Special Bulletin

A Japanese Perspective on the International Energy Landscape (599) August 25, 2022

# Prime Minister Kishida Calls for Accelerating Promotion of Nuclear Power

Ken Koyama, PhD
Chief Economist, Managing Director
The Institute of Energy Economics, Japan

On August 24, Japanese Prime Minister Fumio Kishida emphasized the importance of nuclear power generation for the promotion of decarbonization and the enhancement of energy security and called for accelerating the utilization of nuclear energy. He was delivering an online speech for the second meeting on green transformation at his official residence. As specific measures to accelerate the utilization of nuclear energy, Kishida cited the speedier restart of nuclear power plants, the extension of the nuclear plant lifetime and the development and construction of next-generation nuclear reactors. He instructed to accelerate the consideration of these measures and reach a conclusion on them by the end of this year.

As for the restart of nuclear power plants among the measures to be considered, Kishida said that the national government will take leadership to restart the seven reactors which had got permission of Reactor Installment License by next summer or later in addition to 10 reactors subjected to earlier restarts (including six now in operation). Kishida in July offered to restart up to nine reactors to cope with a tighter electricity supply-demand balance in the coming winter. This offer of the restart of 9 reactors included nothing new because the nine were included in the 10 reactors subjected to earlier restarts. As a matter of course, however, it was significant for the prime minister to specify the numerical target for restarting nuclear reactors. Importantly, Kishida this time made a further step forward by vowing that the national government would take leadership in seeking to increase the number of restarted reactors to 17.

The restart of nuclear power plants is given priority because the effective utilization of existing nuclear plants is viewed as a key option to contribute most effectively and efficiently to achieving the so-called 3E's – energy security, environment protection and economic efficiency – simultaneously by reducing $CO_2$ emissions, securing stable energy supply and cutting electricity and energy costs. As a matter of course, safety must be secured as a precondition for restarting nuclear power plants. However, it was extremely significant that the prime minister proactively and clearly offered to accelerate the restart of nuclear plants.

Regarding the important utilization of existing nuclear power plants, it is also significant that the measures Kishida offered for consideration included lifetime extension of nuclear plants. Under the current law and regulations, the lifetime of nuclear power plants is set at 40 years and can be extended for 20 years if approved by the Nuclear Regulation Authority. In this way, nuclear plants can be operated for up to 60 years at maximum. Given the 40-year lifetime, existing nuclear reactors may be closed one after another from the 2020s, leading to a rapid fall in Japan's nuclear power generation capacity. Even if the lifetime is extended to 60 years, the rapid fall in nuclear capacity in Japan will be delayed but start in the 2040s.

Nuclear power generation will be required to account for 20-22% of total power generation

in Japan to achieve the goal of cutting greenhouse gas emissions in 2030 by 46% from 2013. To this end, some 30 reactors may have to be restarted and subjected to the lifetime extension. Nuclear power generation is also expected to contribute to achieving the 2050 carbon neutrality goal. In this respect, the utilization of existing nuclear power plants through the lifetime extension has been seen as a key point. Under the instructions by Kishida, the lifetime extension will be reviewed. Moves to extend the lifetime of nuclear reactors with safety being secured have been seen globally. In the United States known as the world's largest nuclear power capacity, the lifetime has been extended to 80 years for some nuclear reactors. Kishida might have taken into account the global trend in making the instructions.

Another important point of the Kishida instructions is that he called for developing and constructing innovative next-generation reactors with new safety mechanisms. This means that Japan should build new nuclear power plants that are next-generation innovative reactors. Since the Fukushima nuclear disaster until recently, the national government had reiterated that the construction of new nuclear power plants had not been assumed. Although nuclear energy had been viewed as important for the 3E's, the Strategic Energy Plan and other government documents had called for reducing Japan's dependence on nuclear power plants as much as possible while restarting nuclear reactors with their safety being secured. As interest has grown in new nuclear reactors such as small modular reactors in the world, including Western countries, however, the Japanese government has made a policy turnaround towards the potential construction of new nuclear reactors.

Why has the potential nuclear energy policy turnaround come under Prime Minister Kishida 11 years after the Fukushima nuclear disaster? I see two factors as contributing to the potential policy change. The first factor is connected with the energy situation. Japan is required to substantially cut $CO_2$ emissions towards the 2030 GHG emission reduction goal and the 2050 carbon neutrality goal. In such situation, nuclear energy as a zero-emission electricity source has been expected to make great contributions to the emission reduction. Furthermore, Europe and Japan have accelerated moves to review nuclear energy seen as important for ensuring energy security and for providing stable electricity supply in the energy situation under the Ukraine crisis. Particularly, Japan has been urgently required to secure stable electricity supply due to tighter electricity supply-demand balances in March and this summer and a forecast of an even tighter balance in the coming winter. Energy is no longer similar to "water or air". It is now seen as indispensable for the economy and civic life, becoming an important good that must be supplied stably at affordable price. Nuclear energy has thus been recognized as making key contributions to stable energy supply.

The second factor is a dramatic change in public opinion on nuclear energy under the influence of the first factor. The Fukushima disaster had prompted Japan's public opinion to rapidly become critical of nuclear energy. Majority public opinion had opposed the restart of nuclear power plants. According to a report in the Yomiuri Shimbun newspaper on August 25 of this year, however, 58% of respondents in a poll by the newspaper and the Waseda University Institute for Advanced Social Sciences supported the restart of nuclear power plants satisfying regulatory standards, exceeding the opponent share (39%) for the first time in the poll's history. Similar results have been seen in other polls. While nuclear issues remain politically and socially very sensitive, it is significant that public opinion on nuclear energy is changing. In such situation, the government or the Kishida administration might have made up its mind to make a new step forward regarding nuclear energy policy.

As a matter of course, it is uncertain what changes would come under Prime Minister Kishida's instructions to consider accelerating the promotion of nuclear energy utilization. Various

opinions on the instructions may be presented, leading to national discussions on nuclear energy. On the other hand, various challenges exist in regard to regional communities, technology, economy, institutions and human resources. How to restore public confidence in nuclear policy and in nuclear-related industries and companies is an issue. Various twists and turns are expected for the future. Under various events seen in Japan and the rest of the world, the situation regarding nuclear energy may be changing. Japan's nuclear initiatives are significant for its own 3E's and for international energy issues including the impact on the global liquefied natural gas situation. The Japanese initiative to open a new dimension for nuclear energy is attracting global attention.

Contact: report@tky.ieej.or.jp
The back issues are available at the following URL
http://eneken.ieej.or.jp/en/special_bulletin.html