

Impact of COVID-19 Pandemic on Decarbonization Initiatives

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This weekly column titled “a Japanese Perspective on the International Energy Landscape” has continuously considered the impacts of the COVID-19 pandemic on the international energy situation from various angles since the 471st issue on March 6, 2020. This issue analyzes the pandemic’s impacts on decarbonization initiatives.

First, I would like to review the current impacts of the pandemic. According to a preliminary analysis by the Institute of Energy Economic, Japan, global energy-related carbon dioxide emissions in 2020 will substantially decline as oil and other fossil fuels demand plunges due to considerable economic contraction and an extreme fall in transportation demand through lockdowns. In a reference scenario for a 3% global economic contraction in 2020, global energy-related CO₂ emissions will decline by 8% from an estimated 33.5 billion tons in 2019 to 30.8 billion tons in 2020. In a longer pandemic scenario for a 6% global economic contraction, CO₂ emissions would fall further to 29.7 billion tons. These CO₂ emission falls are basically attributable to a steep decrease in oil and other fossil fuel consumption amid the global economic contraction. In the reference and longer pandemic scenarios, therefore, global energy-related CO₂ emissions will restore the 2019 level in 2021 as an economic recovery leads energy consumption to rise back. If the second pandemic wave comes in 2021 to force a delay in the global economic recovery, however, global energy-related CO₂ emissions will remain as low as 30 billion tons in 2021. Global CO₂ emissions will thus be greatly influenced by the fate of the pandemic itself and the global economy.

The decline in CO₂ emissions is desirable for climate change countermeasures. As indicated by the above projections, however, the sharp fall in global CO₂ emissions in 2020 is attributable primarily to the huge impacts of the pandemic and cannot be welcomed unconditionally. If the pandemic ends, allowing the world to restore business as usual without any structural change in global energy consumption, the world will go back to the past CO₂ emission path in line with economic growth. Attracting global attention now are the pandemic’s long-term and structural impacts on CO₂ emission reduction and decarbonization initiatives.

Interests are growing in the long-term and structural impacts of the pandemic because the pandemic, inflicting huge damage and enormous influence, is increasingly expected to change global human behavior, affect business activities and greatly impact international politics, the global economy and geopolitics. In such circumstances, attention is being paid to the pandemic’s impacts on energy and environment policies of major countries and potential changes in the development, diffusion and future course of relevant technologies. However, the problem is that the impacts are uncertain, indicating no certain direction. It is unforeseeable whether conceivable long-term and structural changes would come or how fast or strong such changes would be. Various factors indicating utterly different directions are mixed, making it more difficult to predict the future.

I would like to begin by looking at “positive” factors for decarbonization initiatives. First,

structural downward pressure on oil demand is attracting attention. It is pointed out that telework and web conferences that have diffused under the pandemic could settle down and expand in a manner to structurally suppress oil demand growth, leading oil demand to peak faster than expected earlier. If so, it would help enhance net energy savings and structurally reduce CO₂ emissions.

Second, moves to give priority to the powerful promotion of “post-corona” economic reconstruction combined with decarbonization initiatives are attracting even greater attention. Such moves are typically seen in Europe including the European Union. The new EU leadership has emphasized the so-called Green Deal that adopts the development and diffusion of renewable energy and other decarbonization technologies as the pillar of a long-term growth strategy. As economic reconstruction becomes an urgent challenge in the wake of huge economic losses brought about by the corona disaster, the Green Deal concept is positioned as one of the key pillars in draft European economic reconstruction plans. If such plans are realized, Europe will powerfully promote decarbonization initiatives while reconstructing its economy. In the United States, the combination of economic reconstruction with decarbonization initiatives would depend on who would be elected president. If Republican President Donald Trump is reelected, no major change would come. If Democratic candidate Joseph Biden wins, however, he could emphasize the enhancement of climate change countermeasures, leading the United States to strengthen decarbonization initiatives in a post-corona world.

However, currently emerging factors include those that could exert “negative” impacts on decarbonization initiatives in the post-corona world. The first such factor is a priority change. Climate change is unarguably a particularly important long-term problem for humans. However, the COVID-19 pandemic has become a critical or grave problem involving our survival as of now. In such circumstances, top priority is given to dealing with the pandemic, leading interests in and priority for climate change to decline relatively and globally. Experiences with the pandemic could prompt people to view climate change as relatively, rather than absolutely, important. If the world gives relative priority to climate change compared with other challenges, it may not necessarily exert positive impacts on climate change. This may be more conspicuous in low-income developing countries. Relevant moves in developing and emerging countries will attract attention as they are set to account for most of future greenhouse gas emissions.

The second factor is related to energy investment. Although there are plans to combine post-corona economic reconstruction with decarbonization initiatives as described above, the energy investment environment is now tough. Falls in energy demand, uncertainties about future energy demand and weak fossil fuel and electricity prices have made energy investment difficult. As the importance of affordable energy supply for economic development and growth is recognized anew, investment in decarbonization initiatives may face various challenges.

The third factor is whether international cooperation in decarbonization would work sufficiently. The international community must be united to tackle climate change and other global challenges for the sake of global interests. In the post-corona world, however, tensions between major powers are expected to increase, leading to a difficult geopolitical environment. A matter of concern is how decarbonization initiatives would be promoted globally in a “G zero world” where me-first foreign policy would grow dominant in a manner to affect international cooperation in protecting global interests.

I would like to closely watch how these various factors would work in the future.