

## **Publication of “Dramatically Changing International Energy Situation”**

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

On June 23, my book titled “Dramatically Changing International Energy Situation” (written in Japanese) was published by Energy Forum Inc. As indicated by the title, the book reviews the international energy situation since 2020, analyzes a series of major developments including the grave impacts of the COVID-19 disaster as a start of dramatic change in the world energy market and explores implications for Japan’s energy strategy.

In the early spring of 2021 when I began to write the book, the first major global energy issue was how international energy markets would recover from the grave impacts of the COVID-19 disaster and restore equilibrium and stability or what structural changes would come in international energy markets through social transformation as well as short-term energy demand and price declines under the COVID-19 disaster. In April 2020, the key West Texas Intermediate crude oil futures hit a low of minus \$37 per barrel in an unprecedented development. Natural gas and spot LNG prices as well as coal and electricity prices sank to record lows under the COVID-19 disaster. How international energy markets would recover from the extremely unbalanced and unstable situation was an extremely serious issue.

The second major issue when I began to write this book was carbon neutrality that was attracting attention from all energy stakeholders in the world as an even greater matter of interest. The year 2020 was of extremely unique or unusual importance in the history of international energy issues. In the year as noted above, the world launched a stampede for carbon neutrality while the unprecedented impacts of the COVID-19 disaster were on a rampage. Carbon neutrality may not be achieved without a revolutionary breakaway from fossil energy supply and demand and energy supply chain infrastructure as a long-life legacy asset. The transition to carbon neutrality represents a huge challenge regarding technology, economy and society. The transition to respond to climate change as an externality is expected to take massive costs. As anti-COVID infection measures, treatments and efforts to minimize relevant deaths became top priority challenges, there were views that other policy challenges including climate change countermeasures were expected to lose their relative importance.

In fact, however, the transition to carbon neutrality accelerated globally then. Behind the acceleration was a concept symbolized by the European Union’s Green Deal, which indicated that clean energy investment (investment in renewable energy, energy efficiency improvements, hydrogen and clean mobility) would contribute not only to long-term economic growth but also to an economic recovery from the COVID-19 disaster. The politically excellent concept was widely accepted by major countries in the world, accelerating the transition to carbon neutrality.

The inauguration of the U.S. Biden administration played a key role in accelerating the transition. Earlier, the EU embarking on proactive climate change countermeasures had contrasted with the U.S. Trump administration ignoring climate change. As the Biden administration replaced the

Trump regime, however, the United States and Europe joined their hands and sometimes even competed for leadership to enhance climate change countermeasures in the world. The geopolitical environment regarding climate change turned around. In such situation, hopes suddenly grew on innovations to realize carbon neutrality, including CO<sub>2</sub>-free hydrogen/ammonia and negative emission technologies like direct air carbon capture and storage, known as DACCS.

In consideration of such international situation, I initially attempted to focus the book on the impacts of the COVID-19 disaster, responses to carbon neutrality initiatives, the Biden administration's policies and their impacts, and hopes and challenges regarding innovations. When I was about to complete the book, however, the international energy situation began to demonstrate another turnaround. In the second half of 2021, crude oil and all other energy prices spiked substantially and simultaneously.

In my history of energy market analysis, the simultaneous energy price spikes were the unique phenomenon except for energy price hikes during the oil crises in the 1970s. Amid the energy price spikes that were growing serious, industrial countries like EU members and Japan launched energy subsidization programs around autumn 2021. The Biden administration plagued with gasoline price spikes requested the OPEC-plus group of oil-producing countries and its leader Saudi Arabia repeatedly to additionally increase oil production. As such request remained unaccepted, the United States cooperated with Japan and other countries to release strategic oil reserves unusually for the purpose of lowering gasoline and crude oil prices. In October 2021, European Commission President Ursula von der Leyen stated that nuclear as stable energy would be necessary for the EU, leading to energy policy changes such as France's decision to construct new nuclear power plants.

The escalation of the Ukraine crisis decisively accelerated energy price spikes. Under Western countries' gradual enhancement of economic sanctions on Russia following Russia's invasion into Ukraine on February 24, 2022, international energy prices have remarkably shot up, with energy markets destabilized. Simultaneous energy price spikes since the second half of 2021 have accelerated and become more serious. Amid growing concern that large-scale disruptions to Russian energy supply could cause physical energy shortages in addition to price hikes, powerful energy security policies including a breakaway from energy dependence on Russia have been implemented mainly in Europe where the energy security concern is the most serious. In this way, the Ukraine crisis and energy security have become urgent top priority issues in the international energy situation. The world has no choice but to keep close watch on the issues. The current situation indicates a turnaround from the mid-2021 situation where climate change countermeasures and carbon neutrality dominantly attracted global attentions as a top energy issue. As a matter of course, carbon neutrality remains important. A new issue is how the current focus on the Ukraine crisis and energy security would affect carbon neutrality initiatives.

Facing dramatic changes since the second half of 2021, I have taken up these new developments including the ongoing Ukraine crisis of which the future is uncertain. As a result, the book comprehensively analyzes dramatic changes in the international energy situation since 2020 to explore implications for Japan's energy strategy. The book has given me a chance to comprehensively analyze the Dramatically Changing International Energy Situation as these dramatic changes have accidentally synchronized with the timing of my writing. I would be pleased very much to see this book making some contributions to energy market and policy analysis.