

Questions for the 7th Round-Table for Studying Energy Situations

~General Statement~

Q1: Efforts required to achieve the goals of the Paris Agreement

- 1) On the basis of the Paris Agreement, how do you think the global energy demand and supply will change through 2050? Under current situation where the cost of renewable energies decline and the gas production including US shale gas is expected to grow, there is a view that world's electricity mix go straight toward “only renewables and gas” scenario. How do you see this view? Addition, how do you think about keeping multiple energy sources such as nuclear energy and coal?
- 2) How do you understand the prerequisites for realizing the Paris Agreement and the challenges to overcome and what is the role of government there?(e.g. setting targets and developing infrastructures for decarbonization of electricity, electrification of transport and heat use and use of hydrogen).
- 3) What strategies and investments are required for the energy industry in the megatrend of achieving the targets of the Paris Agreement? (e.g. converting electricity supply to zero emission sources)

Q2: Renewable energy

⇒How do you evaluate the possibilities and challenges of renewable energy toward 2050, in consideration of the situation where renewable energy is expected to grow into a major power source in the whole world as global investment in renewables is increasing and cost is reducing, while, on the other hand, challenges like the following will need to be overcome for large scale deployment:

- independent from financial support
 - Ensuring balancing capability (utilization of batteries in place of fossil fuel-fired power generation for decarbonization)
 - Re-construction of power transmission lines
- (e.g. How do you evaluate the efforts and challenges of Germany as an “advanced country in renewable energy”?)

Q3: Nuclear energy

⇒While each country adopts different policies on the use of nuclear energy, how do you evaluate the possibilities and challenges of nuclear energy toward 2050, in consideration of the aspect of an important zero-emission power source in relation to the long-term objective of the Paris Agreement, as well as the challenges such as responses to cost overrun and acquisition of public trust in the case of Japan?

Q4: Fossil fuels

⇒While IEA has presented an outlook of increasing demand (although with a variation) for fossil fuels including coal, how do you evaluate the future position of coal, in consideration of the new movement of withdrawal from investment in coal, urged by the global trend of ESG investment? On the other hands, there is also the importance of advancing the efficiency of global coal utilization, how do you think of the possibility of a shift to gas?

Q5: Innovations

- 1) On the basis of the understanding that innovation is indispensable for achieving the targets of the Paris Agreement, what sort of innovation do you pay attention to most as an innovation that will significantly change the energy demand and supply mechanism? For example, how do you evaluate hydrogenation technologies?**
- 2) How will the progress in digital technologies such as AI and IoT etc. influence energy demand and energy-related industries?**
- 3) What actions will be required for the nations to promote innovation?**