

**Carbon Pricing – Current Status and Issues regarding Institutional Designs in Japan and Other Countries**  
**<Summary<sup>1</sup>>**

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**(1) Trends regarding carbon pricing systems in Japan and other countries**

1. Under the global trend of setting carbon neutral goals, carbon pricing policy as one of the measures for decarbonizing has been actively discussed in Japan.
2. The Japanese government has vowed to utilize a carbon pricing system that would contribute to economic growth. In addition, as the financial sector, consumers and other various climate change stakeholders increasingly urge companies to implement decarbonization initiatives, the industry sector (Japan Business Federation) has become more positive than earlier about a cap-and-trade emissions trading system as one of the promising policy options.
3. The Ministry of Economy, Trade and Industry is preparing for launching a Green Transformation League in FY2023 to encourage companies to implement ambitious decarbonizing targets. This scheme is also planning to introduce a voluntary emissions trading system that would support the companies' actions and investments. A total of 440 companies have endorsed the GX League initiative, covering about 38% of total carbon emissions in industrial, commercial and energy conversion sectors.

**(2) Issues to note for considering a carbon pricing system**

4. The government should address the following issues in designing a “growth-oriented carbon pricing system” to simultaneously achieve energy security, economic growth and carbon neutrality:
5. Japanese energy prices: Energy prices in Japan are higher than in other major developed countries and far higher than in other Asia-Pacific countries which account for about 80% of Japan’s trading partners.
6. Carbon leakage: Higher price may cause an adverse effect on international competitiveness. For example, Japan's heavy industries will face the risk of industrial hollowing out due to high energy prices. Furthermore, if Japan's energy-efficient industries leak to less energy-efficient regions, global greenhouse gas emissions will

<sup>1</sup> This summary is based on the information available as of July 2022.

increase. Given that a carbon pricing system influences the industrial structure, the government is required to clarify which industry should be protected as a Japanese industrial strategy.

7. Regressivity: Energy is indispensable goods of our life and industrial activities. Thus, energy price hikes exert a greater burden on low-income and aged households, small and medium sized companies and energy-intensive heavy industries.
8. Emission reduction effects: Among consumption goods, energy features the lowest price elasticity, indicating that any emission reduction effect of price hikes will be limited particularly in a short term. In addition, if no alternative fuels exist, consumers' burden may increase while failing to contribute to emission abatement. Moreover, how much energy price hikes can be passed on to wholesale prices may vary depending on the supply chain structure.
9. Implicit carbon pricing: Japan has already implemented various actions on several stages of energy use, such as the Act on the Rational Use of Energy, the Act on the Promotion of Use of Non-fossil Energy Sources and Effective Use of Fossil Energy Materials by Energy Suppliers, energy taxes and other measures. These overlapping policies are one of the causes of rising energy prices. Therefore, the review of these existing measures and the identification of their interactions with a carbon pricing system is indispensable for designing an efficient carbon pricing system.
10. International initiatives: How to secure compatibility with other international initiatives such as EU carbon border adjustment is essential for the strategic designing of a Japanese domestic carbon pricing system.

### (3) Realities of forerunning foreign carbon pricing systems

11. Emissions trading systems have already been implemented in European Union, South Korea, and other countries. These prior schemes, however, have demonstrated difficulty to ensure fairness in determining emission targets or free allocation to the covered companies. In addition, emissions allowance prices have been fairly affected and fluctuated by not only demand fundamentals but also speculations, nature climate, and other factors. These problems have led to government-controlled markets where regulatory authorities conduct ex-post facto control on quotas. These frequent rule changes have affected the predictability of the systems and impeded incentives for early emission cuts and investment.
12. Carbon taxes have been introduced in European and other countries. In some countries, carbon pricing schemes have been combined with policy measures for reducing tax burdens or subsidizing alternative technologies. However, it turned out that it was difficult for taxation or price effects alone to secure efficient emission cuts. Furthermore, carbon taxes may lead to energy cost hikes and are less acceptable to

citizens. Therefore, generally, carbon taxes have been imposed where cost hikes are avoided in sectors suitable for such taxes.

(4) Towards a growth-oriented carbon pricing system

13. Experience to date on institutional designs and operations of forerunning carbon pricing systems has indicated the following challenges. First, massive institutional and administrative costs accompany institutional designing and operations. Second, administrative capabilities are closely linked to the stability of a carbon pricing system. Third, actual system operations deviate from neoclassical economic theories. Given these issues, considerable determination is required to introduce any carbon pricing systems in Japan. Based on such determination, the following three perspectives are important for designing a “growth-oriented carbon pricing system” for Japan.
14. The first perspective is to maximize emission cuts at minimum cost. As optimum policy approaches differ depending on emission reduction options, target sectors, and timings, priority targets and industries to be supported must be clarified. Then, costs and benefits of existing multi-layered existing policies must be verified for the potential consolidation and integration of specific measures.
15. The second perspective is to design a carbon pricing system that would lead Japanese companies in expanding their markets or business operations worldwide. Given that contributions to overseas’ reduction where there is a large amount of cheaper emission reduction potential will enable them to lessen cost of mitigation. Simultaneously, a mechanism to quickly obtain cheap but high quality emission credits must be incorporated into the system. In this respect, cooperation with other Asia-Pacific countries becomes even more critical.
16. The third perspective is to secure a fair transition. Ensuring alternative measures is indispensable for a cost-effective and steady transition. Given that energy prices in Japan are much higher than in other Asia-Pacific countries, measures to reduce costs must be implemented. Any carbon pricing system would impose additional burdens on citizens over the short term. Therefore, it is indispensable to have a transparent dialogue with the public in order to promote citizens’ understanding and to increase the social acceptability of any carbon pricing system.

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