

Taiwan's Energy Policy Challenges Just before the Regime Change (1)

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On April 21, the 12th Japan-Taiwan joint seminar on energy cooperation took place in Taipei. The seminar has been held in Japan and Taiwan alternately since the first one in 2001 to discuss their energy policy challenges and bilateral cooperation in solving these challenges. More than 30 Taiwanese representatives attended the seminar, including senior officials from the Bureau of Energy at the Ministry of Economic Affairs, from energy-related think tanks such as the Industrial Technology Research Institute and the Taiwan Institute of Economic Research, and from government-run companies.

As is well known, Tsai Ingwen, leader of the opposition Democratic Progressive Party, won a landslide victory in Taiwan's presidential election on January 16, forcing the Chinese Nationalist Party known as Kuomintang to transfer power for the first time in eight years. The seminar to discuss the energy situation and energy policy challenges in Taiwan came at a very interesting timing just before the Tsai Ingwen administration will be inaugurated on May 20. In the following, I would like to summarize Taiwan's energy policy challenges that were particularly impressive to me at the seminar.

The most important point is that nuclear power generation, which accounts for 16% of power output in Taiwan, has great uncertainties and challenges that could have various impacts on Taiwan's future energy and environment problems. While the first to third existing nuclear power stations have stably and efficiently operated in Taiwan, the future course of nuclear power generation has become uncertain on people's growing concern about nuclear safety since the 2011 Fukushima accident. The Taiwanese government has grown more cautious about nuclear energy. In July 2015, the government decided to freeze the fourth nuclear power station construction, which is close to completion. The three existing nuclear power stations are now scheduled to terminate operation around 2020. Nuclear energy has played key roles as one of Taiwan's energy policy options to secure energy security and reduce global warming gas emissions, but its future course has grown more uncertain.

If the existing three nuclear power stations terminate operation without the fourth one being counted, Taiwan will have to prepare an alternative electricity source. It now faces key challenges for its three Es (Energy security, Economic efficiency and Environmental protection) including maintenance of energy self-sufficiency, climate change measures and restrictions on

energy prices to maintain and enhance the Taiwanese economy's competitiveness. Energy security involves international energy supply and demand problems that are difficult to foresee, although current energy prices are low. Regarding climate change measures, Taiwan has submitted its intended nationally determined contribution (INDC) to cut greenhouse gas emissions by 50% from the business-as-usual level in 2030.

Through discussions at the seminar, I felt that great expectations are being placed on measures to take advantage of and enhance Taiwan's industrial and technological infrastructure, promote energy conservation and renewable energy, and develop and diffuse innovative technologies. Regarding energy conservation, Taiwan has decided on various measures to reduce energy consumption per gross domestic product, or energy intensity, in 2025 by 50% from 2005, including tougher efficiency standards for energy-consuming equipment, energy conservation labeling, smart energy systems and electricity saving targets for large industrial users. High expectations are placed on renewable energy. Taiwan plans to boost renewable energy power generation capacity from 4.3 gigawatts (GW) in 2015 to 17.3 GW in 2030 mainly by expanding solar photovoltaics and offshore wind power plants. However, I felt that as expectations are great on renewable energy, Taiwan may raise the renewable energy power generation capacity target further depending on future energy policy discussions.

From the viewpoint of innovative energy measures, I felt that great expectations are being placed on lower-carbon power generation, and carbon capture and storage (CCS) technologies as coal accounts for about 50% of Taiwan's power generation. I also felt that Taiwan is greatly interested in the development and diffusion of fuel cells and the relevant building of a hydrogen-based society. At present, these technologies are subject to strategic initiatives for Taiwan or other economies in the world. Taiwanese participants in the seminar enthusiastically asked questions on Japan's present and future situations regarding fuel cells and hydrogen-based society, indicating their great interest in these technologies and their ambition to cooperate with Japan in the advanced, innovative technology area. Interestingly, some Taiwanese participants noted they were concerned that the present low oil prices could reduce incentives for enhancing and promoting further energy conservation and renewable energy development and stepping up innovative energy initiatives. The seminar gave me an opportunity to appreciate that given that Taiwan along with Japan is a net energy importer depending heavily on energy imports, Taiwanese energy policy planners are cautious of adverse effects of the present low oil and liquefied natural gas prices that now economically benefit Taiwan.

Lastly, I would like to take up the LNG issue. Taiwan is the world's fifth largest LNG importer, increasing LNG imports steadily over recent years. Given that Taiwan faces uncertainties about future nuclear power generation, depends heavily on coal power generation, has submitted an INDC for GHG emission cuts and is expected to take much time before getting great contributions from renewable and innovative energy, LNG is likely to play a greater role in Taiwan over a medium term. Therefore, Taiwan is now constructing its third LNG receiving terminal following the existing two. At the same time, Taiwan is required to procure LNG at more competitive prices and more

flexibly to meet the great expectations placed on LNG and cope with uncertainties about nuclear energy. The seminar indicated anew that Taiwan under such requirement has great ambition to cooperate with Japan and other Asian LNG importers in developing the Asian LNG market and improving market liquidity and functions. Japan and Taiwan have a similar energy supply and demand structure and similar energy policy challenges and are expected to promote their cooperation for the mutual benefits and prosperity.

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