Special Bulletin

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A Japanese View on World Energy Future

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On November 21 in London, JETRO London and the Japan Society cosponsored a seminar titled "A Japanese View on World Energy Future: The Impact of the Shale Revolution." Based on the theme, I made a presentation, followed by comments by Mr. John Mitchell, Associate Fellow for Environment and Resources at Chatham House, and Mr. Howard Rogers, Director of the Natural Gas Program at the Oxford Institute for Energy Studies. About 70 people participated in the seminar and proactively asked questions about my presentation and the abovementioned two experts' comments.

In my presentation, I outlined the world's energy outlook through 2040 in line with the IEEJ's "Asia/World Energy Outlook 2013" as introduced in my report titled "A Japanese Perspective on the International Energy Landscape (148): Analyzing Changes Induced by the Shale Revolution." I emphasized that the gravity of global energy problems will shift to Asia and that technological advancement will dramatically change world energy portfolios, energy security and environmental loads. In addition, I noted that progress in the shale revolution would exert a great impact on global energy supply and demand, economies and industries.

Regarding the impact of the shale revolution, I explained how substantial progress in the development of unconventional energy resources such as shale gas and oil in the United States and the rest of the world would impact competition between primary energy sources, international energy trade, carbon dioxide emissions and gross domestic product. In summary, I specified "winners and losers" in the substantial progress in unconventional energy resources development through a quantitative analysis. Among energy sources, I described gas as a winner and coal as a loser. I also indicated that the United States would be the largest among many countries as beneficiaries from the progress, while negative effects would emerge on the Middle East and the Former Soviet Union that depend on conventional energy resources exports.

At the end of my presentation, I outlined Japan's energy situation after the Fukushima nuclear plant accident and challenges involving energy policy revisions. I told the British audience that even more than two years after the Fukushima accident, Japan faces many challenges among which very important and urgent ones include whether or how to restart off-lined nuclear power reactors, policy revisions to establish the best energy mix, electricity market system reforms, how

best to secure the stable procurement of fossil fuels including liquefied natural gas, renewable energy and energy conservation promotion initiatives and relevant problems, and the harmonization of energy and environment policies.

In response to my presentation, Mr. John Mitchell commented that it is important to anticipate the energy future over a long term through 2040 and that a medium-term perspective to bridge long- and short-term outlooks is required in the actual energy market. Energy market participants and players make investment decisions in consideration of a five- to 10-year time span while anticipating the far future. As investment under these decisions provides key factors for shaping a farther energy future, anticipating medium-term developments is important. Hel also noted that the analytical finding that the substantial progress in unconventional resources development would greatly affect major conventional energy exporters including the Middle East might be very important. His view was that the negative effects of the shale revolution could destabilize oil-producing Middle Eastern countries and should be analyzed from other angles. Similar comments came from the audience, prompting me to think that the shale revolution's impact on or implications for each region should be analyzed more deeply, based on the quantitative analysis in the Outlook.

Mr. Howard Rogers also made very interesting comments on how the Asian LNG market will change as U.S. LNG exports expand amid the shale gas development progress. He pointed out that while buyers and sellers in the Asian LNG market are expected to have tough negotiations on LNG pricing, past changes in European and American markets indicate that the Asian market has already been in transition to great changes. He made the following four key points: (1) Japanese electric utilities as major LNG buyers have become desperate to form reasonable, competitive prices in the face of tough business conditions, (2) moves for a new pricing method cannot be ignored as LNG prices' linkage to crude oil prices is losing its rationality due to market changes, (3) U.S. LNG exports, including those under direct contracts with Japanese, South Korean and other Asian buyers and those to be procured by GDF-Suez, BG and other "aggregators" for sales to the Asian market, will have a great impact, and (4) competition between suppliers for markets will intensify as Russia, Canada and Mozambique are expected to launch new LNG projects around 2020. He indicated that while revisions to terms and conditions in existing LNG import contracts may be very difficult, the abovementioned factors signal great changes in the Asian LNG market.

In addition to these important comments, the audience proactively asked questions about Japan's energy and environment policies as well as the impact of unconventional energy resources development. In this sense, the seminar was very significant. It is significant for Japan to inform the rest of the world of its views on global energy problems. We may have to continue to hold this kind of seminar for sending Japan's messages throughout the world.

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