

## **How Should Pandemic's Impacts on Decarbonization Initiatives Be Viewed?**

Ken Koyama, PhD  
Chief Economist, Managing Director  
The Institute of Energy Economics, Japan

The COVID-19 pandemic has continued to exert grave impacts on the international energy situation. It has brought about global economic deterioration and lockdowns that have caused a substantial energy demand plunge, energy oversupply and remarkable drops in energy prices. The price plunges are expected to result in energy investment shortages, economic deterioration and social destabilization in resource-rich countries that depend heavily on energy export revenue, leading to the possibility of international energy markets to be destabilized over a medium term.

Over a medium to long term, social and economic transformations under the COVID-19 disaster could structurally suppress oil demand and accelerate electrification where electricity would become more important. These possibilities are attracting interest. Symbolically, the disaster has triggered intensification of the U.S.-China confrontation, indicating that geopolitical tensions would heighten as each country gives top priority to protecting its people and economy and naturally emphasizes national security. Energy security would be enhanced, with competition being intensified for technological supremacy. How the world and the international energy situation would be transformed through the COVID-19 disaster has become the biggest matter of interest.

In this respect, there is another important issue. That is what impacts the COVID-19 disaster would exert on low-carbonization and decarbonization initiatives that have globally grown important as climate change countermeasures. Before the disaster rapidly loomed as the world's most important challenge, decarbonization had been the world's biggest issue of interest among global energy challenges.

Calls for enhancing decarbonization initiatives had grown mainly in Europe, attracting political and social interests. Decarbonization initiatives could structurally transform global energy supply and demand, exert great influence on the global economy and energy geopolitics and have enormous impacts on all energy-related businesses. Therefore, decarbonization had been the most important matter of interest to all energy stakeholders. As a matter of course, how the COVID-19 disaster would affect decarbonization initiatives has become a key issue today. Based on very impressive arguments given at recent meetings in which I participated, I would like to present a discussion on how the disaster has affected and would affect global low-carbonization and decarbonization initiatives.

First, I would like to point out that global CO<sub>2</sub> emissions have substantially declined due to the COVID-19 disaster. According to analyses by the International Energy Agency and others, global energy-related CO<sub>2</sub> emissions in 2020 would post an unprecedentedly sharp decline of 8% from the previous year. The CO<sub>2</sub> emission decrease in 2009 after the 2008 global financial crisis was limited to 2%. This year's decline would be the biggest in the past half-century. This is because demand for energy including fossil fuels has dramatically decreased due to the global economy's worst deterioration since the Great Depression and lockdowns under the disaster. The dramatic

decrease in CO<sub>2</sub> emissions may be taken as “positive” for preventing climate change. Given that the emission decrease is attributable to the world’s plunge into a disastrous situation under the COVID-19 pandemic, however, we cannot be simply pleased to see the emission decline. This is because global CO<sub>2</sub> emissions would restore an uptrend with demand increasing for fossil fuels and other energy sources when the global economy and society recover the pre-pandemic situation after the pandemic. In short, CO<sub>2</sub> emissions decline temporarily under the COVID-19 pandemic before rebounding to an earlier level following an end to the pandemic.

However, some people have taken the substantial decline in CO<sub>2</sub> emissions under the COVID-19 pandemic as an opportunity to argue that the world can or should go in the direction of structurally reducing emissions over a long term instead of allowing emissions to rebound after the pandemic. The argument means that economic reconstruction could be combined with clean energy investment for decarbonization to pursue the direction indicated by the European Union’s Green Deal that gives priority to the development and diffusion of renewable energy, hydrogen and other clean energy sources among measures for economic reconstruction after the pandemic. The IEA has estimated that government and private sectors would have to invest \$1 trillion annually to go in the direction of cutting emissions as “sustainable recovery” pathway. While doubts exist about if such huge investment is feasible after budget and business deterioration under the pandemic, the argument provides an ideal solution under which the huge investment, if feasible, would pave the way for the world to pursue the dual goals of economic growth and decarbonization.

On whether the huge investment is feasible or not, some people view such investment as feasible, based on the fact that governments have spent massive money on unprecedentedly large-scale economic stimulus packages and COVID-19 infection prevention measures. This means that massive spending would be feasible if governments are as serious about decarbonization and other climate change countermeasures as they are about the pandemic. Anyone can do it if they wish to. This may be right in some sense. However, major governments in the world have spent massive money in the face of the emergency crisis in which COVID-19 infections and deaths have rapidly increased.

When considering where massive investment in decarbonization initiatives should be made, we can easily find that such investment would be required primarily in developing countries where energy demand including fossil fuels would substantially increase. Effective investment in clean energy would allow CO<sub>2</sub> emissions to be restricted or reduced in developing countries accounting for most of global energy demand growth. Can developing countries make huge investment in climate change countermeasures? The answer depends on decisions on policy priorities. In this respect, it must be noted that climate change countermeasures are not necessarily given top priority in developing countries, as indicated by United Nations and other surveys. In a survey of developing countries before the pandemic, climate change countermeasures were given less priority than health and welfare, employment and economic growth, quality education, gender equality and safe water. Under the COVID-19 disaster, health and welfare, and employment and economic growth become even more important. Massive clean energy investment for decarbonization would not be easy to realize unless such investment is demonstrated as contributing visibly to employment and economic growth.

At present, clean energy investment is likely to lead to higher energy and electricity costs. At a time when fossil fuel prices have declined due to oversupply under the pandemic, options or policies leading to higher energy costs may not be acceptable for consumers in developing countries plagued with economic deterioration. In this sense, the ideal situation where clean energy investment

would lead to both decarbonization and economic reconstruction may not be easy to realize.

Ultimately, decoupling between economic growth and greenhouse gas emissions would have to be realized to achieve global decarbonization. In the face of the difficult challenge, we will have to watch both ideal goals the world should pursue and realities in various countries and regions, while hoping for the availability of advanced technologies and innovations.

Contact: [report@tky.ieej.or.jp](mailto:report@tky.ieej.or.jp)

The back issues are available at the following URL

[http://eneken.ieej.or.jp/en/special\\_bulletin.html](http://eneken.ieej.or.jp/en/special_bulletin.html)