

IEA Executive Director Birol’s Special Speech on “Rapidly Changing Global Energy Landscape”

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On February 27, the National Graduate Institute for Policy Studies (GRIPS) and the Institute of Energy Economics, Japan, cosponsored a special lecture meeting at the GRIPS Soukairou Hall in Tokyo, where International Energy Agency Executive Director Fatih Birol made a speech under the title “Rapidly Changing Global Energy Landscape.”

The global energy market now sees various great changes and growing uncertainties about the future. However, it is very important and significant for energy policy and industry stakeholders in the world to depict the future picture of energy over a long term with uncertainties and multiple scenarios taken into account. It is also significant to extract a driver as a likely key element for anticipating the future. At the meeting, Dr. Birol built on the IEA’s World Energy Outlook 2017 released last November to make an energetic report that was rich with deep analyses on and profound insights into the global energy market and included clear messages. In the following, I would like to summarize the Birol report’s key points that were impressive for me:

First, Dr. Birol emphasized the importance of the United States as a factor that has led and will lead the global energy situation to dramatically change. The U.S. shale revolution, which started in the early 21st century, has fundamentally changed the supply and demand environment for the U.S. oil and gas market, the largest in the world. After the age of energy shortages since the 1970s, the United States entered the age of energy abundance. This change has dramatically altered the supply and demand environment for the international oil and gas market. Oil and gas are the world’s largest and second largest energy trade goods, exerting great influence on the global economy and international politics. As a result, the U.S. shale revolution has brought about a sea change in energy geopolitics.

Dr. Birol pointed out that U.S. oil and gas production would continue expanding over a long term and emphasized that the United States would become a very important gas and LNG exporter. Noting that gas demand would continue increasing in the global energy market and that gas’s role would grow more important, he anticipated that LNG demand would grow particularly significant. In this context, Dr. Birol highlighted the significance of U.S. LNG export expansion. It is significant for the United States to retain its oil and gas market leadership that is one of the major influential factors for the future international energy situation.

Second, the Birol report emphasized anew that Chinese energy market changes are one of the most important points for analyzing the global energy situation. China is the largest energy consumer and carbon dioxide emitter in the world. It has increased its presence not only in the energy and environment field but also in international politics and the global economy, becoming a key country that is indispensable for discussions on global governance. Although Chinese energy demand growth has decelerated from the rapid pace in the early 21st century, China will continue to expand energy demand at least until around 2040 and grow more important as the gravity center of the global energy market. Furthermore, China will rapidly switch from coal, which had accounted for dominant part of the total energy supply in China, to cleaner energy sources. Dr. Birol emphasized the importance of this point.

China is expected to increase its presence in the global gas and LNG market as its gas demand expands sharply amid such transition. As China has pursued clean energy, it has become the largest market for renewable energy including wind and solar photovoltaics. China plans to greatly increase nuclear power plants as a baseload power source free from CO₂ emissions and may replace the United States as the world's largest nuclear power generator in the 2020s. While the United States has remained the world's largest nuclear power generator since the launch of nuclear power generation, gas and electricity price drops under the shale revolution have led some existing U.S. nuclear power plants to be shut down. Dr. Birol pointed out that China's replacement of the United States as nuclear power generation leader would represent a symbolic change in the global energy situation.

Third, Dr. Birol emphasized that electricity's growing importance and its expanding share of the energy mix are certain while the global energy situation is covered with uncertainties. Even in developed countries where primary energy demand will decline, electricity demand is predicted to continue slow expansion over a long term. Furthermore, developing countries' electricity demand is very brisk. Dr. Birol noted that China's electricity demand growth until 2040 would amount to the present U.S. market size, while India's electricity demand growth would rival the present European Union market size. The world will thus grow more dependent on electricity.

Dr. Birol pointed out that how to supply electricity would grow even more important. His report highlighted that renewable energy as a domestic CO₂-free electricity source, on which great hopes are placed, has attracted the most global attention due particularly to solar PV cost cuts. On the user side, hopes are growing on the electrification of vehicles with demand increasing for electric vehicles. In this way, the general electrification of energy is creating new giant business chances. As electricity grows important, its stable supply will have vital importance. Dr. Birol pointed out that as new challenges and threats are emerging in regard to stable electricity supply, appropriate responses to them have become indispensable for foreseeing the future global energy situation.

Even amid great uncertainties about the future, energy policy and industry stakeholders must make choices and decisions regarding the future. Objective and rational analyses must be utilized to this end. The roles of the IEA and other energy institutions will thus remain important in the future. As part of such institutions, I myself am inspired to make efforts to play such roles.

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