

## **Notable Points of the International Symposium in Tokyo on Global Energy Situation**

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On September 17, the University of Tokyo's Graduate School of Public Policy and the Institute of Energy Economics, Japan, cohosted an international symposium entitled “Growing Uncertainties of International Situation Regarding Energy Security and Global Warming” at the university's Hongo Campus. The symposium consisted of three sessions: Session 1 “Increasingly Uncertain Global Energy Security Situation,” Session 2 “Feasibility of 1.5°C Target,” and Session 3 “Direction of Japan's Energy Strategy under Uncertainties.” In each of Sessions 1 and 2, three panelists -- two foreign and one Japanese expert -- held a panel discussion under a moderator. In Session 3, two moderators from the previous two sessions held a dialogue-style discussion.

The panelists for Session 1, which I moderated, were Professor Jason Bordoff, founding director of the Center on Global Energy Policy at Columbia University, Peter Wood, chief energy adviser at Shell, and Hirofumi Matsuo, a commentator and senior editorial board member of the Nikkei Shimbun newspaper, who are known as polemics representing the United States, Europe, and Japan, respectively. Throughout the symposium, there were interesting discussions focusing on very current and hot topics. In the following, I would like to summarize the important points of discussions that left a particular impression on me mainly in Session 1, which I moderated. Incidentally, Session 1, though focusing on energy security as suggested by the title, covered the overall picture of the future energy transition, including responses to decarbonization.

The first issue is how we should view the future of fossil fuels and their roles. Given the destabilization of international fossil fuel markets and the weaponization of important resources during the Ukraine crisis and the similar experiences at the oil crises of about half a century ago, it is clear how to reduce dependence on fossil fuels as internationally tradable commodities, diversify energy sources, and increase energy self-sufficiency is important for enhancing energy security. At the same time, how to maintain and strengthen the stability of international fossil fuel markets is undoubtedly an important issue for global energy security.

In addition, it is necessary to pay attention to the fact that the trend toward decarbonization is ongoing to reduce the use of fossil fuels, at a time when efforts to strengthen measures against climate change are being promoted. Of course, as many oil-producing countries insist, the problem is not fossil fuels but CO<sub>2</sub> emissions accompanying fossil fuel consumption and their impact. Attention should be paid to the importance of decarbonizing fossil fuel use. However, the reality is that decarbonization efforts are pushing down the outlook for future fossil fuel demand. Against this backdrop, discussions at the symposium interestingly indicated that the reduction of dependence on fossil fuels as internationally tradable commodities is important as a long-term challenge for enhancing energy security and decarbonization, as mentioned above.

However, it is also true that fossil fuels, which account for more than 80% of the world's primary energy consumption today, will remain an important energy source, albeit with a gradual decline in their share of energy consumption. Undoubtedly, fossil fuels will continue to be used worldwide in large quantities, even if their share of energy consumption declines. I believe that an important point presented at the symposium is that even if fossil fuel consumption peaks at some point in the future, regardless of the exact timing, it should be assumed that fossil fuel consumption will not disappear rapidly but will continue to play an important role as an energy source for a considerable period of time. Therefore, I felt that the symposium participants shared the view that efforts to stabilize fossil fuel markets would remain critically important.

The second point of discussion that attracted my attention was the growing interest in the possibility of an increase in electricity demand, accompanied by the importance of a stable electricity supply. In this regard, the panelists' awarenesses were similar to each other. In the first place, the progress of electrification, in which the proportion of electricity in the final energy consumption expands, is foreseen as a global structural change in the "business as usual" future image of energy. Regarding the energy transition that promotes decarbonization, however, it is widely recognized that the most efficient prescription for decarbonization is to expand electricity's share of energy consumption as much as possible while promoting zero-emission power sources such as renewable energy and nuclear. As a structural change, therefore, the enhancement of decarbonization efforts will lead to an increase in electricity demand. However, new factors such as the rapidly increasing use of generative artificial intelligence and the large expansion of data centers are expected to further push up electricity demand.

Moreover, it is hoped that the expanding demand for electricity will be met as stably as possible, at a competitive price, and with zero-emission power sources. With regard to the stable supply of electricity, various issues are emerging, such as how to secure investment in expanding supply capacity, how to respond to intermittent supply due to the expansion of naturally variable renewable energy, the increasing frequency of extreme weather conditions, the intensification of natural disasters, and the risk of cyberattacks. How to enhance electricity security of supply, which is growing more important, has become the world's most important challenge. Through the discussions at the symposium, I came to feel strongly about this challenge.

The third point is that I found an important common awareness of the impact of the world's deepening division on energy security through discussions at the symposium. In order to reduce dependence on fossil fuels as internationally tradable commodities exposed to geopolitical risks over the long term, as mentioned earlier, it is necessary to promote so-called "clean energy investment" and the energy transition. With regard to renewable energy, storage batteries, electric vehicles, and other important elements of clean energy investment, however, China's overwhelmingly high share of their global production capacity and the concentration of supply sources for critical minerals for their production (especially in the midstream stage such as refining) in some countries have come to be recognized as important economic security issues.

An interesting view that came out of the symposium was that there is an emerging vicious cycle where geopolitical confrontation makes the energy transition difficult while the energy transition complicates geopolitical confrontation. Discussions at the symposium indicated that the world's division and geopolitical confrontation, such as the escalation of the U.S.-China confrontation, have led countries around the world to choose an energy transition path where additional costs are required for enhancement of domestic production of clean energy, domestic supply of critical minerals, and the diversification of critical mineral supply sources and that as the promotion of the energy transition is

likely to lead to an increase in dependence on China, major countries' race to avoid the increase in dependence on China is causing geopolitical competition and confrontation, and the rise of resource nationalism. The world will face a complex international energy situation in which efforts to reduce dependence on fossil fuels as internationally tradable commodities exposed to geopolitical risks will create and exacerbate completely different new geopolitical risks.

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