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## **LNG Supply Security and Diversification with the Supply Crisis**

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The ongoing energy supply crisis, which stemmed from the military conflict in the Middle East, has the following characteristics regarding LNG and natural gas.

1. In the past, when energy and natural gas supply were tight, flexible LNG supply was a saviour to balance the market. However, this time, it is necessary to make up for the shortfall of LNG supply with other LNG, other natural gas, and / or other energy sources.
2. In addition to the physical blockade of the Strait of Hormuz for the first time in history, it was also the first time that LNG export facilities were damaged by a military attack.
3. Although both LNG market parties and authorities recognize the importance of diversifying their sources, there are disparities in the degree of dependence on LNG supply through the Strait of Hormuz and the impact of supply disruptions due to the historical development and location of each market. Even if supply diversification has been achieved, in the event of a large-scale supply shortage, it is still difficult to escape the blow of price volatility caused by the supply-demand imbalance in the global market.

In light of this situation, the following areas can be pointed out as challenges that the LNG industry and related markets need to overcome.

1. Overcoming the vulnerability of LNG logistics

The blockade of the Strait of Hormuz has highlighted the vulnerability of LNG logistics. Unlike crude oil, there are no alternative means of transporting output from LNG production facilities in the Gulf to outside the Gulf. In recent years, the need to optimize LNG transportation has been recognized due to the long-distance LNG transportation from the Gulf region of the United States to the Asian market, the capacity limit of the Panama Canal and the restriction of navigation of that canal due to drought, and the difficulty of navigation in the Red Sea and Suez Canal routes. It will continue to be important to secure detour routes and respond to rising ship operating costs, and the effectiveness of cross-Pacific and Atlantic partnerships for optimization will increase. The industry needs to take care of soaring marine transportation insurance premiums and restrictions on war insurance. In response to the current situation in the Middle East, a re-evaluation of alternatives, including transportation by land pipelines outside the Gulf, will also become a reality. It could also be effective to consider international frameworks for sharing logistics risks, such as mutual accommodation in emergencies.

## 2. Reviewing risk management in LNG prices

It is also important to consider hedging methods that companies and government agencies on the consumer market side can adopt, such as strengthening the functions of the LNG derivatives market. In addition, the optimal balance between long-term contracts and spot market procurement to reduce risks will continue to be considered. During the latest crisis, spot LNG and gas prices have risen to even higher levels than crude oil prices. In addition, spot LNG prices in Asia have tended to exceed spot gas prices in Europe. Meanwhile, the range of short-term spot price fluctuations has remained smaller compared to the sharp rise in 2022.

## 3. Increasing importance of supply source diversification in response to risks

The dependence on LNG supply through the Strait of Hormuz is one-fifth of the total LNG supply in the world, and one-tenth in Europe. On the other hand, the share of Hormuz in Asia's total LNG supply is relatively high at one-quarter. South Asia's dependence on Hormuz is high, accounting for over 60% of total LNG imports. However, in total gas consumption, the share of Hormuz's LNG supply is 3% on the global average, 4% in Europe, 10% in all of Asia, and about one-quarter in South Asia. In Northeast Asia, the share of Hormuz LNG supply in total gas consumption varies from 6% to Japan, 15% to Korea, and three-tenth to Taiwan. Though China is dependent on Hormuz LNG for 6% of its total gas consumption, it has a domestic gas supply and pipeline gas imports that can offset the loss of some LNG. Europe has declined LNG imports via Hormuz since peaking in 2022, both in terms of volume and the share in total LNG imports and total gas consumption. At the same time, LNG imports from the United States have increased to more than half of total European LNG imports by 2025.

"Diversified procurement from many projects" should be preferred to "dependence on a single large project". Assessing the resilience of the entire individual supply chain is essential. North America, including the West Coast, East Africa and others would continue attracting attention as LNG project regions. How to deal with Russia's LNG supply will also be the focus.

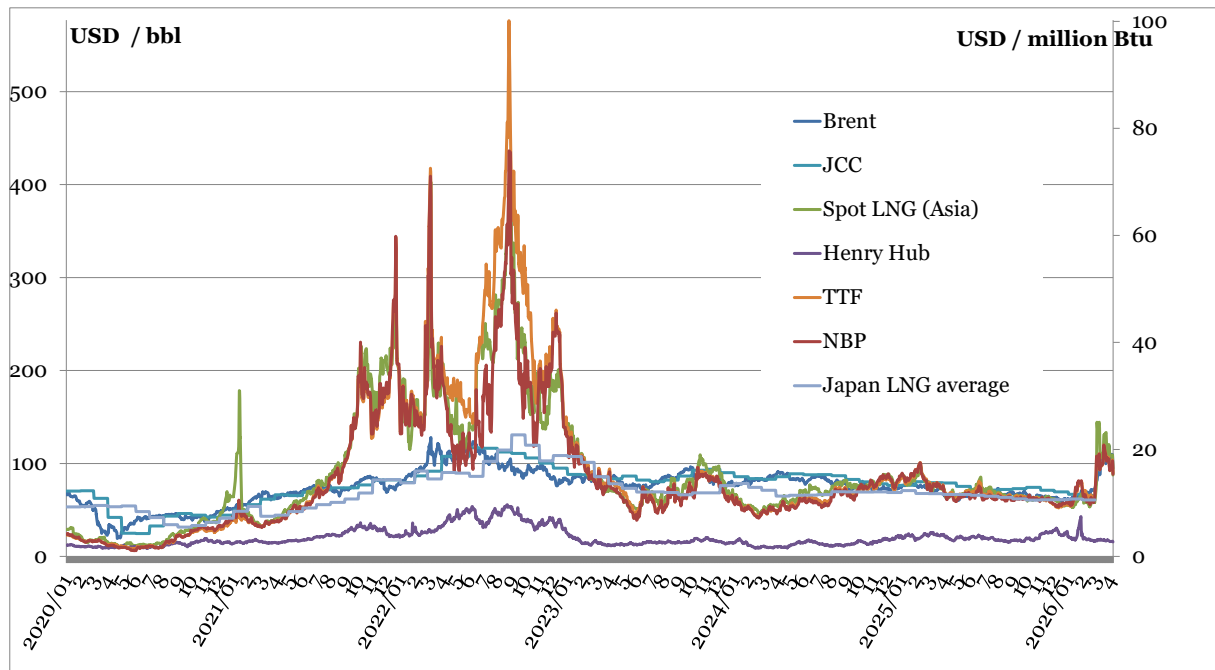
## 4. Balance and compatibility between stable supply and GHG mitigation measures

This crisis inevitably makes it necessary to review the balance between stable supply and GHG mitigation measures. Changes are inevitable in the consideration of investment and financing standards for fossil fuel projects by financial institutions, the consideration of measures to reduce methane and GHG emissions in the value chain, and the evaluation of LNG as a transition and destination energy source. In the EU (European Union), the focus is on the implementation of climate change policies such as the methane regulation, while in the Asia-Pacific region, efforts to clean up the LNG value chain are the focus.

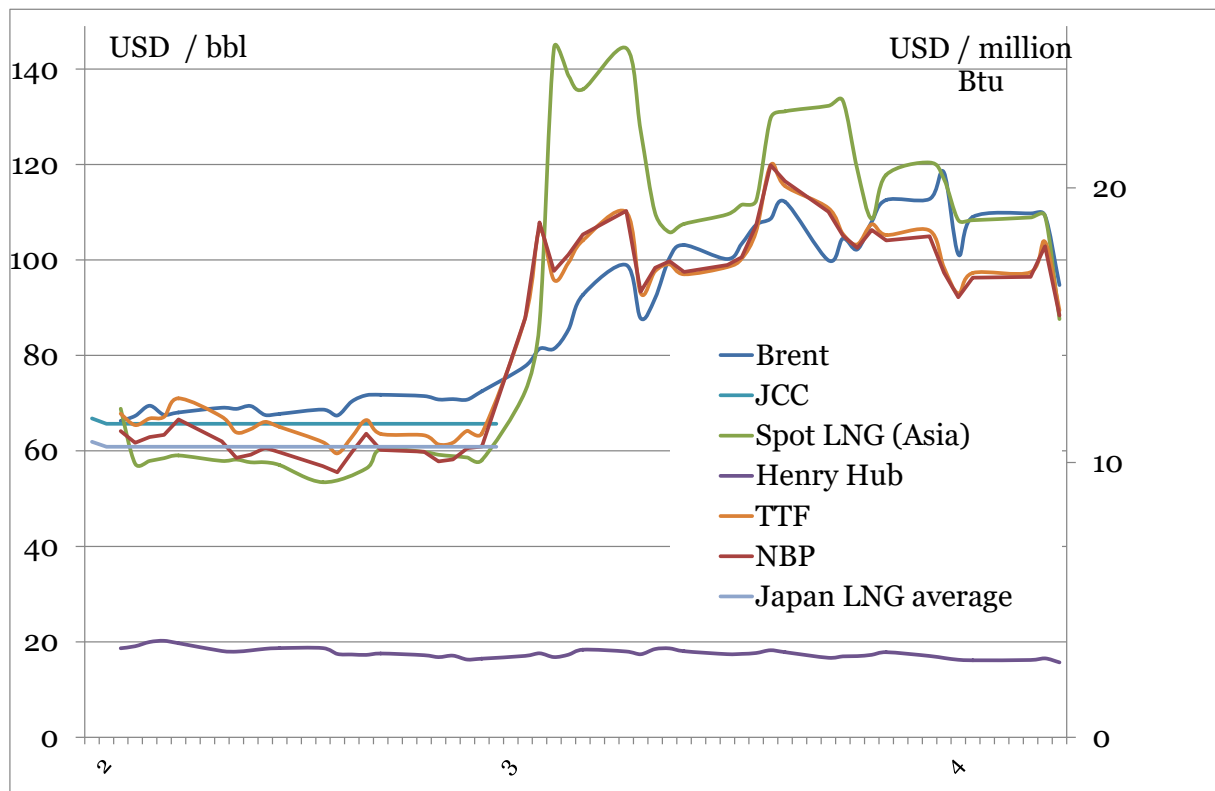
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[Appendix]

**Spot LNG, spot gas and crude oil prices in different regions**



Although volatility has been high in March and April 2026, the range of volatility has been smaller than that of 2022.



Spot LNG and spot gas prices become higher than crude oil prices at the beginning of March 2026. Asian spot LNG prices become higher than European spot gas prices in early March 2026.