

Reviewing Japanese and Global Energy Situations in 2020

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Six days are left before the end of 2020. The year saw many important events and great changes in the Japanese and global energy situations and the overall international situation. Regarding them, I would like to summarize impressive points for me.

First, I have no choice but to point out the COVID-19 pandemic's unprecedentedly great impacts on global political, economic, and energy situations. First novel coronavirus infections were confirmed in Wuhan, Hebei Province, China in December 2019 before infections rapidly spread in the city in January 2020. Then, COVID-19 infections fast spread throughout China and the world. In March, the World Health Organization declared the outbreak as a pandemic. The global COVID-19 spread has remained unlimited. So far, COVID-19 has infected about 80 million people and killed more than 1.7 million in the world. In Europe, the United States, and Japan where new COVID-19 infections declined from May, second or third outbreaks have come, forcing lockdowns and other travel restrictions to be implemented to help prevent infections from spreading further.

As the pandemic has grown serious, U.S.-China relations, which had become tense due to a trade war in 2019, have deteriorated further. Washington and Beijing have harshly criticized each other over China's initial response to the outbreak, coronavirus sources, and other matters, as well as Hong Kong, Taiwan, and other human rights and democratic movement issues, and China's maritime expansion, escalating the bilateral confrontation into what is being called "the new Cold War." Given that the United States has recorded the world's largest numbers of COVID-19 infections and deaths (more than 300,000 deaths, some six times as many as American soldiers killed in the Vietnam War), Washington has grown critical of Beijing.

The global economy rapidly contracted due to the pandemic. The International Monetary Fund has forecast that the global economy would contract 4.4% in 2020, indicating the worst economic crisis since the Great Depression, outdoing the 2008-09 global financial crisis. Economic reopening from May allowed many countries to post positive economic growth in the second half of 2020. Since November, pharmaceutical companies have filed for COVID-19 vaccine approval. Vaccination has started in Russia, the United Kingdom, the United States, and other countries, raising hopes on vaccination effects. As noted above, however, there is no sign of an end to the pandemic, which has become even more serious through second or third outbreaks in many countries.

Under such circumstances, 2020 became a year of turbulence for global energy markets. Global energy demand declined sharply due to the economic contraction and lockdowns for preventing the spread of COVID-19. Particularly, oil demand posted a steep fall of some 30% from normal levels temporarily, affected by lockdowns and a plunge in international air travel demand. As demand for all energy sources including oil, natural gas and LNG, and electricity decreased substantially, oversupply hit energy markets, triggering price crashes. Symbolizing rapid energy

price falls, the key futures contract on the West Texas Intermediate crude oil fell into negative territory for the first time in history. On April 20, the front-month WTI futures contract dropped to minus \$37 per barrel on special conditions just before its expiration. The fundamental factor behind the fall was substantial oversupply under the pandemic. To cope with the oil price crash, the OPEC-plus group, comprising the Organization of the Petroleum Exporting Countries and some non-OPEC oil-producing countries such as Russia, launched their largest ever production cuts in May. High-cost U.S. shale oil producers lost profitability due to the price crash and reduced production, adding fuel to a supply decline. The supply fall and demand recovery supported oil prices from May, allowing the key Brent futures contract to rise back above \$50/bbl in December for the first time in nine months.

Oversupply and low prices were common to oil, natural gas and LNG, and electricity markets. Energy price and demand declines seriously affected the international energy industry, leading to a considerable decrease in energy investment. They also hit oil-producing countries that depend heavily on energy export income, casting a gloom over their economies and societies. Investment shortages and the destabilization of oil-producing countries could destabilize the oil market over the medium term. Over the long term, the COVID-19 pandemic could bring about an oil demand peak and progress in electrification through social and economic transformations. Its impacts on energy transitions are attracting attention.

The second important event in 2020 was November's U.S. presidential election in which Democrat Joe Biden won back the presidency from incumbent Republican President Donald Trump. Given that the United States exerts the world's greatest influence on international politics, the global economy, and the international energy situation, who leads the influential country is a matter of grave interest to the world. As the incoming Biden administration's energy and environment policies are likely to greatly differ far from those of the Trump administration, global attention is focusing on the new administration's policies on climate change, the Middle East including Iran, and shale resources development. U.S. policies on China and Russia are also important issues exerting great influence on the overall international situation. A serious division in the United States indicated in the presidential election and policy differences within Biden's Democratic Party demonstrate an unstable political environment for the Biden administration. As top priorities for the new administration include COVID-19 countermeasures and economic recovery, it is difficult to predict how its energy and environment policies would be and how strongly they would be implemented. The large change in the United States in 2020 will shake the world in the future.

As the third important point in 2020, I would like to cite major countries' announcements of carbon neutral targets in the second half of the year. The European Union took the initiative in offering a target of achieving carbon neutral status by 2050, coming up with its Green Deal policy including the development of renewable energy, hydrogen, and other clean energy sources. The Green Deal initiative is positioned as the key to accomplishing recovery from the COVID-19 disaster, long-term economic growth, and climate change countermeasures. Following the European Union, China in September offered to seek carbon neutral status by 2060. In October, Japan announced its target of achieving carbon neutral status by 2050. The incoming Biden administration also plans to pursue carbon neutral status by 2050. As Japan, the United States, the European Union, China, and other major greenhouse gas emitters are seeking carbon neutral status, momentum could rapidly grow for enhancing climate change countermeasures in the world.

Under these carbon neutral status targets, hopes have grown on clean energy sources contributing to such status. The significance of renewable energy, nuclear, and other non-fossil

energies has been recognized anew along with the needs to promote and enhance energy efficiency improvement. At the same time, the decarbonization of fossil fuels accounting for most of global energy supply now has been highlighted. Regarding the decarbonization, hydrogen's roles have attracted interest. The production of clean hydrogen including "green" and "blue" hydrogen, as well as the development of hydrogen supply chains, has become a matter of global interest. As cost cuts and infrastructure investment are required to introduce and diffuse such innovative energy, stakeholders have grown conscious of utilizing existing technologies, infrastructure, and facilities to reduce costs. In this regard, a Japan-Saudi Arabia "blue ammonia" project, the first of its kind in the world, has attracted attention from energy stakeholders.

Under such global situation, Japan's Suga administration, inaugurated in September, offered the 2050 carbon neutral status target in October. Based on the target, the government is stepping up discussions on revising the strategic energy plan to simultaneously achieve the 3E's – energy security, economic efficiency, and environmental protection – while responding to COVID-19 countermeasures and policies of the new U.S. administration.

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