

Summary of Press Conference Comments Made by Kingo Hayashi, FEPC Chairman
on June 14, 2024

I am Kingo Hayashi, Chairman of the Federation of Electric Power Companies (FEPC).

I have two topics I want to discuss today: 1) the significance of the passing of the Hydrogen Society Promotion Act and CCS Business Act and considerations for future systems and measures, and 2) electricity supply and demand for this summer and response to medium-term projections.

On the first topic of the passing of the Hydrogen Society Promotion Act and the CCS Business Act: in last month's press conference, I talked about the electricity industry's views on the revision of the Strategic Energy Plan. I mentioned then that to achieve carbon neutrality in 2050, we will need to tackle all available options with full force, rather than focusing on just a few.

One of these options is the decarbonization of thermal power generation. Last month, two important laws regarding the use of hydrogen and ammonia, as well as CCS were passed. The passing of these laws is significant for Japan's GX Strategy and we believe they will play an important role in the transition in thermal power generation.

Here I want to discuss the significance of these two laws as electric utilities, and talk about a few considerations we believe need to be addressed when building systems based on these laws.

First, on the Hydrogen Society Promotion Act, discussions are currently underway on detailed design of framework for open calls for assistance, which focuses on the price differential between hydrogen, ammonia and other fuels that contribute to decarbonization and existing fossil fuels, as well as assistance for developing bases

using hydrogen, ammonia, and other fuels. We look forward to these initiatives creating an environment conducive to using hydrogen and ammonia in various business sectors.

As it currently stands, businesses that use hydrogen and ammonia exclusively in the power generation sector will not be given assistance. For the power generation sector to receive this price differential assistance, it will need to create a plan together with the steel, chemistry, or other sectors. However, thermal power plants exist across Japan including in regions where there is no steel or chemical industry. To balance stable supply of electricity with decarbonization, we believe measures are required for the procurement of hydrogen and ammonia, even for businesses who work exclusively with thermal power generation.

The second consideration is that the assistance will only be given to businesses that will start supply by FY2030. We believe it is important to provide continuous assistance to second movers in the supply chain who will start supply hydrogen and ammonia in the power generation sector after FY2030 on a longer timeline.

This may not be directly tied to this law, but in terms of systems related to the electricity system, we also believe the Long-term Decarbonization Power Source Auction also needs to be improved. In the first auction, hydrogen and ammonia co-firing and biomass firing did not meet the target recruitment volume.

We believe this can be addressed through improvement measures such as allowing upstream fixed costs such as the facility costs for the production of hydrogen and ammonia and variable costs such as the operating costs to be included in the auction bid price. We also believe that raising the ceiling price would also expand the range of options available to us as utilities.

Moving onto the CCS Business Act, this Act clarified measures for securing stable storage of CO₂ and the rules and regulations for the transport and storage business. This is the first law to be passed for CCS and represents an important step toward

developing a business environment for it.

One key point to consider here is that this law does not cover separation and capture. For private operators to make the decision to invest in the separation and capture businesses, it is essential to establish a business scheme that recovers operating costs and to clarify the technical security standards. We hope that the legal positioning of separation and capture will be clarified and that the necessary business environment will be developed.

Thermal power generation continues to be an indispensable power source as balancing capacity for solar, wind and other variable power sources in addition to maintaining stable supply. We believe it is important to clarify the role of existing thermal power plants in the Strategic Energy Plan and to advance the development of hydrogen and ammonia generation and CCS as a transition power source.

Utilities are also working to develop technologies in collaboration with other industries. For example, 20% ammonia co-firing tests have been conducted at the JERA Hekinan Thermal Power Station and a demonstration of hydrogen co-firing and dedicated firing in a gas turbine has been held by the Kansai EPCO. We will continue to accelerate initiatives to decarbonize thermal power generation as utilities and hope that progress in developing a business environment through the systems and measures discussed today will lead to increased use of hydrogen and ammonia.

The second topic of the day is electricity supply and demand for this summer and response to medium-term projections.

The Strategic Policy Subcommittee held on June 3 announced the supply and demand projections for this year, which reflect the latest plans including changes to the repair plans in power plants and recovery projections. Although the reserve rate in the East Japan area is marginally lower than it was in March 2024, we expect to be

able to secure the minimum necessary reserve rate for stable supply of 3% even in the Hokkaido, Tokyo and Tohoku areas in July which have the lowest levels.

However, in recent years, we have seen unexpected supply crunches due to unforeseen issues with generation facilities and rapid fluctuations in temperature. We as utilities will be vigilant and prepare for the summer high-demand season by doing our utmost to secure supply capacity. To that end, we ask the public to use electricity efficiently to the extent possible while prioritizing their health.

I also want to briefly touch upon our medium-term supply and demand projections and supply capacity.

The Organization for Cross-regional Coordination of Transmission Operators (“OCCTO”) published the FY2024 supply plan which included the annual Expected Unserved Energy (“EUE”) for the next ten years. This annual EUE is the probability of an outage occurring in a year derived by probabilistically evaluating the number of demand fluctuations and unscheduled shutdown of power plants against supply capacity, including inflows from other utilities through interconnections. It is, in short, the expected value of outages.

The introduction of this annual EUE comes against a backdrop of rising uncertainty in both supply and demand due to the diversification of power sources and the growth of renewable energy. This has made it difficult to assess supply and demand risk with just the supply reserve rate, which is just one side of a supply and demand crunch, of the most difficult moment when there is peak demand. The situation now requires a view of both supply and demand over 8750 hours, 365 days a year.

According to OCCTO, the Hokkaido, Tokyo and Kyushu areas in FY2025 exceeds the target outage volume due to suspensions and decommissioning of power sources, and from FY2026 through FY2033, the total for the 9 areas excluding Okinawa, does

not meet the criteria for supply reliability. In other words, these projections indicate there is a concern that there will be a supply crunch on a nation-wide level and that we are in a critical situation.

In regards to long-term projections beyond a ten-year time span, as mentioned previously, electricity demand is expected to grow substantially due to electrification and digitalization including increases in data centers. Meanwhile on the supply side, there are many risks posed by aging of thermal power plants and stagnation in the investment into new power sources.

To ensure that we can secure the necessary supply capacity in the future, we must generate realistic demand projections and plan to build the necessary facilities to accommodate that demand. We must think about the energy mix and energy security having secured this necessary supply capacity.

The maximal use of nuclear energy will be an important option to achieve this goal. Stable operation of restarted power plants, accelerating the restart of BWRs, and in the future, building, expanding, and replacing nuclear power plants will be necessary.

As electric utilities, we will do our best in a variety of respects to rebuild a sustainable power grid to support Japan's economy and the livelihoods of the people now and in the future.

This concludes my remarks for today.

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