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Significance of Best Energy Mix Should Be Reaffirmed Now

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As the international energy situation undergoes an unprecedented upheaval, with uncertainties growing about the future, Japan has resumed policy discussions in the run-up to updating its Strategic Energy Plan. On July 1, the Strategic Policy Committee of the Advisory Committee for Natural Resources and Energy held its 31st meeting to resume the discussions for the first time in some 10 months.

In the previous updating, the government decided on the Fifth Strategic Energy Plan in July 2018, reaffirming that Japan would steadily achieve its target energy mix for FY2030 (formulated in 2015). Of the target FY2030 energy mix, renewable energy accounted for 22-24% of total power generation, nuclear for 20-22%, liquefied natural gas for 27% and coal for 26%. It was a desirable energy mix designed to simultaneously attain the energy self-sufficiency rate, electricity cost and CO_2 emission reduction targets related to the so-called 3Es – energy security, economic efficiency and environmental conservation. The Fifth Strategic Energy Plan also specified energy policy challenges over the longer term up to 2050 and featured such key concepts as multiple scenarios, a scientific review mechanism and a technology self-sufficiency rate.

Since policy discussions for the formulation of the Fifth Strategic Energy Plan, however, the situation surrounding Japan has changed dramatically. Policy discussions based on such changes and the new situation are indispensable for formulating the next Strategic Energy Plan.

The new situation first features the impact of the COVID-19 pandemic. The novel coronavirus outbreak rapidly expanded early this year into the pandemic, of which the future course or result cannot be forecast by anyone. Its impact has dramatically shaken the international energy situation to an extent that no one could foresee. Over a short to medium term, substantial drops in energy demand, subsequent oversupply and plunges in crude oil, natural gas, LNG, coal and electricity prices have become the greatest matter of concern to the world. Price drops differ by market depending on conditions. However, price drops have greatly affected the energy supply industry, discouraging energy investment. Weak energy prices have economically hurt oil-producing countries depending heavily on energy export revenue. Their economic deterioration is expected to lead to their economic and social destabilization.

While the short to medium-term impact is serious, whether the world would transform structurally over a long term is attracting global attention. A key issue is whether the global energy transition, which had seemingly started before the pandemic, would accelerate, stagnate or change its course.

Particularly, decarbonization initiatives and the impact of international politics and geopolitics changes on energy security in a post-corona world have become matters of great interest. How will global energy consumption change under the impact of these factors? How will the position

of fossil fuels such as oil, gas/LNG and coal change? Will the electrification accelerate? Will the future picture of renewable energy or nuclear change? What will the roles of hydrogen and other innovative energy technologies be? These questions are attracting great attention.

As these matters of interest have great uncertainties, their future courses are difficult to predict. It is therefore risky to fix any single future picture for considering a relevant strategy. We must prepare future scenarios covering various possibilities and work out subsequent long-term strategies and roadmaps for their implementation flexibly and strategically. As a matter of course, such long-term strategies may include a strategy to realize or attain a “desirable future”.

When considering long-term strategies with future uncertainties taken into account, we should have high-level philosophies or ambitions for ideal goals. At the same time, we should coolly assess realities and have realistic strategic discussions based on objective, scientific and reasonable facts. How to balance idealism and realism is also important for policy discussion in Japan.

It is also important to have a balanced energy mix. As noted above, the target FY2030 energy mix was designed to simultaneously attain the 3Es targets. The simultaneous attainment of the 3Es targets hold the key to the balancing. Japan’s basic policy of attaining the 3Es targets while securing safety will remain important in future policy discussions. The problems are how we should assess progress and challenges regarding the attainment of the FY2030 targets, how we should set new 3Es targets for a new target year (like FY2040) and what optimum energy mix we should select.

I here would like to note anew that there is no perfect energy source. All energy sources including energy savings have both strengths and weaknesses. Discussions frequently focus on bright or dark sides of a specific energy source. We must keep some distance from such discussions and consider the optimum energy mix required for Japan. The best energy mix differs by country, depending on endowed energy resources, economic, industry and social development phases, energy industry structure, energy-related infrastructure and technology development conditions, the geopolitical environment and other factors. Given that the best energy mix varies by country, Japan should pursue its own best energy mix based on its inherent conditions. In doing so, Japan should take advantage of the strengths of individual energy sources and technologies, make maximum efforts to overcome their respective weaknesses, and utilize all options in a balanced manner. The energy mix should also include contributions from innovative energy technologies while giving consideration to time horizon.

In addition to the best energy mix, the integration and best mix of foreign, economic, technological, industrial, educational and other relevant policies are important for Japan and other countries to realize energy and environment policy targets. Given that energy agenda are extensive and comprehensive, the best policy mix is indispensable. The full utilization of market mechanisms is also important for the efficient attainment of energy policy targets. On the other hand, policy responses or interventions are required to address so-called “externalities” including national security and environmental problems. In this sense, the best mix of policies and market mechanisms plays a key role. Also indispensable is the best mix of integral initiatives to bring together the wisdom of the government, industry, academia/experts and citizens, with these agenda taken into account.

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