
They All Went to Mexico - Mexico Pacific Ltd.'S LNG Export Project in Puerto Libertad

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There are no absolute certainties in the energy industry, but one thing a lot of people are betting on is increasing demand for LNG in Asia. A long list of countries there — China, Japan, and South Korea among them — have been shifting from nuclear and coal-fired power generation to natural gas, and as they do, their demand for LNG will be mind-blowing. The U.S. has emerged as a major supplier, but shipping LNG from the Gulf Coast to Asia involves either transiting the busy and costly Panama Canal or taking much longer routes through the Suez Canal or around the Cape of Good Hope. All of that has helped spur interest in developing LNG export terminals in western Mexico that would pipe in and liquefy Permian gas, then ship it straight across the Pacific Ocean. Today, we discuss plans for a large-scale liquefaction/export project aimed squarely at Asian buyers.

The global LNG market has been on a wild ride the past year or so. Last January, [U.S. exports hit a new record](#) as several Gulf Coast liquefaction plants came online. Then came COVID-related demand destruction and plunging LNG prices that [wiped out the price spreads](#) that justify exports. Toward the end of 2020, the international gas market firmed up on various supply outages and improved demand, sending U.S. LNG exports soaring to new highs. In addition to blogging about it, we've also been tracking LNG exports, arbitrage, and feedgas flows in our weekly [LNG Voyager report](#).

But the news wasn't all good: [delays at the Panama Canal](#) made it more costly and time-consuming to ship LNG to Asia, the biggest market of all. And so LNG developers have redoubled their efforts to bring cheap natural gas to the Pacific coast of North America. As we discussed in [The Long Run](#), up north, Shell's LNG Canada looks to take Montney gas west for export. (Also, Pembina Pipeline for years has been seeking to advance its Jordan Cove LNG export project in Oregon, though it was set back by a Federal Energy Regulatory Commission ruling earlier this week on a key state permit.)

Just a few weeks ago, in [Closer](#), we considered Sempra Energy's recent announcement that it has made a final investment decision (FID) on Phase 1 at its Energía Costa Azul (ECA) liquefaction/LNG export project along the coast of the Pacific Ocean in Ensenada, in the Mexican state of Baja California. As we said in that blog, ECA was originally built as an LNG *import* terminal, which means it has good pipeline connectivity, not only within western Mexico but with Kinder Morgan's El Paso Natural Gas network (EPNG) and other systems across the border in the U.S. — systems that will enable ECA to receive gas from the Permian in West Texas and southern New Mexico. We also noted in that blog that, with its location on the Pacific Coast, the Sempra project offers a significant advantage over its U.S. Gulf Coast competitors regarding shipping costs to Asia: fewer miles and fewer days on the water means lower charter and fuel costs. As for ECA's project details, the \$2 billion Phase I is expected to be complete in late 2024 and will have a nameplate capacity of 3.25 million tons per annum (Mtpa), or about 450 MMcf/d. The project is backed by 20-year sale and purchase agreements (SPAs) with Mitsui & Co. for approximately 0.8 Mtpa (~110 MMcf/d) and Total for about 1.7 Mtpa (~240 MMcf/d).

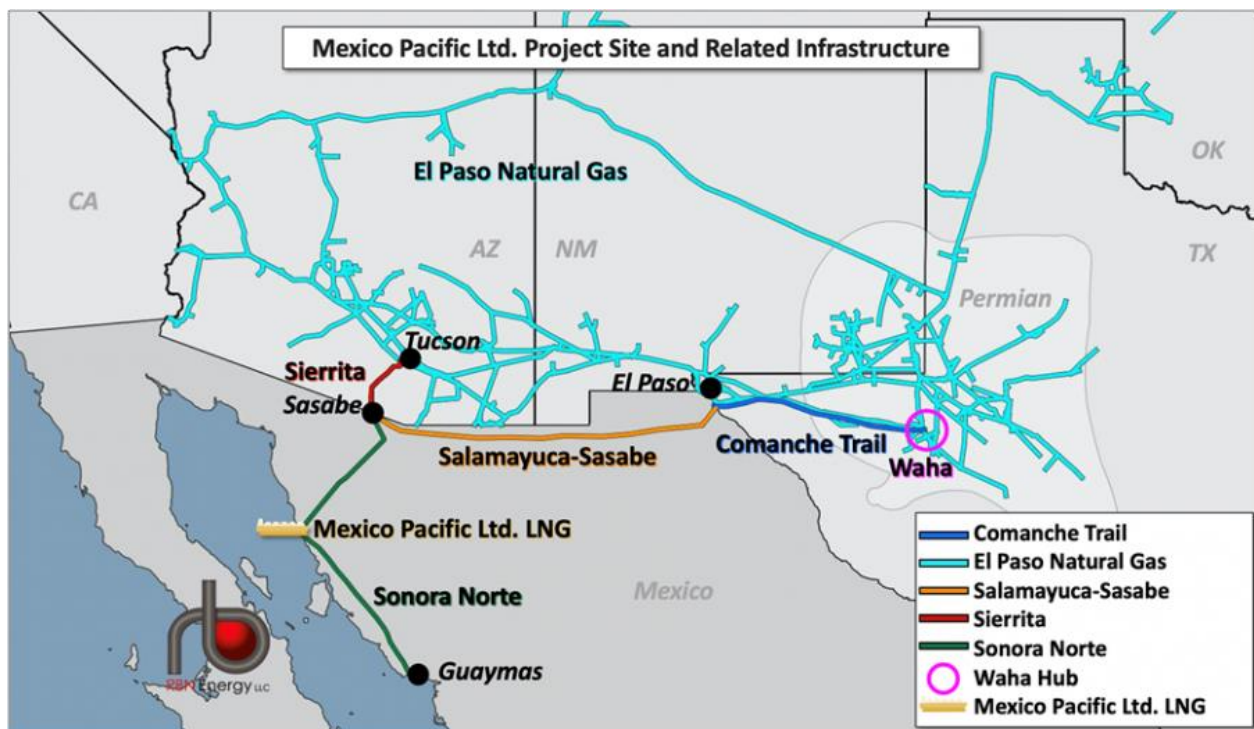


Figure 1. Mexico Pacific Ltd.'s LNG Project and Related Pipelines. Source: RBN

The project we are focusing on today — Mexico Pacific Ltd.'s (MPL) proposed liquefaction/LNG export terminal (yellow icon in Figure 1) in Puerto Libertad, in Mexico's Sonora state — appears to offer similar, but not identical, advantages, and would be considerably larger from the get-go. The small town of Puerto Libertad is located on the Gulf of California (also known as the Sea of Cortés) about 125 miles south of Mexico's border with Arizona. The town is already the site of an older Comisión Federal de Electricidad (CFE) power plant that was converted from coal to natural gas in 2015. (As we will get to in a moment, that plant is connected to pipelines that will supply the new MPL liquefaction/LNG export terminal.)

MPL owns a 1,100-acre waterfront site, only a small part of which will be needed to support the developer's initial plan for two 4.3-Mtpa liquefaction trains and future plan for a third 4.3-Mtpa train (blue-shaded area in Figure 2). Each train will demand about 600 MMcf/d of natural gas. In September 2018 and March 2019, respectively, MPL received U.S. Department of Energy approval to export up to 12 Mtpa (~1.6 Bcf/d) to Free Trade Agreement (FTA) and non-FTA countries (needed because the Mexico Pacific project will be exporting U.S.-sourced gas), and our understanding is that by mid-2021 the developer expects to receive export approval from the Mexican government. We also have heard that MPL has in hand permits to build the liquefaction/LNG export terminal and an environmental permit for a new pipeline from the U.S.-Mexico border to the project site. (That new pipeline will not be needed initially, however, as we'll discuss soon.)

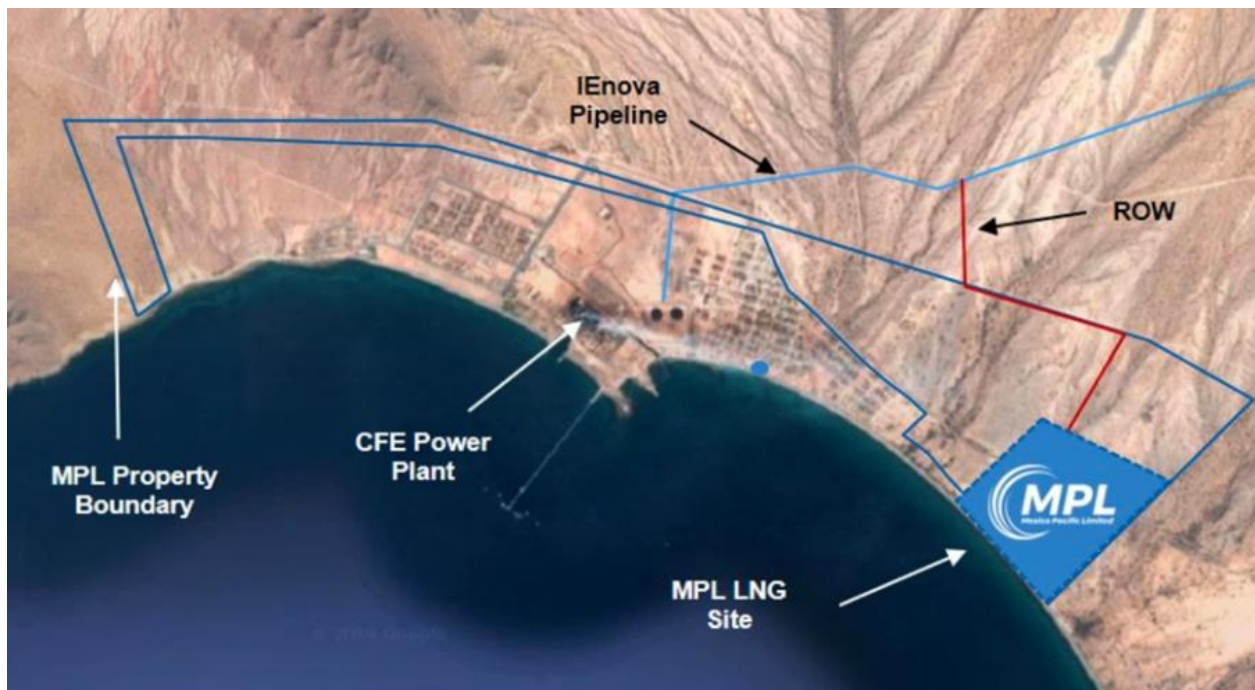



Figure 2. Mexico Pacific Ltd. Project Site and Related Infrastructure. Source: MPL

As for the commercial side of the project, MPL already holds five memoranda of understanding (MOUs) for a total of 10 Mtpa, and that it is working toward converting those MOUs into binding offtake agreements — also known as Sales and Purchase Agreements, or SPAs — later this year. In March 2019, the developer awarded a front-end engineering design (FEED) contract for the Puerto Libertad project to Technip USA; MPL has indicated that it expects to award an engineering-procurement-construction (EPC) contract for the project in the fourth quarter of 2021, and to announce an FID by early 2022. Assuming all goes to plan, operation of the liquefaction/LNG export project will begin in 2025.

There is no guarantee, of course, that the MPL project will advance to FID, construction, and operation — remember, there are no sure things in the energy industry — but it definitely has a few things going for it. For one, its location: on the Pacific coast, with a natural deepwater port (no need for dredging), and very near a gas-fired power plant and the gas pipelines that supply it. Those gas pipelines are critically important — not only are they already in place, they are underutilized, and they offer connections to other pipelines that will enable the MPL project to receive gas from the Permian. For example, gas to supply the Puerto Libertad liquefaction/LNG export terminal and the project's new onsite power plant could flow from the Permian through the EPNG system (aqua line in Figure 1), then south on Kinder Morgan, Pemex and Mitsui & Co.'s Sierrita Pipeline (red line), and then further south on Sempra/IEnova's Sonora Norte pipeline (green line) to the MPL project site. Or Permian gas could flow from the Waha Hub on Grupo Carso, Mastec, and Energy Transfer's Comanche Trail pipeline (blue line) to the recently completed Salamayuca-Sasabe Pipeline (orange line). For more information about Waha basis and natural gas flows out of the Permian and into Mexico, check out our [NATGAS Permian](#) report.

Speaking of Waha, our understanding is that MPL's MOUs and prospective SPAs call for the gas supply to be indexed to gas prices at the West Texas hub. MPL's hope and expectation is that its project's unique set of circumstances will give the Puerto Libertad facility a distinct competitive advantage as existing LNG-supply contracts roll off over the next few years and Asian demand for LNG increases. We have been told that the project site could support as many as six 4.3-Mtpa liquefaction trains (combined gas demand, ~2.4 Bcf/d), and that MPL has been in talks with potential offtakers for another 8 Mtpa in MOUs beyond the 10 Mtpa it already has in hand. If that additional level of interest can be converted to SPAs, the developer could be in a position to move forward with Train 3 — and Train 4, if demand warrants — in relatively short order.

Both Sempra's Energía Costa Azul and Mexico Pacific Ltd.'s Puerto Libertad project appear to pose a significant challenge to developers that have been trying to advance new U.S.-sourced LNG export projects along the Gulf Coast, at least in their pursuit of Asian customers. Shipping costs are a major factor in the LNG trade, and the ability to sail straight to and from China, Japan, South Korea, and other key markets in Asia without transiting the Panama Canal would be an advantage for ECA and MPL. Adding in access to Permian gas at Waha-indexed prices would be icing on the cake.



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"They All Went to Mexico" was written by Greg Brown and appears as the fifth song on side two of Carlos Santana's fifth solo album, *Havana Moon*. Featuring Willie Nelson on vocals, the song was released as a single in May 1983. Personnel on the record were: Willie Nelson (lead vocals), Carlos Santana (guitar, backing vocals), Booker T. Jones (keyboards), Barry Beckett (keyboards), David Hood (bass), Graham Lear (drums), Flaco Jimenez (accordion), Mic Gillette (trumpet), and Armando Peraza, Raul Rekow, Orestes Vilato (percussion). The song was produced by Carlos Santana, Booker T. Jones, Barry Beckett, and Jerry Wexler.

Havana Moon was Santana's first foray into a hearty blend of Tex-Mex music. It featured guest artists such as Willie Nelson, the Fabulous Thunderbirds, Booker T. Jones, and Flaco Jimenez. It was recorded at The Automatt in San Francisco and produced by Jerry Wexler and Barry Beckett. Released in April 1983, the album went to #55 on the Billboard Top 200 Albums chart.

Carlos Santana is a Mexican-American guitarist who rose to fame with his Latin American rock band Santana in the late 1960s. He put the original Santana band together in San Francisco in 1966. Bill Graham arranged for the band to appear at Woodstock, and their successful show there helped to propel their debut album, *Santana*, to #4 on the Billboard Top 200 Albums chart in 1969. As a solo artist, Carlos Santana has released seven studio albums, three live albums, six compilation albums, and five singles. The band Santana has released 25 studio albums, seven live albums, 23 compilation albums, and 61 singles. Carlos Santana has collaborated on 25 albums with other artists. The band Santana has won one American Music Award, one Billboard Latin Music Award, four Brit Awards, five Grammy Awards, and two Latin Grammy Awards. As a solo artist, Carlos Santana has won one Billboard Century Award and one Grammy Award. He is the recipient of Kennedy Center Honors and his band Santana was inducted into the Rock and Roll Hall of Fame in 1998.

Willie Nelson is an iconic American singer, songwriter, musician, and actor. He has released 95 studio albums, 13 live albums, two soundtrack albums, 51 compilation albums, and 130 singles. He still records and tours, as does Carlos Santana.