مركز الخليج للأبحاث
المعرفة للجميع

Can Gulf Gas be Replaced?

Alternative Options and Challenges

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As long as the Strait of Hormuz remains closed and gas export installations in Qatar and the United Arab Emirates (UAE) stay shut down, around 83 million tons of liquefied natural gas (LNG), or the equivalent of about 20 percent of global supply, continues to be prevented from reaching the wider international market.

In the Gulf, LNG carriers departing from the 77-million ton/year LNG liquefaction plants at Ras Laffan (Qatar) and the 6-million ton/year units at Das Island (UAE) must pass through the Strait of Hormuz and Gulf of Oman before reaching the Arabian Sea and onwards to global customers. In fact, export of natural gas from the Gulf Arab countries is done exclusively in liquefied form, with no pipelines linking the region to outside markets. Oman, which supplies around 10.4 million tons of LNG annually, has its liquefied gas plant located at Qalhat on the Arabian Sea and is not therefore affected by the closure of Hormuz.

On March 4, 2026, QatarEnergy officially halted its liquefied gas and associated liquids production at its Ras Laffan Industrial City. The state energy company declared force majeure, a legal clause that permits it to miss contracted deliveries without penalty due to circumstances beyond its control, though no structural damage to the facility has been reported. In a similar development, ADNOC (Abu Dhabi National Oil Company) decided on March 23 to totally cut off its LNG output at Das Island.

When looking at the impacts of the closure of Hormuz and the shutting down of Ras Laffan and Das Island, much will depend on the duration of the closure and the extent of any damage to or blockage of the LNG facilities there, which could lead to long-term supply constraints and enduring detrimental impacts.

In addition to massive spikes in prices, shipping insurance, and freight rates, there are other key

impacts on gas supply and markets resulting from the shutdown of Hormuz, Ras Laffan, and Das Island. With the disruption of global supply and the high dependency of Asian countries (Pakistan, India, China, Bangladesh, Japan, and South Korea in particular) on Gulf LNG imports — up to 90 percent of Gulf LNG go to Asian markets — regional shortages are already being seen. While some countries may have stockpiles, a sustained closure would likely trigger severe energy market stress and potential industrial and economic disruption, as those stockpiles will quickly dwindle down.

The shortage in Asian markets would increase competition for non-Gulf LNG supplies, especially from the US, resulting in worldwide cost inflation, similar to the 2022 energy crisis that arose following the outbreak of the Russian-Ukrainian conflict. One aggravating factor is the lack of alternative routes or gas supply buffers, as there are currently no pipelines or shipping paths capable of handling even a fraction of the missing LNG volumes and providing relief. For oil, Gulf countries have many alternative routes, like the East-West (Petroline) pipeline linking the Saudi Eastern province to Yanbu on the Red Sea, the Abu Dhabi-Fujairah line, and the Iraqi pipelines to Turkey. But such alternatives are not available for natural gas exports from the region.

Readily-Available Alternatives to Gulf Gas

Another exacerbating fact is the lack of adequate spare capacity globally to fill the 83-million-ton annual LNG supply gap. Many gas suppliers in different parts of the world that used to bring additional production online in response to supply shock have no readily-available spare capacity. Norway exemplifies one such supplier.

Efforts to secure adequate alternative supplies to a few European countries and pivotal Asian markets, which have been hardest hit by the Gulf disruptions, have so far proven insufficient. The spare gas capacity and diversion of LNG cargoes that have been made available in some countries, including the US, Russia, and Algeria, remain of minor importance and unable to fulfill the LNG gap resulting from the Gulf closure.

- **The United States**

With the Gulf offline, the US, as the world's largest exporter of liquefied gas, is poised to enhance its position. LNG export projects there are racing to fill the gap, with two of the largest producers (Cheniere and Venture Global) seeking to squeeze additional volumes of liquefied gas from their existing facilities and bring more capacity online as consumers around the globe brace for supply shortages. US LNG, which was the last resort for European markets after the Russian invasion of Ukraine and the resulting gas crisis, became a "lifebuoy" for Asian economies facing energy shortages.

Traders and buyers of US LNG are rerouting cargoes to capitalize on skyrocketing prices as customers battle for supplies. Asian and European buyers of liquefied natural gas are chasing the limited number of cargoes still available from US suppliers. Importers from Japan and Germany are among those in discussions with US LNG companies to buy more of the fuel, particularly for short-term delivery.

But the current US LNG annual capacity that can be diverted to fill the gap caused by the closure of Hormuz, Ras Laffan, and Das Island is not more than 30 million tons. Although the US LNG industry has the needed gas reserves, it does not have the capacity to quickly expand production.

2026 will only see an incoming stream of an additional 12 million tons of annual US capacity, representing the first and second phases of the

Golden Pass project (a joint venture between QatarEnergy and ExxonMobil). In 2027, about 32 million tons of new LNG annual capacity are expected to be built in the US, including the third phase of Golden Pass. The US LNG industry will have to wait until 2028-29 to see a real boom in its production when the annual gas liquefaction capacity is anticipated to increase by an astronomical figure of around 80 million tons. And if gas liquefaction projects currently under construction in the US continue operations as planned, the country's LNG export capacity could more than double by 2029.

- **Russia**

According to press reports, Russian companies have around 2.4 million tons of spot LNG available in 2026, with a maximum of 1.7 million tons that could be diverted away from Europe to Asia. However, aside from supply availability, shipping Russian liquefied gas is much trickier. Its key LNG projects, especially in the Arctic, depend on specialized icebreaker ships, the number of which is very limited, making it difficult to quickly shift to Asia. Another difficulty is that most Russian LNG is bound in long-term contracts, while many new projects are still affected by sanctions. All this limits the possibility of expanding Russian LNG exports in the short-term.

In the medium-term, if the European Union actually cuts the import of Russian LNG, about 15 million tons annually may be "liberated" and redirected to Asian markets. New projects, if completed, may also add significant supply.

On the pipeline front, China's gas imports from Russia increased via the "Power of Siberia I" line, which pumps more than 45 billion cubic meters annually, while a second pipeline linking the two countries — "Power of Siberia II" with a proposed design annual capacity of 50 billion cubic meters — is now back on the table for quick processing. When it comes to Russian piped gas to Europe, many believe that it is only a matter of time before the countries of the Old Continent ease sanctions on Russian gas, allowing it to be pumped again to these markets. Either a large-scale energy crisis or a peace agreement ending the Russian-Ukrainian war will accelerate such a development and push European countries to turn once again to supplies from Russia.

- **Algeria**

Algeria, the largest natural gas producer in North Africa has been identified as a promising source of additional supplies of natural gas, especially to Europe. As a result of the Gulf LNG blockage, Italy and Spain began serious talks with Algiers to boost its shipments of both piped and liquefied gas. Other requests have come from as far afield as Vietnam — a stark sign of the global energy squeeze. That said, it is unclear how much gas Algeria — which has strong domestic demand and export commitments — can actually spare.

Despite being one of the largest natural gas suppliers to Europe, providing more than 12 percent of European gas imports in 2024 (according to the Energy Institute's Statistical Review of World Energy 2025), Algeria has received limited serious attention as a gas exporter in recent years. Decades of underinvestment by the state-owned Sonatrach and leading international companies, as well as Algeria's complex fiscal terms, byzantine bureaucracy, and complex political environment have resulted in missed opportunities to enhance the country's position in the global gas market.

Although Algeria has a nominal annual LNG production capacity of around 25.3 million tons, the country was able to export just 11.6 million tons in 2024, or nearly 46 percent of its capacity, according to the GIIGNL Annual Report 2025. In fact, the gas liquefaction plants at Skikda and Arzew have had many technical problems over

the past years, which have limited their actual production. That is why the main focus for both Algiers and European customers has been on further increasing piped gas from Algeria.

The pipelines linking Algeria to Italy and Spain apparently have the capacity to pump more volume. However, while Algeria possesses the necessary natural gas reserves to increase its deliveries to Europe through these existing pipelines, the needed rise in actual gas production would be limited.

Whether Algeria can further ramp up exports to its customers in Europe will depend on two factors: production and domestic demand. Although several new upstream gas start-ups over the past few years have pushed the country's annual gas output to between 95 and 100 billion cubic metres, domestic consumption has also soared over time reaching about 50-55 percent of production, according to the Energy Institute's Statistical Review of World Energy 2025. If the annual growth rate of local gas demand continues at its current pace (around 5 percent), the volumes available for exports will decrease with every passing year.

Medium and Long-Term Alternatives to Gulf Gas

In the medium to long-term, some countries around the world appear more poised to benefit from redirected trade flows and knock-on effects of the Gulf LNG production closure. Many of these alternative sources of supply are located within the Pacific Basin which means they are not susceptible to trade chokepoints. Few others have yet to fully establish their LNG and gas export industries, plans for which could possibly be stimulated by a new impetus resulting from the Gulf crisis.

A developing gas industry in the **Eastern Mediterranean** is emerging as a flexible regional energy corridor that can reinforce European gas resilience. Natural gas in the region's countries (Egypt, Israel, and Cyprus) cannot replace Gulf gas at scale, but its value lies in its flexibility, diversification, and responsiveness during market stress like the current crisis in the Gulf. The dual role of Egypt — as a regional hub and main consumer — characterizes the gas equation in the area. Therefore, Europe's access to Eastern Mediterranean gas ultimately hinges on the ability of Egypt to balance domestic demand with export capacity.

Gas from **Azerbaijan** could regain importance if pumping through the Southern Gas Corridor (SGC) increases. The SGC, described as the "world's largest non-military infrastructure project," spanning approximately 3,500 km, connects Azerbaijan to Europe through dedicated gas pipeline projects. Already, gas supplies to European countries through the SGC increased by more than 40 percent between 2021 and 2024.

In **Australia**, where most of the liquefied gas output is locked in long-term contracts, an outage at a major LNG export plant recently decreased the country's total production for "a number of weeks." A few other LNG producers there may defer maintenance of their plants to squeeze out an additional one to three million tons over the next six months to capture record-high spot prices. Nevertheless, a main challenge for Australia is that most of its existing LNG plants are already running at full capacity, meaning there is almost no scope to significantly increase volume capable of fully replacing Gulf losses.

LNG **Canada** officially entered the global export market in July 2025, and is anticipated to reach full annual capacity of around 13.5 million tons in 2026. A proposed second phase of the project that would double the annual export capacity to about 27 million tons is expected to come online after

2029. The Woodfibre LNG and Cedar LNG projects are also due to come on stream in the next two years. It would come as no surprise if the Gulf crisis provides renewed impetus to fast-track and accelerate the plans of these schemes.

In July 2024, New Fortress Energy produced the first LNG plant in Mexico at its 1.5-million ton asset located offshore in Altamira. West Coast **Mexico** holds massive LNG potential, with a 3 million-ton plant currently under construction aiming to become a premier export hub for US-sourced gas to Asian markets. Key LNG projects and proposed exports terminals like Saguaro Energía are strategically positioned to bypass the Panama Canal. However, the sector there faces significant hurdles, including high development costs, environmental concerns in sensitive areas, and reliance on long-distance pipeline infrastructure. The **Peru** LNG terminal in Pampa Melchorita is South America's first gas liquefaction plant, exporting around 4.5 million tons of LNG annually. While Peru faces immediate operational challenges, including a recent export suspension due to a pipeline rupture, its long-term potential is tied to vast natural gas reserves and emerging green energy initiatives. However, growth in North America, coupled with Gulf supply challenges, may spark new opportunities.

Nearby, in **Argentina**, the vast Vaca Muerta shale basin with its 8.7 trillion cubic meters as estimated by the US Energy Information Administration (EIA), is targeting up to 30 million tons of annual LNG capacity by 2030. Major projects, including the 12-million ton/year Argentina LNG, aim to use floating gas liquefaction units, with the first one expected to come on stream in 2027.

In **Mozambique**, the current annual production of about 7 million tons will double from 2028. Meanwhile, the government has approved three megaprojects for the development of natural gas reserves in the Rovuma Basin, classified among the largest in the world, off the coast of Cabo Delgado.

Conclusion

When looking at the impacts of the Gulf conflict on gas with the closure of the Strait of Hormuz and the shutdown of the gas liquefaction projects at Ras Laffan and Das Island, much will depend on the duration of the crisis and the extent of any serious damage to LNG facilities and related key infrastructure in the region.

After a brief review of the readily-available alternatives for Gulf gas, as well as the sources of LNG and gas supply that would be accessible in the medium to long-term, one can conclude that the Gulf conflict could well lead to a global acute gas supply crisis in the short-term, considering that there are no adequate alternative gas capacities available to fulfill the 83 million-ton gap.

However, if the situation in the Gulf becomes protracted, the energy crisis is likely to ease with every passing month as new gas and LNG capacities worldwide come on stream. Yet the demand for gas will be heavily affected by both the negative impacts on prices and the substitution of natural gas by other alternative energy sources.

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