

## **Significance of Surplus Supply Capacity: Saudi Arabian and Japanese Cases**

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As the international energy situation remains turbulent, there is growing interest in the presence and significance of surplus energy supply capacity for stabilizing the market and adjusting the supply-demand balance. Here, the surplus supply capacity refers to the capacity that already exists physically, is left unused for some reason, and can be used through some decisions or solutions to immediately increase supply. From a different viewpoint, a new capacity to be made available in the future through investment decisions at present is an addition to the current capacity, differing from surplus supply capacity. Since surplus supply capacity is now available for adjusting the supply-demand balance, it can produce great effects immediately and efficiently.

Saudi Arabia's surplus crude oil production capacity is often cited as representing surplus supply capacity in the international energy market. At present, Saudi Arabia has a sustainable crude oil production capacity of more than 12 million barrels per day. Since actual production in August was a little less than 9 million bpd, it has a surplus production or supply capacity of more than 3 million bpd. This means that one-quarter of the total production capacity is left unused and retained as surplus capacity. In fact, other Middle Eastern oil-producing countries such as the United Arab Emirates, Iraq, and Kuwait as well have surplus production capacity, but Saudi Arabia's surplus capacity is overwhelming. OPEC or OPEC-plus group oil-producing countries, including Saudi Arabia, are currently adjusting the supply-demand balance through production cuts. Although the production cuts produce new surplus supply capacity, it is important that Saudi Arabia's surplus supply capacity continues to exist at all times while fluctuating based on supply-demand adjustments. This means that Saudi Arabia has the potential to quickly expand oil supply at any time, if necessary.

That is why the importance of Saudi Arabia with huge surplus supply capacity, or the potential to quickly increase production, attracts attention amid crude oil price hikes, prompting market participants to become interested in and place hopes on the oil kingdom. This leads to Saudi Arabia's great presence and influence in the international energy market. With crude oil prices' hikes since the second half of 2021 and their later maintenance of high levels, the importance of Saudi Arabia has actually increased sharply. Major oil-consuming countries have called on Saudi Arabia to increase production. In July 2022, U.S. President Joe Biden visited Saudi Arabia to directly ask its leaders to expand oil production. In late 2022, Chinese President Xi Jinping as well visited Saudi Arabia to strengthen bilateral relations. In this way, Saudi Arabia's presence increased even further amid soaring crude oil prices. The source of Saudi Arabia's great presence is the enormous surplus oil production or supply capacity.

Why does Saudi Arabia alone have such a huge surplus supply capacity? Because Saudi Arabia under its national strategy has chosen to refrain from producing crude oil at its full capacity after initial investment to develop huge production capacity. The oil kingdom has made a strategic decision to deliberately accept an efficiency decline caused by below-capacity production and secure

its position as a market maker. For any company or country that has invested massive money to develop production capacity, it is economically rational to fully or highly utilize the capacity for actual production. This is why almost all other oil-producing countries in the world implement full-capacity production. In this sense, Saudi Arabia is truly unique.

An important point of view here is that surplus supply capacity, which can immediately increase supply, if necessary, can be viewed as a capacity that is usually left unused or wasted in some sense. Not only in the international oil market, but also in all other energy markets, the trend of seeking efficiency and rationalization has continued amid intensifying competition over the long term, leading surplus supply capacity to be reduced substantially. Surplus supply capacity, though available to increase supply, if necessary, can be viewed as a waste cost as far as it is left unused. In a competitive energy market, eliminating waste, pursuing rationalization, and reducing costs are key survival principles. Therefore, the world or the energy market as a whole has promoted the reduction of surplus supply capacity. While the efficiency of the market has increased, the market's capacity to respond to unforeseen emergencies has declined, making the market more vulnerable.

In this way, the presence of Saudi Arabia's huge supply capacity is unique in the international energy market as a whole. From my perspective, however, there is another extremely unique presence of large-scale surplus energy supply capacity. It refers to idled nuclear power plants in Japan.

After accounting for 30% of Japan's electricity mix, all Japanese nuclear power plants were shut down temporarily in the wake of the Fukushima Daiichi Nuclear Power Station accident in 2011. Later, however, some of them have been screened under new regulatory standards and restarted far more slowly than expected earlier. Unit 2 of Kansai Electric Power Co.'s Takahama Nuclear Power Station became the 12th nuclear reactor to be restarted in Japan this month. However, more than 20 other reactors are still left out of operation. Of course, the background to the current status includes the enormous social impact of the Fukushima accident, time-consuming strict screening under new safety standards, complex local coordination, and other difficult challenges. Therefore, idled nuclear power plants, though existing physically as electricity supply capacity, characteristically differ from Saudi Arabia's surplus oil production capacity that can be used to expand supply quickly depending on decisions by government leaders.

Even so, however, this surplus energy supply capacity will exert a great influence on Japan's energy supply-demand balance, if piled-up problems are resolved. The idled capacity, if made available through safety screening, may contribute to reducing CO<sub>2</sub> emissions, improving Japan's energy self-sufficiency, cutting fossil fuel import costs, stabilizing the electricity supply-demand balance, and lowering electricity costs, realizing the improvement of Japan's 3E's -- economic efficiency, energy security, and environmental conservation -- in an extremely effective manner.

I have had rich opportunities to exchange views with energy experts from around the world at international conferences and other events, where I have felt that Japan is seen as a unique country that retains extremely important surplus energy supply capacity from a global point of view. Of course, the actual situation of idled nuclear power plants as the surplus energy supply capacity, as well as challenges regarding their utilization, are also well understood. However, the fact that such surplus energy supply capacity itself rarely exists is attracting attention. That is why energy stakeholders around the world are paying much attention to progress in the promotion of nuclear reactor restarts, the revision of systems to extend their service life, the consideration of new nuclear power plant construction, and other moves to promote nuclear energy under Prime Minister Fumio Kishida's leadership since last year. In addition, progress in the restart of nuclear reactors in Japan will not only

contribute to Japan's 3E's, but also have a significant impact on the supply-demand balance in the international energy market. Progress in Japan's restart of nuclear reactors may help to reduce LNG and other fossil fuel imports into Japan, contributing to improving the supply-demand balance in the international gas and LNG market, where supply capacity has declined due to the loss of Russian pipeline gas supply to Europe. Regarding the future domestic and foreign energy situation, Saudi Arabia's oil policy and the progress in Japan's restart of nuclear reactors may attract attention from the perspective of surplus energy supply capacity and its impact.

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