

IEA World Energy Investment Roundtable

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On March 9, the International Energy Agency sponsored the World Energy Investment Roundtable in Paris. A major objective of the workshop, the second of its kind, was to ascertain useful implications for the IEA's planned World Energy Investment report through presentations and discussions among energy policy and industry stakeholders and experts. More than 80 participants in the workshop held vigorous discussions under the "Chatham House rule". It comprised three sessions titled "the ongoing transformation of the oil and gas industry," "changing business model & financing of electricity sector investment" and "investment in the future: new technologies and business models." At each session, scene-setting presentations were followed by a panel discussion chaired by a moderator. The following summarizes particularly impressive points for me in the discussions:

At the first session that dealt with oil and gas investment, very interesting discussions came on investment based on a peak oil demand theory in which global interests have grown since last year. Long-term global oil demand outlooks released by various institutes in the world widely differ depending on various scenarios and assumptions. They range from robust oil demand growth to peak oil demand before a long-term decline, indicating great uncertainties. Even in the case of the fastest decline in oil demand, global oil demand around 2040 would be around 70 million barrels per day, indicating that large-scale investment would still be required due to natural depletion of oilfields now in operation, according to discussion in the workshop. Demand for natural gas, the cleanest among fossil fuels, is expected to continue growing globally for a long term, requiring investment in the whole supply chain to expand.

While various challenges and uncertainties were pointed out about future oil and gas investment at the workshop, how best to secure investment under "abundance" was impressively given as one of the keywords. Since the international oil and gas market is in oversupply amid progress in the development of unconventional resources including U.S. shale oil and gas, resource potential is high enough to cover future demand growth over a medium to long term, as recognized globally. Under such situation, oil and gas investment problems must be considered. As a result, competition is emerging for securing investment by which countries or regions, or by which investors, or at what investment paces and at what priorities. Particularly, how best to reduce costs would grow even more important for successful investment, according to a participant in the workshop.

Cost reduction pressure is a key common challenge for oil and gas producing countries as investment hosts and investors including national oil and gas companies, international oil and gas companies, services firms and other players. Various ideas and initiatives are required for anyone to successfully secure and implement investment for survival. Under such competitive situation, players could seek and select shorter cycle investment (featured by shorter cycle from investment to development, production and sales), as pointed out at the workshop. Shorter cycle investment typically represents U.S. shale resource development, indicating that U.S. oil and gas development investment will grow even more important. At the same time, it poses the challenge of how best to

secure other long-term investment projects amid an uncertain market environment. A typical longer cycle investment issue involves LNG projects featuring relatively large initial investment. While LNG is expected to play a growing role in the world, how best to secure investment to meet the expectation is a great challenge.

Very interesting issues were proposed for discussions on investment in the electricity sector and new technologies. Among impressive points for me in the discussions was how to secure stable supply of environment-friendly clean electricity and how to secure necessary investment to achieve the said electricity supply of supply amid the expanding electrification of energy demand meeting progress in digitization. Another impressive point was how to position renewable energy that has become a central target for electricity investment thanks to fast drops in power generation costs in a manner to attract global attention. Electricity sector investment has surpassed oil and gas investment as the center of global energy investment at last. As electrification is likely to make further progress, it is growing more important to secure investment covering the whole of electricity supply chains. Renewable energy power generation has become the largest target for electricity investment, becoming a central energy investment issue naturally.

As a bid price as low as 2 cents/kWh is seen in some auctions for renewable energy projects and there is expectation that overall costs of renewable power generation may decline further, it is necessary to consider a future in which renewable energy would command a central or dominant position in overall power generation or overall primary energy supply through electrification, as pointed out by some participants. In such future, participants asked if fossil fuel resources including oil and gas as well as coal could become “stranded assets” and if a cautious attitude is required on oil and gas investment in the future. In this respect, topics about technological development and cost drops not only for renewable energy but also for advanced vehicle technology and other areas are attracting global attentions. Optimistic views about technological development and cost drops are generally growing more influential. In fact, however, various challenges and uncertainties exist concerning technological development, cost cuts and advanced technologies’ penetration into the market. It may be important to take a cautious view their future courses.

While some participants in the discussions indicated hopes on various new or innovative technologies including those for renewable energy, others pointed out that the viewpoint of overall competitiveness covering costs for integrating intermittent renewable energy into power grids would be important. Electricity investment is expected to grow more important in emerging countries including Asian countries such as India and ASEAN members that clearly intend to utilize coal and other fossil fuels for power generation while promoting renewable energy. In this sense, it would remain very important to appropriately invest in fossil fuels however electrification makes progress, according to arguments by some participants in the discussions.

Energy investment frequently and essentially features long-term commitments. As various and large uncertainties lie in the long-term future involving energy and environment problems, it is growing more difficult to make investment decisions and implement investment on the premise of such uncertainties. Given that present investment will shape the future energy market, strategic investment decisions based on objective, reasonable and scientific analyses will grow even more important.

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