

## The State of LNG Imports in Recent Years

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### 1. Trends in LNG imports

In April 2020, the volume of liquid natural gas (LNG) imports at 5,574,000 tons exceeded the levels of April 2020 and April 2022 and approximately equaled the level seen in April 2019, prior to the COVID-19 pandemic (Fig. 1). During the previous year of 2021, while imports exceeded those of 2020 year-on-year from January through August, they suddenly began falling below the previous year's figures from September onwards. Changes in LNG consumption levels among electricity utilities and gas utilities (Fig. 2) suggest that increases and decreases in consumption among electricity utilities are the primary factors connected with changes in LNG imports.

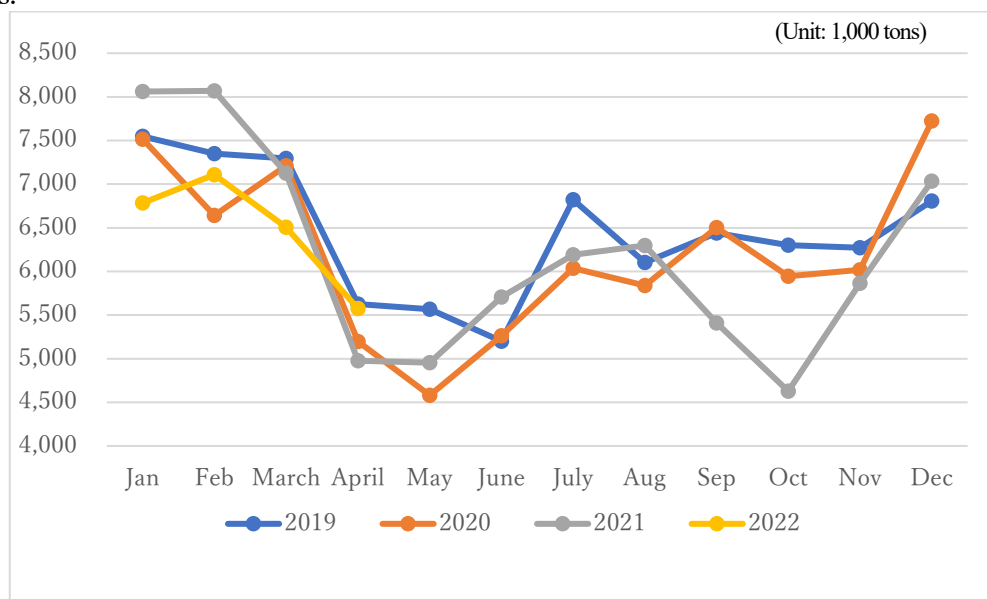


Fig. 1: Changes in LNG imports (Unit: 1,000 tons)  
 (Source: “Trade Statistics of Japan,” Ministry of Finance, Japan)

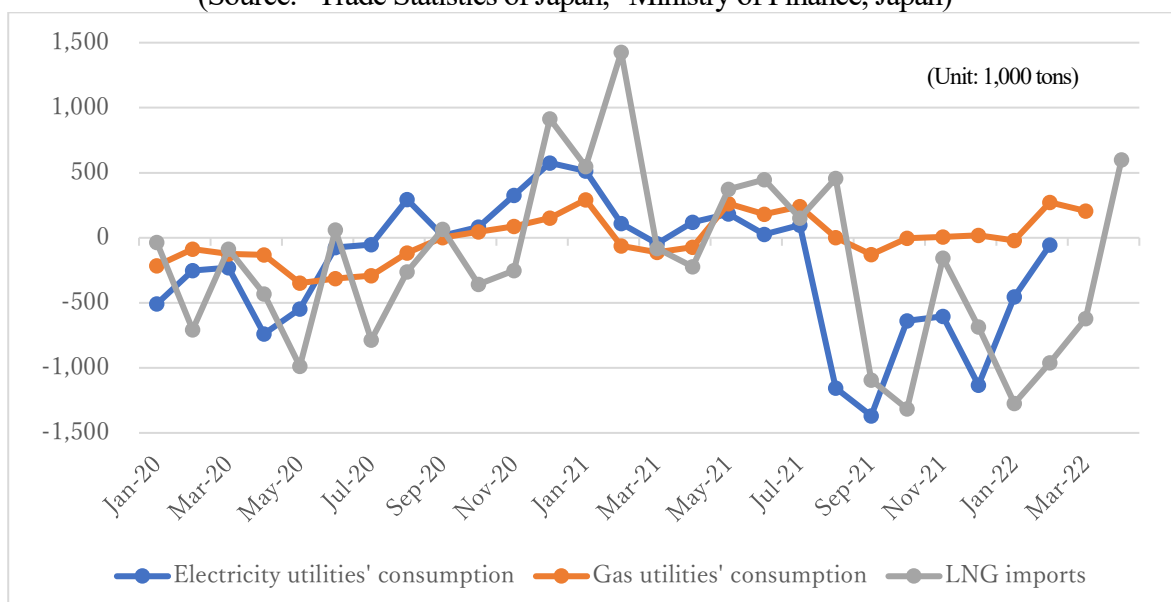


Fig. 2: Year-on-year changes in LNG consumption among electricity utilities/gas utilities and in LNG imports (Unit: 1,000 tons)

(Source: “Trade Statistics of Japan,” Ministry of Finance, Japan, “Surveys and Statistics of Electricity” and

“Current Production Survey on Gas Utility Industry,” Agency for Natural Resources and Energy)

While changes in LNG consumption among electricity utilities are influenced by a wide variety of factors, one key factor that may be cited is the level of power generation at nuclear power plants (Fig. 3). Looking at the graph of Fig. 3, it is evident that the level of power generation at nuclear power plants has an impact on the increases and decreases in LNG consumption among electricity utilities. Although in early 2021 the level of power generation at nuclear power plants was below that of 2020 year-on-year, it then began to rise year-on-year from May onwards, with generation of 6,871GWh of power being secured by August 2021 (a time of increasing demand for electricity), representing an increase of 3,547GWh over the same month in 2020. From this point onwards, the extent of year-on-year increase continued to expand, with 6,391GWh of power generation being secured in December (when electricity demand was on the rise), representing a year-on-year increase of 4,158GWh.

In 2020, the inability of several nuclear power plants to operate over the winter due to failure to comply with anti-terrorism countermeasures on time resulted in electricity utilities’ engaging in spot procurement of LNG in order to secure supply capacity. Conversely, as the operation rate of nuclear power plants gradually rose month by month during 2021, the operation of LNG-fired power generation decreased, resulting in LNG imports decreasing year-on-year. It may indeed be stated that the operational status of nuclear power plants (including the restarting of operations) has a major impact on LNG import trends.

In the wake of the recent invasion of Ukraine by Russia, LNG import prices have been on a rising trend. Boosting operations at nuclear power plants will reduce consumption of LNG (the price of which is soaring) for use in power generation, thus reducing payments for LNG imports. This can be expected to shore up the Japanese economy.

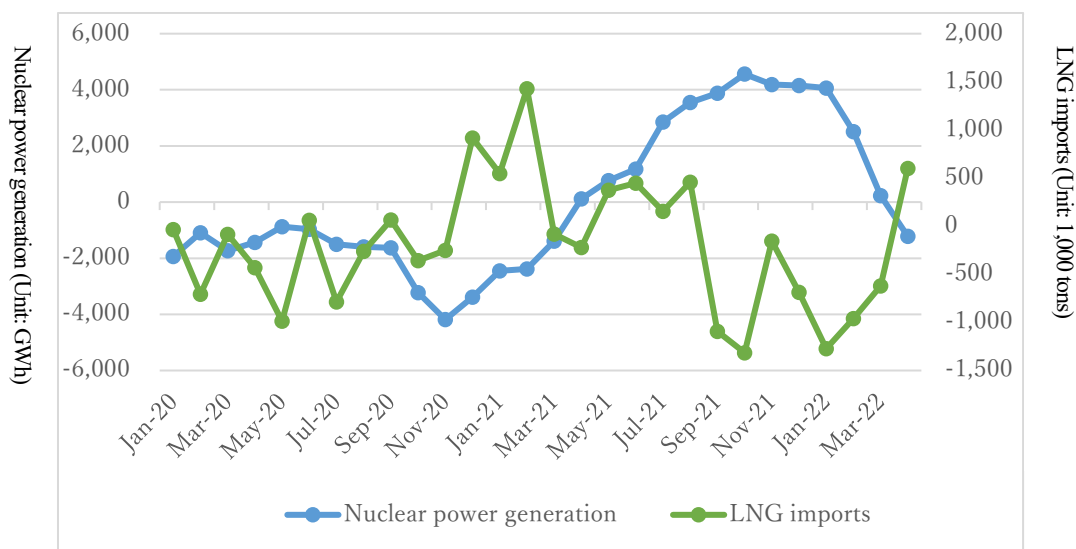


Fig. 3: Year-on-year changes in nuclear power generation/LNG imports (Units: 1,000 tons/GWh)

(Source: Created based on “Current Production Survey on Gas Utility Industry,” Agency for Natural Resources and Energy, and on data from Japan Atomic Industrial Forum. Inc. (JAIF))

## 2. State of Japan’s LNG imports by country of origin

Of all LNG imported by Japan in 2021, the country of origin comprising the largest share of imports was Australia at 26,639,000 tons, representing approximately 36% of total imports (Fig. 4). With the next-largest shares coming from Malaysia (approximately 14%), Qatar (approximately 12%) and the United States (approximately 10%), the share of total imports coming from Russia (currently the focus of considerable attention) stood at around 9%.

With LNG-fired combustion increasing between 2011 and 2013 in line with the suspension of operations at

nuclear power plants over this period, spot procurement of LNG from Qatar and other parts of the Middle East took place, leading to a temporary increase in Middle Eastern LNG as a percentage of total LNG imports; by 2021, however, this percentage had fallen to around 16%. Meanwhile, with Japanese firms participating in Australian LNG production projects (the Gorgon LNG Project and Ichthys LNG Project) from 2012 onwards based on the minimal level of geopolitical risk inherent in Australia itself and in the export process from that country, production from Australia has been on the increase. The share of LNG imported from the United States has also increased smoothly to date, ever since the first imports of shale gas-derived LNG in 2017. In summary, the energy security situation is now more secure than the situation in the immediate aftermath of the 2011 Great East Japan Earthquake in terms of the countries from which LNG is imported.

However, at the current time when a ban on imports of Russian LNG is being mooted as part of sanctions against Russia, it may be necessary to review Japan’s energy security set-up once again. It seems likely that going forward, Japan will need to further shore up its energy security through continuing to secure Japanese interests and development in locations with a lower level of geopolitical risk, as seen in the investments in development in Australia.

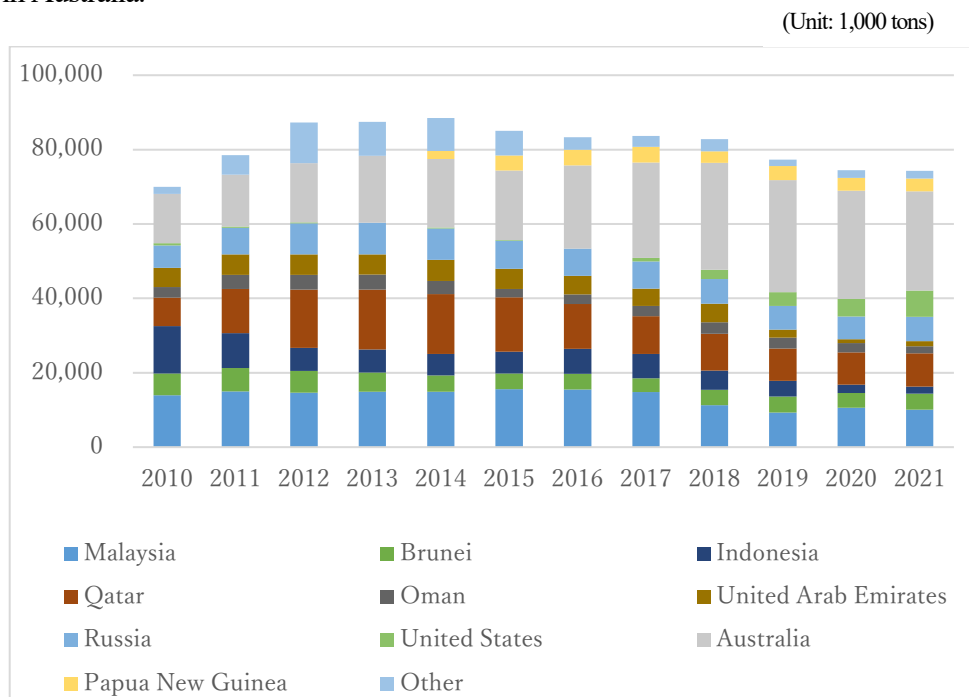


Fig. 4: LNG imports by country (Unit: 1,000 tons)  
 (Source: “Trade Statistics of Japan,” Ministry of Finance, Japan)

### 3. Trends in the CIF price of LNG imports

Although the cost, insurance, and freight (CIF) price of LNG imports rose to exceed 50,000 yen/ton in 2019, it fell sharply from May 2020 onwards due to a collapse in the price of crude oil as a result of decreased global energy demand in the wake of the COVID-19 pandemic, reaching 30,370 yen/ton by September 2020 (Fig. 5). The price of crude oil then began to rise during the recovery period following the pandemic due to coordinated production cuts organized by the Organization of the Petroleum Exporting Countries (OPEC)-plus to correct oversupply, while spot prices for LNG have also risen gradually as the supply-demand balance tightened following an initial slack period; as a result of all this, together with the manifestation of the impact of the Russian invasion of Ukraine which commenced on 24 February 2022 in addition to steady depreciation of the yen, the yen-denominated price of imported LNG reached a historic high of 99,976 yen/ton in April. Although this rise in prices was relatively moderate compared with overseas spot prices as a result of the long-term contracts indexed to crude oil prices at Japan’s major electricity and gas utilities, which cover the greater part of Japan’s LNG imports, it is considered highly likely that this trend of rising prices will continue going forward as the invasion of Ukraine drags on.

Even as the COVID-19 crisis has settled down, LNG is in considerable demand worldwide as a fuel that is considered the lowest-carbon option among the fossil fuels. Given that upstream investment in LNG is nevertheless on a declining trend worldwide due to the continuing push for carbon neutrality, many believe that prices will continue rising or will remain at a high level. Although upstream investment in LNG is expected to expand in 2022, this cannot be expected to result in any price reductions in the immediate future, since many years are required for construction work.

In addition to continuously securing Japan’s upstream national interests and development, the development and social implementation of technology relating to fuels that serve as alternatives to LNG (including hydrogen, ammonia and synthetic methane) will be essential for Japan, in order to sustain a stable and affordable supply of energy. As these initiatives aimed at achieving carbon neutrality also offer the potential to reduce Japan’s energy prices and bolster its energy security, they will merit continued attention going forward.

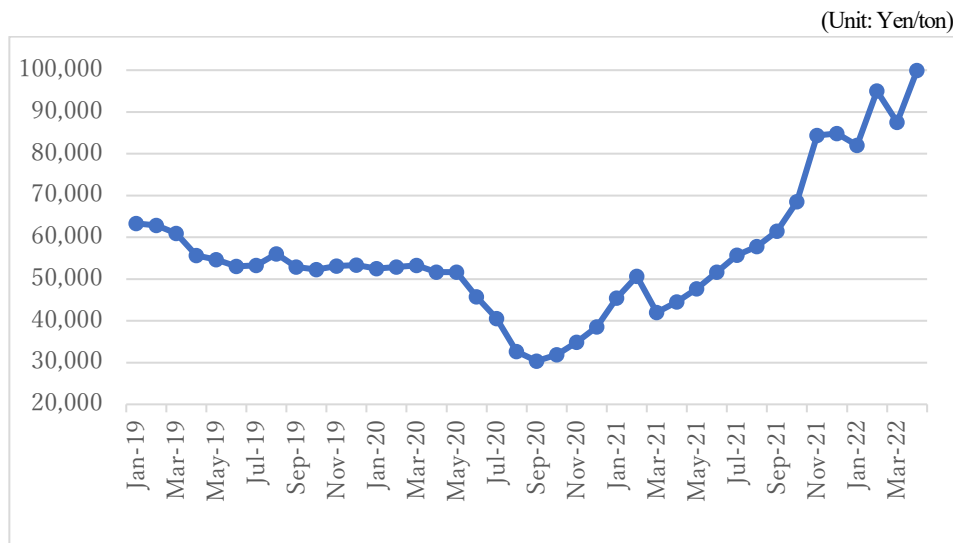


Fig. 5: Trends in CIF prices of LNG imports (Unit: Yen/ton)  
(Source: “Trade Statistics of Japan,” Ministry of Finance, Japan)

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