Mexico's expanding role in global LNG markets

Infrastructure, permits and securing offtake agreements are among the hurdles potential exporters are facing in Mexico's liquefaction development, Sheky Espejo writes

LNG liquefaction developers see a role for Mexico in supplying global markets with LNG derived from US natural gas imported by pipeline, but several challenges must first be overcome.

Mexico is attractive to liquefaction development, in part due to its proximity to abundant gas supply available by pipeline from the US. Further, cargoes departing from export terminals on Mexico's Pacific Coast enjoy shorter travel times to Asian markets by about eight days compared with cargoes departing the Gulf Coast and needing to transit the Panama Canal.

Global LNG demand is expected to increase 29% to 713 million mt by 2027 from 552 million mt in 2022, according to estimates by analysts at S&P Global Commodity Insights.

Access to gas

Would-be exporters face challenges that include infrastructure and other permitting as well as securing offtake agreements in the global LNG market. But in Mexico, securing firm access to feedgas from the US is the most significant hurdle liquefaction developers face, market participants watching Mexico LNG activity told S&P Global.

The system of pipelines currently operating in Mexico was designed to import roughly 12 Bcf/d from the US through entry points along the border, but transport capacity narrows as it spreads through the country. The two peninsulas have suffered from little access to gas for years.

In the first nine months of 2022 imports from the US were at 5.9 Bcf/d, while demand stood at 8.6 Bcf/d, according to data compiled by S&P Global. Domestic production was 2.6 Bcf/d.

National demand is set to grow in the coming years with buildout of new gas-fired power plants, but the country is doing little to increase its domestic production. Observers say more needs to be done to tap the vast reserves the country has, mostly in unconventional deposits.

LNG projects in Mexico

Project	Planned capacity	Developer
Energía Costa Azul Phase 1	3.25 million mt/year	Sempra Energy
Energía Costa Azul Phase 2	12.00 million mt/year	Sempra Energy
MPL LNG Phase 1	14.00 million mt/year	Mexico Pacific Limited LLC
MPL LNG Phase 2	28.00 million mt/year	Mexico Pacific Limited LLC
Vista Pacífico LNG	4.00 million mt/year	Sempra Energy
Salina Cruz LNG	3.00 million mt/year	CFE/Sempra Energy
Amigo LNG Phase 1	3.60 million mt/year	LNG Alliance
Amigo LNG Phase 2	7.80 million mt/year	LNG Alliance
Altamira LNG	2.80 million mt/year	New Fortress

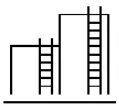
Source: S&P Global Commodity Insights

Energía Costa Azul, or ECA, Phase 1 is the most advanced in securing feedgas supply. The 3 million mt/year terminal is on the Baja Peninsula – only a few miles from the US border – at a site adjacent to an existing regasification terminal, also owned by Sempra.

ECA Phase 1 would have feedgas consumption of 400 MMcf/d and would source it through the 530 MMcf/d Rosarito pipeline, owned by Sempra Mexico subsidiary IEnova.

Rosarito is fed by TC Energy's North Baja system, which delivers gas from West Texas and the Rocky Mountain region. The company has contracts in place for supply and transport of gas to and across the US-Mexico border to meet the requirements of the terminal, according to the company's reports to the US Securities and Exchange Commission.

Vista Pacifico, also from Sempra, is also in a good position to secure the gas it needs. The 4 million mt/year project in the port of Topolobampo – on the Pacific Coast – would require 600 MMcf/d of feedgas, which



Global LNG demand to hit 713 million mt by 2027

it can source from the Trans-Pecos and Comanche pipelines in the US via a 670 MMcf/d pipeline owned by TC Energy called El Encino-Topolobampo.

Although the firm capacity of the El Encino-Topolobampo pipeline belongs to the state utility CFE, both companies have signed a memorandum of understanding for the project's development.

New Fortress Energy's Altamira has also secured gas. In July, the New York-based company said it had agreed to build an offshore hub in the port of Altamira, on the Gulf Coast, with gas provided by CFE.

The gas comes from Texas via TC Energy's 2.6 Bcf/d Texas-Tuxpan marine pipeline. According to New Fortress, CFE currently uses roughly 20% of that capacity, giving New Fortress the possibility to support three 1.4 million mt/year units.

Based on an agreement signed by both companies, New Fortress will make the investments, and in exchange CFE will provide the gas. Once the project is in operation, CFE will keep 10% of the production of the first unit, 15% of the second and 20% of the third, New Fortress management said during its August earnings call.

The first phases of MPL's project in Puerto Libertad and LNG Alliance's Amigo project in the port of Guaymas are both on the coast of Sonora and would compete for gas from a 36-inch diameter 770 MMcf/d pipeline operated by Sempra.

Although the pipeline can source gas from both the Sierrita Lateral and the Samalayuca-Sasabe pipelines, operated by Kinder Morgan and Carso Energy, respectively, observers said the system could not serve both terminals. MPL's project would require roughly 2 Bcf/d and Amigo roughly 500 MMcf/d.

"Putting together a project on the coast of Sonora is not trivial; many systems come into play," said Eduardo Prud'homme, a partner at Mexico-based consultancy Gadex, adding that it would be ideal if the capacity of the pipelines were reassigned. Prud'homme previously served as the head of the technical body inside the country's energy regulator CRE.

LNG terminals and natural gas pipelines in Mexico

Source: S&P Global Commodity Insights

MPL CEO Douglas Shanda told S&P Global in July that the company has options for sourcing its gas through the different import points to the north, but LNG Alliance CEO Muthu Chezhian said that realistically there is not enough gas for everyone.

"It will be a matter of who finishes first," he said.

Both MPL and LNG Alliance expect to make final investment decisions in 2023.

Infrastructure needed

For the second phases of ECA, Amigo, MPL and Salina Cruz, there is currently no gas available, and securing it would imply the construction of infrastructure.

ECA phase 2 would increase capacity of the terminal to 12 million mt/year, which would require almost 2 Bcf/d of feedgas, according to estimates by S&P Global. Completion would require expansions both

in the Mexican pipelines as well as on the US side of the border.

Kinder Morgan recently ran a nonbinding open season for incremental transportation in the region and said in an email that details are not yet available.

Sempra has already started considering an expansion at Rosarito but has not given any details about its plans.

The second phase of Amigo would increase the capacity of the terminal from 3.6 million mt/year to 7.2 million mt/year, requiring an additional 0.5 Bcf/d of feedgas.

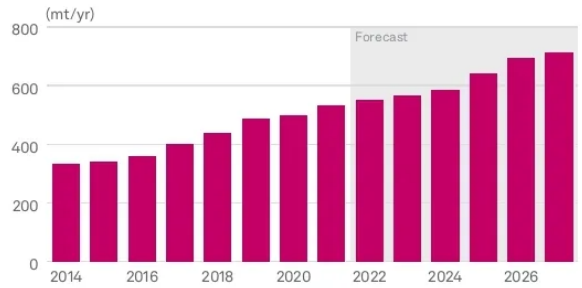
"That would require a new pipeline, which can be challenging," Chezhian said, adding that the company has started the process, which could take a few years for commissioning. Chezhian declined to discuss the pipeline's potential route.

MPL's second phase is more ambitious as it would increase production to 28 million mt/year, requiring 4 Bcf/d of feedgas. The company has told investors it would require a new dedicated 2 Bcf/d pipeline for its completion that would go from the US border to the site, roughly 200 miles away.

For the 4 million mt/year Salina Cruz project, proposed by CFE, the closest source of gas is in the port of Tuxpan, hundreds of miles away, where TC Energy's 2.6 Bcf/d Texas-Tuxpan marine pipeline ends. The Texas-Tuxpan pipeline is the source of feedgas for New Fortress' terminal in Altamira. For the Salina Cruz project to happen, TC Energy would have to complete the extension of that pipeline, and then CFE must commission the construction of a new pipeline that crosses the Tehuantepec Isthmus.

Rosanety Barrios, an independent analyst in Mexico, told S&P Global that liquefying imported gas for export in Salina Cruz would not be the best way to utilize the gas, considering there are industrial clients in the area who would be better users. Barrios was part of the team that designed the legal framework for the gas market. CFE did not respond to requests for comment.

Global LNG demand through 2027



Source: S&P Global Commodity Insights

While Mexico has an apparent role in supplying global markets with LNG given its proximity to abundant gas supplies available by pipeline from the US, developers must find a way to overcome the many challenges there are.

The combination of factors that make exporting LNG from Mexico attractive at present may change. To take advantage of the window of opportunity open today, timing will be key. ■