

## **The Implications of the Forthcoming “Big Wave” of LNG Supplies on the International LNG Market**

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From 2026 onward, the global LNG market is expected to witness a substantial expansion in supply capacity, giving rise to the view—and indeed the expectation—that LNG is entering a new phase of growth and development. Historically, international gas trade was dominated by pipeline-based transactions, with LNG playing only a “complementary role” on a global scale. However, through the pursuit of economies of scale within individual projects and the enhancement of economic competitiveness vis-à-vis pipeline trade, LNG has strengthened its strategic importance in terms of both supply flexibility and security. Today, LNG has secured its position as the principal mode of international gas trade, and further growth and expansion are widely anticipated.

Natural gas, among fossil fuels, is exceptionally clean with respect to sulfur oxide emissions, making it an effective energy source for combating air pollution. Furthermore, as a relatively low-carbon energy source, natural gas plays a critical role in reducing CO<sub>2</sub> emissions, as demonstrated by the U.S. experience during the shale revolution, where coal-to-gas switching significantly contributed to emission reductions. Globally, natural gas resources are abundant and less geographically concentrated compared to oil, offering notable advantages from an energy security perspective. One of the key challenges for natural gas, however, has been its gaseous state, which complicates the economics of transportation compared to liquid fuels such as oil. Initially, pipeline supply dominated, directly linking production and consumption regions. LNG subsequently emerged as a solution, involving liquefaction, specialized tanker transport, and regasification at the point of use.

In the year 2000, LNG accounted for a mere 22% of global interregional natural gas trade, with pipeline trade overwhelmingly dominant. As noted earlier, however, the strengthening of LNG’s economic competitiveness and the growing expectation for supply flexibility have driven a remarkable expansion in LNG trade. By 2022, LNG’s share had reached 52%, surpassing the halfway mark and establishing itself as the majority component of global gas trade. Looking ahead, continued growth in LNG is anticipated to further enhance its significance—not only within the international gas trade but also within the broader global energy mix.

The year 2022 represented a historic turning point, as LNG trade surpassed the halfway mark of global gas trade for the first time. Simultaneously, however, this year was marked by the outbreak of the Ukraine crisis, which abruptly destabilized the international energy landscape. Europe—heavily dependent on Russian pipeline gas—faced an unprecedented “gas crisis,” characterized by a serious perception of severe physical shortage of supply. In response, European nations deployed every conceivable measure to secure energy stability, engaging in desperate, all-out efforts without regard for cost or convention. Among the most critical of these measures was the procurement of U.S. LNG, which happened to be in the midst of a significant expansion. By offering premium prices to redirect cargoes, Europe dramatically increased its imports of U.S. LNG. Had U.S. LNG not been on an

upward/growth trajectory, and had it lacked the high degree of destination flexibility that enabled such redirection, Europe's gas crisis would have been a far graver situation. The expansion of U.S. LNG exerted a profound influence on global gas trade and on the assurance of supply security.

Today, U.S. LNG stands at the threshold of another massive expansion. Until the mid-2010s, U.S. LNG exports were negligible in global gas trade, but driven by the shale revolution, they grew rapidly, making the United States the world's largest LNG exporter by 2023. Current U.S. LNG exports total approximately 100 million tons, accounting for one-quarter of global supply. Projects sanctioned with FID after the Ukraine crisis are now under development, and by around 2030, U.S. LNG export capacity is projected to double to roughly 200 million tons. Indeed, the expansion of U.S. LNG supply is poised to become a transformative force—a “Big Wave” that will serve as a primary driver reshaping the global LNG market.

Of course, the expansion of LNG supply is not limited to the United States. In the Middle East, Qatar is steadily advancing large-scale LNG projects. Widely regarded as the most cost-competitive supplier globally, Qatar's LNG capacity is expected to increase substantially—from the current level of approximately 80 million tons to around 140 million tons by 2030. In addition, new projects are under consideration in other regions, including the Middle East and Africa. Consequently, toward 2030, global LNG supply is highly likely to expand on the momentum of this “Big Wave,” driven primarily by the United States and Qatar.

Against the backdrop of this massive expansion, concerns are emerging among market participants that the global LNG market may enter a period of oversupply. This perspective is rooted in projections indicating that the aggregate LNG supply capacity—based on the accumulation of committed projects—will significantly exceed the levels of global LNG demand estimated through model analyses. For example, while global LNG demand in 2030 is expected to rise to nearly the mid-500 million ton range, some forecasts suggest that total LNG supply capacity at that time will far surpass this level. When supply capacity exceeds demand, it may lead to oversupply, resulting in market surplus—where certain supply capacity remains unused. This scenario represents one interpretation of what constitutes “oversupply.”

However, a review of the historical evolution of the international LNG market suggests that such a straightforward occurrence of oversupply may be unlikely. Rather, an abundance of supply tends to exert downward pressure on market prices, and as LNG prices decline, this triggers and stimulates additional demand. Consequently, demand often exceeds prior expectations, preventing the emergence of a surplus. In such cases, the primary drivers of demand growth are price-sensitive markets, most notably the emerging and developing economies in Asia, which are widely regarded as the future center of LNG demand expansion. It is conceivable, therefore, that the very expansion of supply will act as a catalyst for the overall growth of the LNG market. If affordable and stable LNG supply becomes widely available, it will not only strengthen energy security for consuming nations—including emerging Asian economies—but may also contribute to the decarbonization of energy supply structures.

Naturally, it would be premature to assume that the anticipated expansion of LNG supply will proceed exactly as projected. It goes without saying that careful monitoring of future developments in the energy landscape—particularly in the United States, Qatar, and other key producing regions—will be essential.

Should the projected expansion materialize, LNG-importing nations may find themselves in a

“buyer’s market,” characterized by downward pressure on spot prices and increased availability of competitively priced LNG. This environment will also reshape the dynamics of long-term contracts, as negotiations between sellers and buyers are heavily influenced by prevailing and anticipated market conditions. Toward 2030, under market conditions defined by the “Big Wave” of LNG supply, the procurement strategies adopted by LNG-importing and consuming nations—including Japan, Asia as a whole, and the global community—will become a critical issue. For Japan in particular, strategic initiatives that focus on these sweeping changes in the global LNG market will be strongly expected.

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