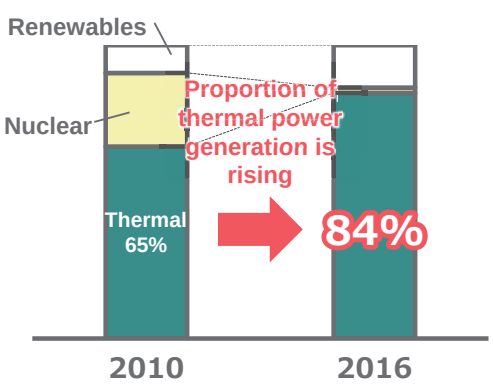
Rebuilding Japan's Electricity System—Electricity Policy to Realize Society 5.0

Keidanren
Japan Business Federation

Japan's electricity system faces four crises due to changes following the Great East Japan Earthquake

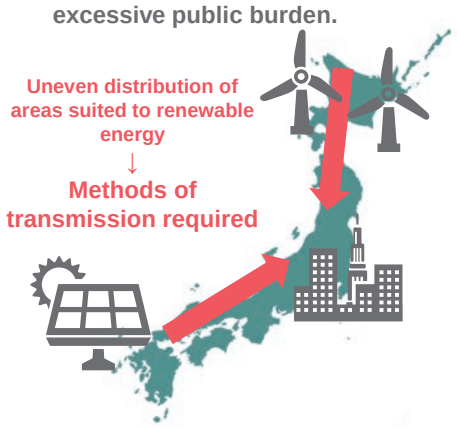
1 Contrary to global expectations, the proportion of fossil fuels in the energy mix has risen

- More than 80% of electricity output depends on fossil fuels.
- Eight years after the earthquake, a rising level of reliance on fossil fuels is difficult to justify, and Japan is attracting international criticism regarding global warming countermeasures.



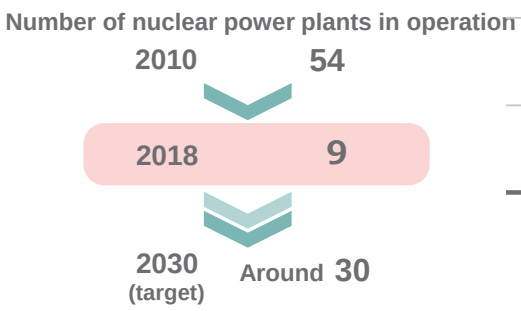
2 Inadequate efforts to create an environment for further expansion of renewable energy

- Sluggish efforts to upgrade transmission and distribution networks or build next-generation facilities.
- Efforts have been inadequate to deliver renewable energy to areas of demand while distribution of areas suited to renewable energy is uneven, and to assure quality of electricity when large volumes are introduced.
- Current subsidy system for renewable energy (FIT scheme) imposes excessive public burden.



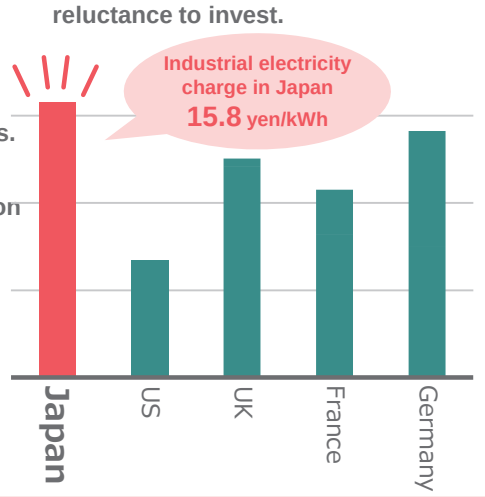
3 Re-start of nuclear power plants is still delayed

- Meeting 100% of Japan's electricity needs with renewables is not realistic. Utilization of nuclear power is essential from a decarbonization perspective, etc.
- Although safety has been enhanced following the earthquake, public understanding has not yet been gained, and resumption of operations is delayed.
- With operators unable to recover investment by operating their plants, facility maintenance and upgrading costs are a burden on their businesses.



4 Electricity charges in Japan are relatively high

- FIT scheme for renewables pushes up electricity charges.
- Although liberalization was expected to curb electricity charges, they have not yet fallen to a level comparable with other countries.
- As the population declines, prospects of recovering investment become increasingly remote, leading to reluctance to invest.



Electricity infrastructure is becoming increasingly important as we head towards Society 5.0. However, electricity investment is stagnant in the face of uncertain business prospects.

Failure to address this situation will inevitably lead to:

- Continuing reliance on fossil fuels
- Lower-quality electricity supply
- Steep rises in electricity charges

= Breakdown of the S+3E principle on which energy policy is based (safety+energy security, economic efficiency, and environment)

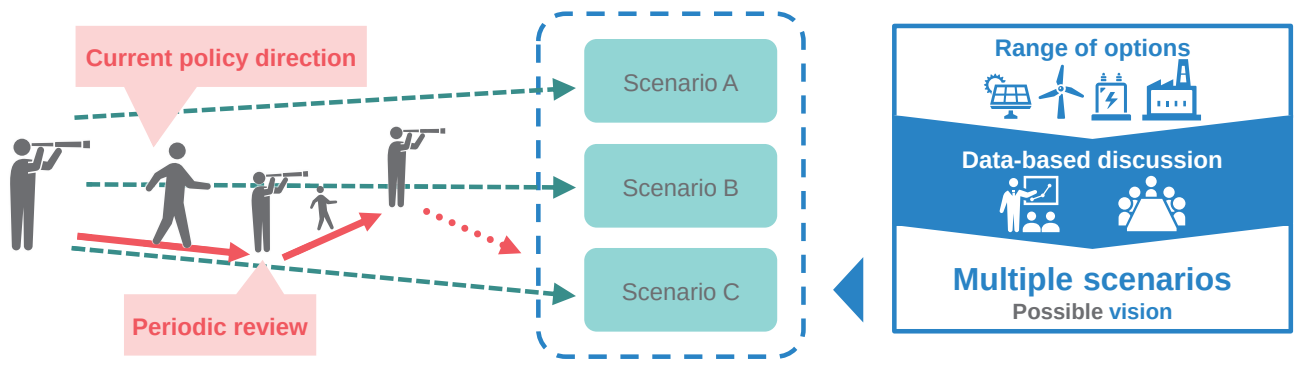
Impact on a wide range of key policy issues including climate change and reinforcement of industrial competitiveness and, by extension, daily lives and business activities.

Essential to create an environment that stimulates currently stagnant investment in electricity infrastructure

Direction of Key Measures in Each Field

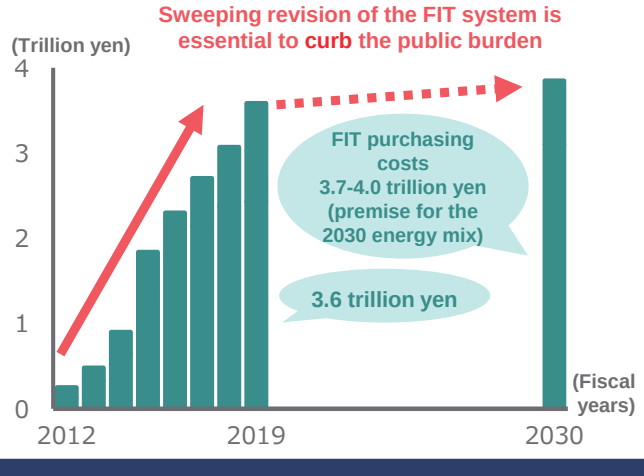
Develop a vision for the future

- A vision for the future needs to be presented to show potential for recovery of investment.
- In drawing up the next Strategic Energy Plan, the government needs to present multiple scenarios setting out an electricity system vision beyond 2030.
- These scenarios should strive for the best mix combining all options to set out specifics of electricity sources, networks, demand, public burden, etc.



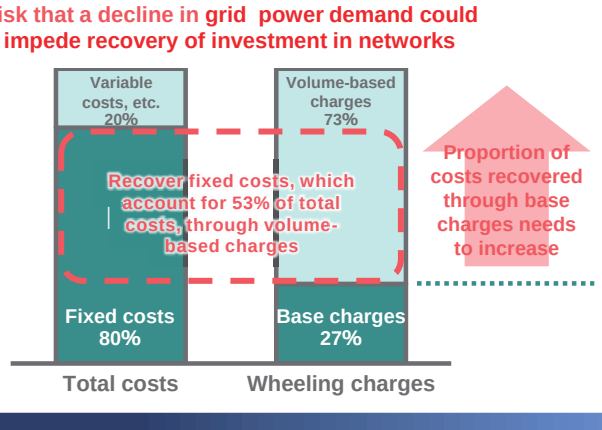
Expand utilization of renewable and nuclear energy

- Renewable and nuclear energy is essential to decarbonization.
- Sweeping revision of the FIT scheme for renewable energy is essential to curb the public burden.
- The government needs to restart existing nuclear facilities, streamline regulation with safety as a prerequisite, and encourage replacement and building new facilities, etc.



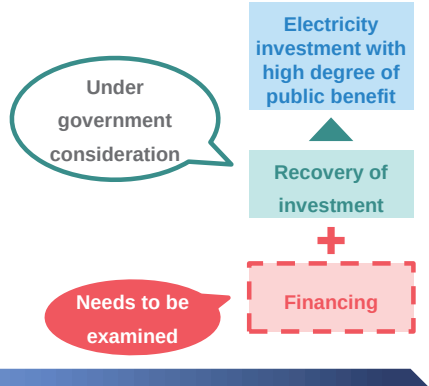
Build next-generation transmission and distribution networks

- Transmission and distribution networks built during Japan's high economic growth period are aging and need to be upgraded or replaced with next-generation facilities to cope with expanded introduction of large-scale offshore wind farms, roof-top solar panels, electric vehicles, etc.
- Given the unlikelihood of any increase in electricity volumes handled by transmission and distribution networks due to factors including widespread introduction of decentralized electricity sources, the wheeling charge system (which enables recovery of transmission and distribution costs) needs to be reformed to encourage necessary investment.



Secure finance

- As electricity business shifts from the fully distributed cost method to a free competition model, financial risk-return equation is also changing.
- As well as examining means of recovering investment, the government should consider fund-raising provisions, including use of FILP, to enable uninterrupted financing of electricity infrastructure which offers a high degree of public benefit.
- It will also be vital to create an environment that attracts domestic and international capital, including ESG investment.



Keidanren will take stronger action to maintain and advance Japan's electricity system