

## **Reviewing Japanese and International Energy Situations in 2021**

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Five days are left before the end of 2021. The year saw events that were unusually important and led to dramatic 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 would like to note that as a global trend toward enhancing decarbonization initiatives accelerated further in 2021, global interests grew in the impacts of decarbonization on energy industries, markets and investment and in future decarbonization measures.

The U.S. Biden administration, inaugurated in January 2021, reversed the previous Trump administration's climate policy and designated global warming countermeasures as one of its top priorities, launching extremely proactive initiatives to prevent global warming. Particularly, the Biden administration strongly promoted diplomatic initiatives to enhance climate change countermeasures. In April, President Joe Biden hosted a climate summit, where the United States, Japan and other countries vowed to substantially raise their greenhouse gas emission reduction goals in their Nationally Determined Contributions, or NDCs.

In May, the International Energy Agency released a report titled "Net Zero by 2050" ahead of the annual Group of Seven summit and the 26th Conference of Parties to the United Nations Framework Convention on Climate Change, or COP26, hosted by the United Kingdom. The report adopted a backcasting approach to analyze potential global energy market changes on the assumption of net zero global GHG emissions in 2050. The net zero emission scenario served as a major pillar for analyzing global energy markets through 2050 in the "World Energy Outlook 2021," an IEA flagship product published in October. The net zero emission scenario based on the backcasting approach does not represent any outlook but was misinterpreted by media as indicating that the IEA sees no need for new upstream oil and gas investment or that the world will achieve net zero emissions in 2050.

Over about two weeks from late October, COP26 took place in Glasgow. Toward the conference, Indonesia, Saudi Arabia, Russia, Australia and India announced their carbon neutrality goals in the second half of the 21st century. All of the Group of 20 economies thus set carbon neutrality goals by 2021. The United Kingdom as the host of COP26 took leadership in paving the way for the Glasgow Climate Pact to be adopted. The Pact clarified the importance of goal of limiting global warming to 1.5°C from preindustrial levels, urged NDCs to be reviewed in line with the temperature goal in the Paris Agreement to raise emission reduction goals as necessary, and called for phasing down unabated coal power plants.

COP26, while achieving the Pact, fell short of clarifying a pathway to the 1.5°C goal. At the same time, a conflict of interest between developing and advanced economies emerged over the

enhancement of climate change countermeasures, indicating the possible escalation of the north-south confrontation. Asian developing and emerging market economies and resource-rich countries grew interested in transitioning to decarbonization steadily, pragmatically and inclusively in line with their respective economic development phases and resource endowment conditions.

Technological innovation initiatives for the carbon neutrality goal were globally enhanced in 2021. Countries and major companies promoted initiatives to build international supply chains for CO<sub>2</sub>-free hydrogen and ammonia. The significance of rulemaking regarding technological options and systems for decarbonization was recognized, while talks on carbon pricing, border carbon adjustment measures and emission credit trading became a global matter of interest.

As the second important trend regarding the international energy situation in 2021, I would like to cite the simultaneous energy price hikes and their impacts. The energy supply-demand balance tightened generally as energy supply failed to catch up with demand growth amid the world's recovery from the COVID-19 crisis. Prices shot up for crude oil, natural gas, liquefied natural gas and coal. Electricity prices also soared. Abnormal electricity price hikes and the tighter electricity supply-demand balance were seen in some parts of the world.

Crude oil prices rose above \$80 per barrel to seven-year highs from late October to November. The United States and other oil-consuming countries exerted pressure on the OPEC-plus group of oil-producing countries to further increase production. Finding that such pressure was unsuccessful, the United States led a coordinated multilateral release of oil reserves. The release was coupled with the emergence of a new COVID-19 variant named Omicron to push down crude oil prices. In December, the OPEC-plus group decided to retain its existing plan to gradually increase production in a manner to defy predictions by oil market players and avoid escalation of the confrontation with oil-consuming countries. Later, however, crude oil prices rose back and remained high above \$70/bbl.

Natural gas and LNG prices staged even faster hikes than crude oil prices. Asian LNG spot prices topped \$50 per million British thermal units temporarily as supply growth failed to catch up with robust demand expansion driven by China's explosive demand increase. In Europe, natural gas hub prices shot up to record highs around \$60/MMBtu as low inventories were combined with seasonal winter demand growth, geopolitical factors such as rising Ukraine tensions, and insecurity about Russian supply. Crude oil, gas and LNG prices soared as supply and demand fundamentals were coupled with geopolitical factors.

International coal prices increased more than fivefold from last year's lows as China's domestic coal prices shot up due to a production decrease that led to a tightening supply-demand balance. The electricity supply-demand balance also tightened in China, affecting civic life and economic operations including industrial production. Authorities were busy with measures to stabilize the supply-demand balance. Europe also faced a tighter electricity supply-demand balance and electricity price spikes as a long suspension of wind farms was combined with insufficient surplus supply capacity and hikes in prices of power generation fuels. Authorities including the European Commission had no choice but to take consumer protection measures such as energy subsidies for low-income people.

This year, decarbonization alone temporarily attracted attention among energy issues, but the simultaneous energy price hikes turned the situation around. The price hikes and tightening

supply-demand balance for energy as an indispensable good for civic life and economic operations led governments to focus on energy supply stabilization measures as a top energy policy priority. In addition to short-term energy supply and demand adjustments and energy subsidies to cope with the abovementioned energy price spikes, various changes emerged in the second half of 2021, including growing interests in the significance of investment to secure stable energy supply and in nuclear energy that was identified as useful again in regard to decarbonization.

In such international situation, Japan saw the inauguration of the Kishida administration and a cabinet decision on the sixth Strategic Energy Plan in October. Under the plan, Japan will pursue safety, energy security, environmental protection and economic efficiency and promote initiatives to cut GHG emissions by 46% by 2030 and achieve carbon neutrality by 2050.

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