

Overview of Nuclear Energy Policy Direction in Japan

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Aiming to Carbon-Neutral in Japan

2050 Carbon-Neutral Declaration and 2030 Climate Goal

- In October 2020, Former Prime Minister Suga declared that by 2050 Japan will aim to reduce greenhouse gas emissions to net-zero, that is, to realise a carbon-neutral, decarbonised society.
- At Leaders Summit on Climate in April 2021, followed by Leaders Summit on COP 26, Prime Minister Kishida announced that Japan aims to reduce its GHG emissions by 46 percent in FY 2030 from its FY 2013 levels.

Remarks at Leaders Summit on COP26 (Nov. 2021)

Japan aims to reduce its greenhouse gas emissions by 46 percent in the fiscal year 2030 from its fiscal year 2013 levels, and that Japan will continue strenuous efforts in its challenge to meet the lofty goal of cutting its emissions by 50 percent.



Basic Policy for Realization of GX (Green Transformation)

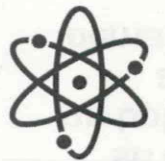
- To rebuild a stable supply of energy, measures including promoting drastic shift to decarbonized power sources will be taken.



Renewable Energy

A grid development plan has been established.

Investment in the next 10 years will be **8 times** compared to the past 10 years.

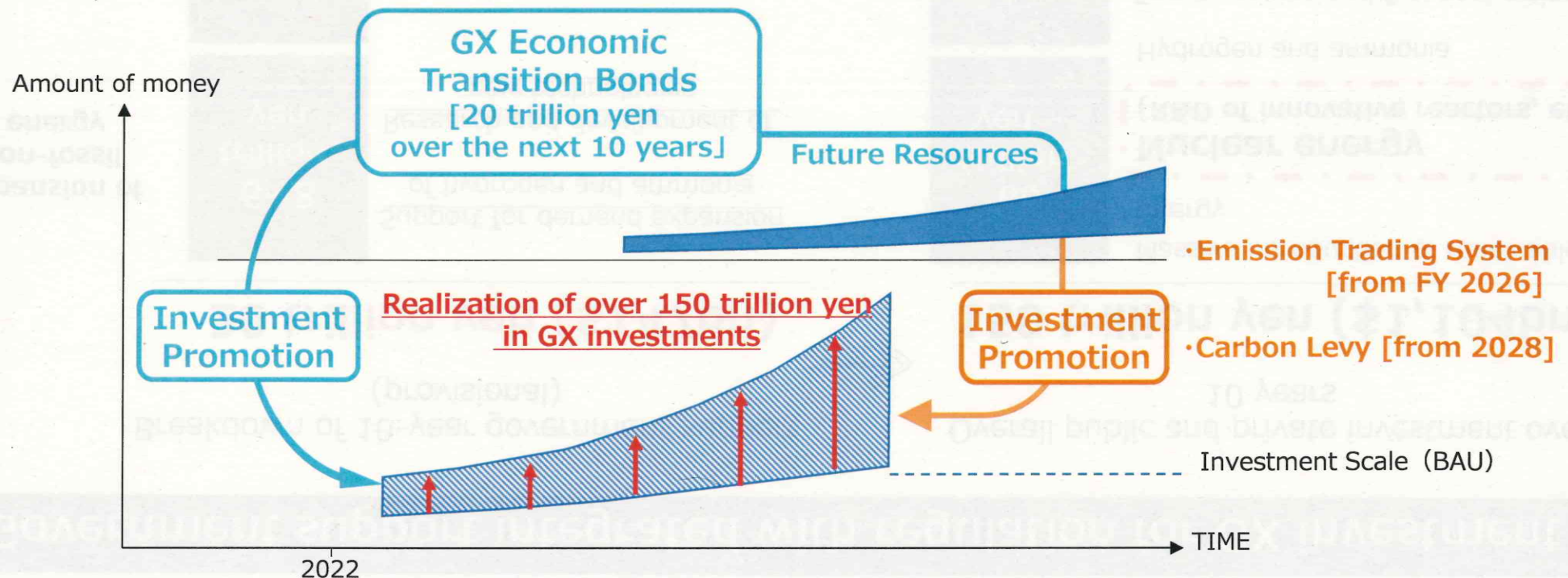


Nuclear Power

Replacement of reactors decided to be decommissioned with next generation innovative reactors.

Review of operating period

(40 years + 20-year extension + shutdown period such as inspection)



Government support integrated with regulation for GX investment

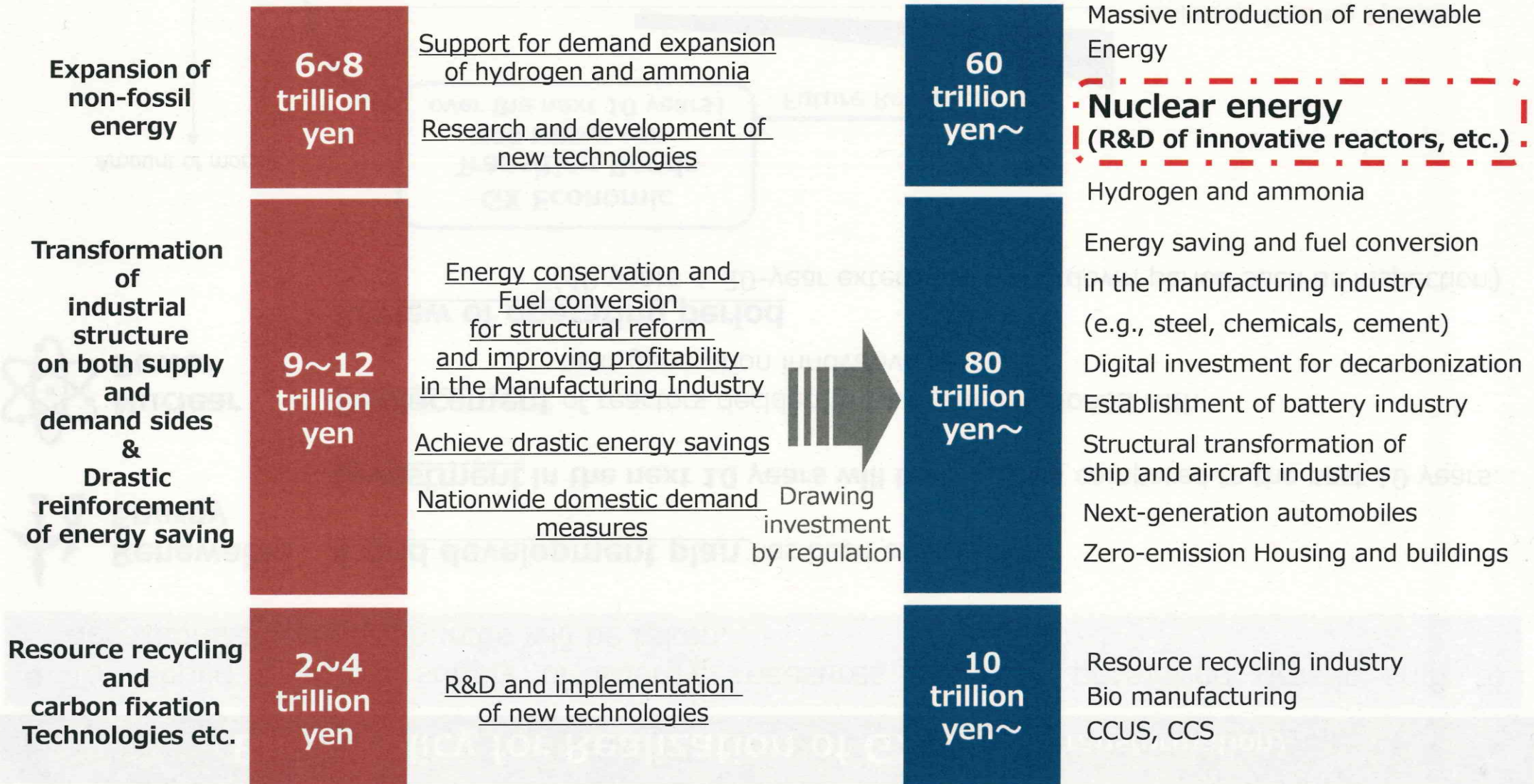
Breakdown of 10-year government support (provisional)

20 trillion yen (\$147bn)



Overall public and private investment over 10 years

150 trillion yen (\$1,104bn)



Nuclear Power Plants in Japan As of 24th, February 2023

Restarted
10 reactors

Passed NRA Review
for the Permission for Changes
in Reactor Installation
7 reactors

Under NRA Review
10 reactors

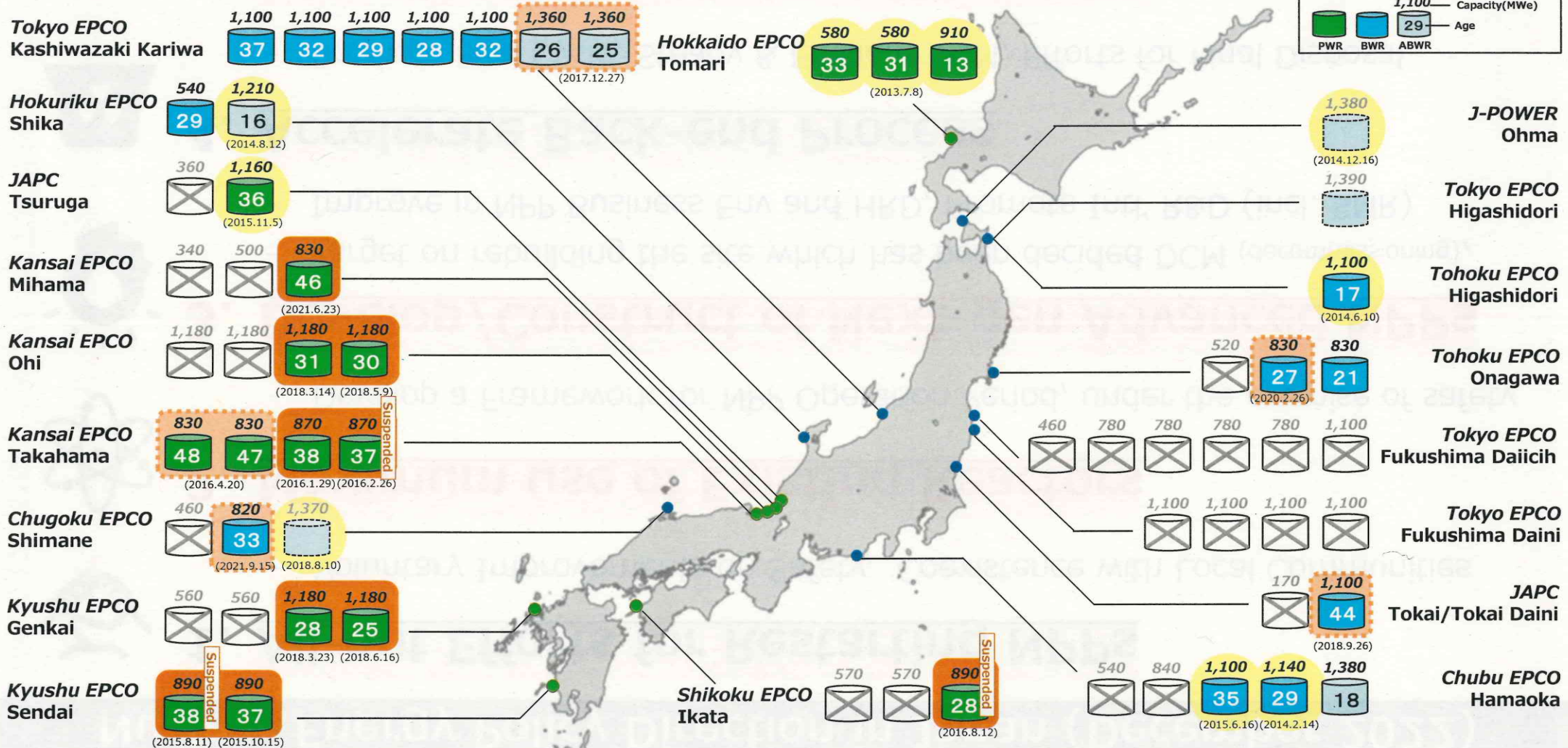
Not yet Applied
9 reactors

Decommission
24 reactors

In Operation : 7 reactors (Date of Restart)
Suspended : 3 reactors

(Date of Approval)

(Date of Application)

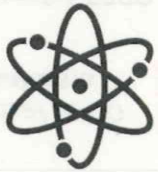


Nuclear Energy Policy Direction in Japan (December 2022)



1. All-out Efforts for Restarting NPPs

- Voluntary Improvements on Safety, Coexistence with Local Communities



2. Maximum use of Existing Reactors

- Develop a Framework for NPP Operation Period, under the premise of safety



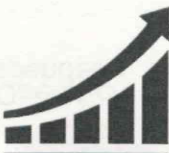
3. Develop / Construct of Next-gen Advanced NPPs

- Target on rebuilding the site which has been decided DCM (decommissioning),
- Improve in NPP Business Env and HRD, Promote Intl' R&D (incl. SMR)



4. Accelerate Back-end Process

- Promote Fuel Cycle, Steady & Efficient DCM, Efforts for Final Disposal



5. Maintain / Strengthen Supply-chain

- Reinforce JPN Supply-chain, by Support to Industry for join in Intl' Projects



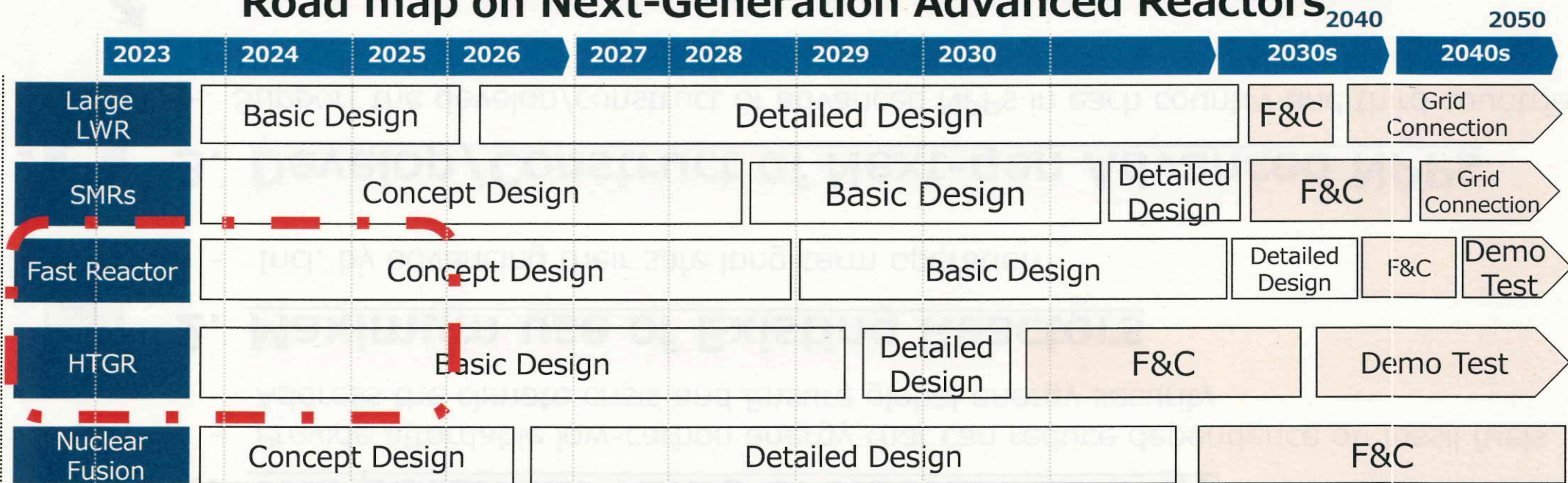
6. Contribute to Solve Common Intl' Issues

- Promoting R&D and building supply chains through international collaboration
- Ensuring Nuclear Safety and Security

Develop of Next-gen Advanced NPPs

- In order to accelate GX(Green Transformation) , GoJ has announced to establish budget proposal GX bond_(provisional translation)
- The Amount of bonds is ¥20 trillion the next 10years (2023-2034)

Road map on Next-Generation Advanced Reactors



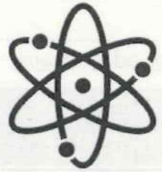
※Prototype Reactor

※F&C, Fabrication & Construction

● **Fast Reactor**
 Demonstration and Development Project
 [\$357mil for 3years(2023-2025)]

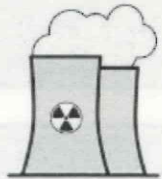
● **HTGR (High-Temperature Gas-cooled Reactor)**
 Demonstration and Development Project
 [\$335mil for 3years(2023-2025)]

◆ Those countries that opt to use nuclear energy ◆



1. The potential value of nuclear energy

- Provide affordable low-carbon energy that can reduce dependence on fossil fuels
- Address the climate crisis and Ensure global energy security



2. Maximum use of Existing Reactors

- Incl. by advancing their safe long-term operation



3. Develop/Construct of Next-gen Advanced NPPs

- Support the develop/construct of advanced NPPs in each country and third countries



4. Maintain/Strengthen Supply-chain and HRD

- Building robust and resilient nuclear supply chains including nuclear fuel

◆ G7 countries ◆



5. Reduce dependence on Russia

- Ensure security of supply by a continuous supply diversification efforts
- Support the establishment of WG to explore further cooperation

Thank you for your attention!



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