In 2019, South Korea ranked as the third-largest importer of liquefied natural gas (LNG) in the world, trailing behind Japan with 76.9 million tons (22%) and China with 61.7 million tons (17%), with imports amounting to 40.1 million tons (11%) of the global LNG imports (International Gas Union [IGU], 2020). With the energy conversion policy implemented by the South Korean government, the demand for LNG is expected to continue to increase. South Korea's Third Basic Energy Plan in 2017 predicted that, by 2040, the composition of coal usage would decrease from 35.2% to 30.5%, while LNG would significantly increase from 19.3% to 25.4%. Additionally, the proportion of renewable energy is expected to increase from 6.1% to 14.1%. This policy also includes the construction of combined cycle power plants using LNG as the main fuel and the prohibition of new coal-fired power plant developments.

The use of LNG in South Korea's electric industry is predicted to become increasingly dominant. The South Korean government, through its ninth basic electricity supply and demand plan, announced that out of 60 coal-fired power plants, 30 units will be halted, and 24 of them will be converted to LNG power plants, which will increase the capacity of LNG power plants from 41.3 GW in 2020 to 60.6 GW by 2034. In this regard, attention to LNG prices, especially in the electricity market, is expected to increase.

South Korea's electricity market implements a cost-based pricing system, where power plants are operated based on the order of the lowest fuel costs. However, with the capacity of electricity supply and demand in South Korea, LNG power plants often determine the system's marginal price. In 2017, 81.7% of the SMP was determined by LNG power plants. This indicates that LNG prices become a crucial factor in the operation of power plants.

Moreover, LNG prices also become a key factor in determining the business risk of renewable energy. The long-term positive relationship between LNG import prices and SMP in South Korea increases the uncertainty of investment in renewable energy. Therefore, LNG price forecasts can assist in mitigating business risks and encouraging investment in new and renewable energy.

The implementation of regulations by the International Maritime Organization (IMO) that limit the sulfur content in ship fuel to less than 0.5% m/m starting from 2020 has encouraged the shipping industry to switch to low-sulfur fuel oil or LNG. This indicates that LNG prices have a significant impact not only on the electric industry but also on the economy of shipping companies and bunkering operators, as well as various other stakeholders across different industries.