

443rd Forum on Research Works

December 27, 2022

Climate Change and GX Policy Outlook and Challenges for 2023

~ International Frameworks and Major Countries' Policy Trends under Energy Crisis ~

<Executive Summary>

Junko Ogawa

Senior Researcher, Climate Change Group

Climate Change and Energy Efficiency Unit

Institute of Energy Economics, Japan

General Outlook

1. In 2022, a global energy crisis arose from Russia-Ukraine War spilled over throughout the world, leading to the tightening energy supply-demand balance and price spikes that hit the economy. A similar situation will continue for 2023 and influence international frameworks and national climate change policies.

United Nations Framework Convention on Climate Change (Mitigation)

2. The 27th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) reaffirmed the temperature goal for mitigation under the Paris Agreement and adopted “Matters relating to the work program for urgently scaling up mitigation ambition and implementation,” which included annual checks on progress toward the strengthening of goals in nationally determined contributions in 2030.
3. Regarding emission credits, technical negotiations fell short of producing any agreement on methodology or removals guidance for management by the United Nations under Article 6, paragraph 4, of the Paris Agreement. For the time being, the companies should prioritize international transfers of voluntary national emission cuts under Article 6, paragraph 2.
4. The COP28 in 2023 will come to the final phase of the first global stocktake (GST) to assess global progress toward the long-term Paris Agreement goal every five years. An additional session on the GST will be held in 2023 to consider output to scale up mitigation ambition for 2035 goals.

Policy Trends in major countries

5. Climate change initiatives in the European Union, the United States, China and India, which accounted for 60% of global CO₂ emissions in 2020, will continue to be the climate change policy benchmarks for the rest of the world.
6. EU: The EU is promoting the REPowerEU program to phase out dependence on Russia and making progress in legislating the Fit for 55 initiative to secure the enhancement of the 2030 emission reduction goal. Under the agreement to introduce the Carbon Border Adjustment Mechanism, the EU plans to phase out free allocations under the EU Emissions Trading Scheme by 2034. Meanwhile, the EU is increasing coal-fired power generation due to the tightening energy supply-demand balance this winter, indicating that the energy crisis may exert some impact on progress in European decarbonization.
7. U.S.: The Build Back Better bill was announced in 2021 but has failed to be enacted due to unsuccessful congressional coordination. A climate change package has been included in the Inflation Reduction Act, with its spending size cut from \$555 billion to \$369 billion. A key point is how far the United States would come closer to its goal of cutting greenhouse gas emissions by 50-52% by 2030 through progress in investment in decarbonization infrastructure under the Inflation Reduction Act and the Infrastructure Investment and Jobs Act.
8. China: China has been shaking out inefficient production equipment under energy efficiency and other laws, indicating its rapid promotion of energy efficiency improvement. On the other hand, its emission intensity continued to deteriorate due to economic growth and dependence on domestic fossil fuel resources until around 2010. Investment in fossil-fired power generation has continued expanding. China has recently introduced policy goals to increase non-fossil energy sources' share of energy consumption. As for the emissions trading scheme launched for the power generation sector in 2021, the timing for expanding the range of sectors subject to the scheme is attracting attention.
9. India: Energy efficiency improvement is making progress, while the emission intensity is deteriorating. In 2022, India submitted its updated nationally determined contributions and a long-term strategy and target of carbon neutrality by 2070 to the United Nations. Given that universal access to energy is cited as one of India's national development goals, the low-carbonization of fossil-fired power generation may be a realistic approach for the immediate future. The introduction of a carbon credit trading scheme is now under consideration. India will take the chair of the Group of 20 in 2023.

Policy Trends in Japan

10. The government announced a green transformation initiative in 2021 and made progress in policy and measures for decarbonization in 2022. Among these, the biggest focus of attention in 2023 will be the consideration of a growth-oriented carbon pricing (CP) scheme.
11. A planned CP scheme is a hybrid scheme combining a green transformation emissions trading scheme (GX-ETS) with a GX surcharge on carbon. The upstream surcharge on fossil fuel importers is planned to be introduced in FY2028. As for emissions trading, the GX League, which is a forum for industry, government, and academia to examine the scheme that enables Japanese companies to be competitive internationally while implementing ambitious emission reduction targets, will operate the GX-ETS. Gx League emphasizes companies' voluntarism in the immediate future, whereas it plans to implement third-party certification and disciplinary enhancement in FY2026 to secure fairness and effectiveness of the GX-ETS. The power generation sector plans to gradually implement auctions from FY2033 in the GX-ETS. Surcharge revenue under the CP scheme will be used to redeem GX economic transition bonds (20 trillion yen over 10 years) to be issued from FY2023 for supporting investment in decarbonization and other innovative research, development and equipment. Discussion on the institutional design of CP scheme will be launched in 2023, and key viewpoints will include how to take into account burdens on enterprises and citizens. More importantly, how coordinating the relationship and overlap among existing policies and the CP scheme will be inevitable.
12. Along with how to design the growth-oriented CP scheme, the discussion will focus on supplement policies to enhance emission reductions such as domestic and foreign crediting mechanisms and carbon footprint that can encourage behavioral change by visualizing life cycle emission of each product.
13. In 2023, Japan will host the Group of Seven Hiroshima Summit in May. Japan features the highest heavy industry ratio among the G7 members and the position as the only Asian G7 member. Japan, therefore, should take advantage of such features. For example, Japan should lead the G7 initiative that can involve emerging countries, especially Asian countries. The key to global carbon neutrality will be how to design initiatives to involve these emerging economies, switching from natural gas to coal under the current energy crisis and expected to increase energy consumption due to population and economic growth.