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Participation in Two Meetings for Scenario Planning

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Since last week, I have participated in brainstorming discussions based on the scenario planning approach at two different meetings. The first of them was the 46th Energy and Environment Summer School sponsored by the Institute of Energy Economics, Japan, on July 12 and 13. The second was a scenario planning workshop in Malaysia on July 16.

Scenario planning is an approach for exploring uncertain future scenarios. When a future scenario of a specific problem area is considered, various factors exert influence on the future scenario development. In scenario planning discussion, the most important and uncertain factor is extracted “as a branching point” to develop scenarios that differ depending on how the factor would work. In this sense, scenario planning differs from “business as usual” anticipations or outlooks based on trend analysis. By developing different future potential scenarios each of which is logically consistent in itself, scenario planning aims to contribute to strategic decisions on responses and policies for different future scenarios.

Participants in scenario planning discussions at the two meetings are now facing great uncertainties in considering strategic decisions for the future and intended to make preparations for addressing the uncertainties. In the following, I would like to summarize key impressive points in the scenario planning discussions at these meetings.

In the IEEJ Energy and Environment Summer School, some 100 Japanese energy industry stakeholders participated to discuss the theme of “Japanese and other energy markets reaching a turning point: Scenario planning to depict pictures for 2050” divided into 13 discussion groups over two days. While issues taken up for discussion ranged very wide, those related to international politics, geopolitical risks and crude oil prices attracted interests from participants. This indicates that crude oil price hikes and Iranian and other geopolitical risks behind the hikes have become key topics that energy industry people cannot ignore. Participants also indicated their growing interest in issues regarding the expansion of advanced energy-related technologies including renewable energy, storage batteries and electric vehicles for which costs have rapidly declined, as well as hydrogen, and carbon capture and sequestration (CCS) of which future potential has attracted attention. Many issues were also taken up in regard to nuclear power generation that is important for considering Japan’s future energy mix and has faced various challenges including the restart of nuclear power plants under new safety regulations. Furthermore, changes in the exterior environment for energy markets attracted interest along with issues involving the future course of the energy industry that faces structural energy market changes such as market liberalization and fiercer competition.

As issues of interest to participants were put in order in accordance with the scenario

planning approach for discussion to extract scenario branching points, various and numerous branching points were selected at each group. Generally, the nuclear plant restart and other issues regarding nuclear power generation and those related to the future and potential of renewable energy were selected in many groups. Issues of interest to discussion and scenario branching points selected by participants (and groups) indicate what discussion participants recognize as the most uncertain and important issue at present. While there are numerous uncertain factors for Japanese energy industry stakeholders, the utility or value of scenario planning is in discussion using flexible, strategic thinking on what factors would exert great influence in the future, what changes or developments could arise from such factors, what meanings resulting scenarios would have for energy industry stakeholders participating in the discussion and what responses should be taken.

In scenario planning discussion at the workshop in Malaysia, I saw interesting brainstorming on issues of interest based on Malaysia's unique situation. In Malaysia's general election in May, an opposition camp led by former Prime Minister Mahathir Mohamad defeated a ruling camp, leading to the first regime change since Malaysia's independence in 1957. Under Mahathir who has been re-inaugurated as prime minister, Malaysia is tackling new policies, reorganizing government agencies and replacing senior officials. Regarding energy, the Ministry of Energy, Technology, Science, Climate Change and Environment was established in July to cover a wide range of energy related areas. How energy policies would be developed under the new ministry is a matter of great interest to energy industry stakeholders in the country.

At the Malaysian workshop, some 20 energy policy makers, industry stakeholders and academics participated in discussion on Malaysia's energy scenario, including future pictures of the electric power sector, from 2030 to 2050. Various issues were taken up there, indicating the diversity and complicatedness of issues of interest to these participants. What I viewed as key points were how Malaysia should change the position of coal-fired power generation accounting for 45% of its total power output in 2017 and how we should view the future of renewable energy that is expected to play an important role to reduce the heavy dependence on coal and be expanded substantially under new policies.

The reason for coal's largest share in the power mix is that coal power generation is the most competitive power source. Coal is socially and economically required to provide citizens (including low-income people subject to subsidization) with electricity at affordable prices to support the Malaysian economy. In this sense, the importance of coal-fired power generation is based on the "realities" in Malaysia as long as the abovementioned needs exist, coal would have no choice but to play some key role. However, Malaysia is enhancing initiatives to prevent climate change and air pollution, leading to very important challenges for coal. As noted above, the new Malaysian government is considering an ambitious policy to rapidly expand renewable energy including solar photovoltaics, biomass and biogas. How such policy would or could be implemented is still uncertain. At the workshop, therefore, participants discussed what points would be important for a scenario where renewable energy would be expanded substantially. They also discussed how international arguments over climate change, energy security changes and crude oil price fluctuations would influence renewable energy, coal and nuclear power generation. This exactly indicates the present issues of interest to Malaysian people.

In preparing for the uncertain future, we must develop capabilities to make and implement

strategic decisions. The scenario planning approach is designed for such purpose. Its appropriate use will remain important for energy stakeholders in the future.

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