
Will Offshore VLCC Projects Survive Crude Rout?

Only one will likely proceed.

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Fate Hangs in Balance

U.S. crude exports increased by 1 million barrels/day in 2019, and that growth has continued so far in 2020 on the back of expanding production. That has spurred at least eight projects to build offshore terminals that can load very large crude carriers for long-haul shipments to Asia. But with crude prices dropping through the floor - at one-point last week close to \$20/barrel - and the supply demand picture thrown into chaos by coronavirus and the Saudi-Russian battle for market share, the fate of any new crude infrastructure project hangs in the balance. This note ponders what will happen to offshore crude terminal projects.

Export-Led

Average U.S. crude exports reached a record 3.7 mmb/d in December, according to the Energy Information Administration, and averaged 3.0 mmb/d during 2019, up 45% from 2.0 mmb/d in 2018. Despite the recent coronavirus impact on Asian demand, crude exports have held up so far this year. They averaged 3.3 mmb/d in January, according to U.S. Customs data, and 3.6 mmb/d in February, according to EIA weekly estimates, peaking at 4.4 mmb/d during the second week of March. However, as we detailed last week (see [Corona Crude Contango](#)) exports are expected to tumble in light of both a contango market that encourages storage and a sharply narrowed Brent premium over WTI.

U.S. export expansion is driven by domestic production that averaged a record 12.2 mmb/d in 2019, according to EIA, and has continued to increase, reaching an estimated 13.1 mmb/d for the first time during the last week of February 2020. Over the past two years, rising export demand spurred midstream plans to build offshore facilities able to load VLCC tankers. The recent price shock points to production declines as producers abandon their drilling investment. That certainly throws new investment in infrastructure into doubt in the short term. Even so we believe at least one of these export terminal projects could be built although delays are likely until U.S. crude production recovers.

Size Matters

As we outlined in a May 2019 note ([Gulf Coast Crude Exporters Navigate Port Limitations](#)), except for the Louisiana Offshore Oil Port terminal 20 miles offshore Louisiana in the Gulf of Mexico, the Gulf Coast is not blessed with deep-water ports that can accommodate the largest VLCCs, which hold around 2 million barrels of oil. These VLCCs and a handful of their giant brethren—the 3 million-barrel ultra-large crude carriers—require at least a 75-foot draft to load fully but are the workhorses of intercontinental oil transportation. Shipping with these supertankers typically shaves considerable freight cost, particularly on long-haul Gulf Coast to Asia routes.

Most Gulf Coast terminals are restricted to a 45-foot draft; this only allows them to fully load Aframax tankers, which hold 500-650 thousand barrels of crude, or to partially load Suezmax tankers, which hold up to 1.3 million barrels. Our analysis of RBN Energy's Voyager data showed an increasing number of VLCC crude exports being loaded from Houston or Corpus Christi area docks by transshipment of smaller cargoes to larger vessels anchored offshore. Some ports— notably the outer harbor docks at Corpus Christi— can accommodate VLCCs, but these vessels can only be partially loaded and must be topped off in the Gulf of Mexico.

As a result, during the last three years, at least eight project proposals have emerged to build offshore VLCC loading facilities (Exhibit 1).

Exhibit 1 U.S. Gulf Coast Offshore VLCC Projects

Region	Project/Company	Status
Corpus Christi	Texas Gulf Terminals - Trafigura	Withdrawn see P66 Bluewater
Brownsville	JOLT Jupiter / Charon Systems Advisors	No Permit Application Yet
Texas City	SPOT Enterprise / Enbridge	FID Made - Shipper Commitment
Freeport, TX	Texas COLT - OilTanking, Enbridge	Withdrawn - Enbridge investing in SPOT
Louisiana (Venice)	Tallgrass	No Permit Application Yet
Freeport, TX	Texas GulfLink - Sentinel Midstream / Freeport Commodities	Negotiating link to Magellan Houston
Corpus Christi	Bluewater - P66 Logistics / Trafigura	Recent JV with Trafigura
Nederland, Port Arthur	Energy Transfer	Seeking anchor shipper

Source: Company presentations, Morningstar Commodities.

The scale and cost of offshore VLCC loading terminals as well as an associated two-year multi-agency permit approval process meant the number of these projects likely to reach fruition was always going to be less than the full eight. Our analysis indicates only three of these projects still have a reasonable chance of getting built. We review each of these three projects below.

First, we'll recap the five projects we believe are already out of the race.

Out of the Race

Top of the list and the latest official casualty is Trafigura's Texas Gulf Terminals project that applied for a deep-water port permit from the federal Maritime Administration, or MARAD, in July 2019. This proposal for a single-point mooring, or SPM, buoy 12.7 miles off the coast of North Padre Island, Texas, would load VLCCs at a rate of 1.4 mmb/d. Although TGT was the first offshore deep-water port project announced in the shale era, it ran into early opposition from local environmental groups as well as the Port of Corpus Christi (see our September 2018 note [Corpus Christi Objects to Trafigura Terminal](#)). The TGT permit has been in limbo since April 2019, when the Department of Defense withdrew the project's U.S. Army Corps of Engineers permit application because Trafigura didn't supply requested additional information. As detailed later, Trafigura has now suspended its TGT application and joined forces with former rival Phillips 66's Bluewater project.

Second in our unlikely category is the Jupiter project. In November 2018, Jupiter MLP, with financial backing from Charon System Advisors, proposed a crude offshore loading terminal project to form one component of a multipart proposal, including a 1 mmb/d pipeline from the Permian basin to Brownsville, Texas, via Three Rivers and Corpus Christi with origins in Midland, Pecos, and Crane, Texas. Another component is crude upgrading and processing facilities in Brownsville that could be used to supply refined product across the nearby border into Mexico. The COLT project would be 6 miles offshore Brownsville and capable of loading 1 mmb/d onto a VLCC. Nothing has been heard publicly about this proposal since a February 2019 press release extending the pipeline open season, and no MARAD permit application has been received. The radio silence suggests a lack of committed shippers.

Third comes the Texas COLT project to build an SPM 28 miles off the coast of Freeport, Texas; it applied for a MARAD permit in February 2019. This project was backed initially by pipeline companies Enbridge and Kinder Morgan as well as terminal operator Oiltanking, but Kinder Morgan withdrew early on. Enbridge withdrew the COLT application Dec. 10, 2019, after it decided to invest instead in the Enterprise Products Partners SPOT project (more about that later).

Fourth in the unlikely category comes Tallgrass Energy. In August 2018, Tallgrass announced plans for an 800 mb/d crude pipeline from Cushing, Oklahoma, to St. James, Louisiana, continuing to a terminal and dock 20 miles south of New Orleans at Plaquemines on the Mississippi River. From Plaquemines, Tallgrass plans a twin pipeline to an offshore VLCC loading terminal with two SPMs, 1.5 miles off Venice, Louisiana, at the mouth of the Mississippi. The Tallgrass project is an extension of the company's existing 400 mb/d Pony Express crude pipeline from the Niobrara formation in the Rockies to Cushing that it is also planning to expand. The offshore terminal depends on the Seahorse pipeline project, for which Tallgrass has yet to receive enough shipper commitments to make a final investment decision.

Last of our also-rans is the Energy Transfer proposal. Little is known publicly about this project except for comments by the company on investor calls that indicate it wants to build an offshore terminal connected to its huge Nederland terminal in Port Arthur, Texas. The Nederland terminal is a destination point on Energy Transfer's extensive Permian crude pipeline system as well as the ETCOP linking to its Dakota Access Pipeline from North Dakota's Bakken formation. The company's September 2019 purchase of SemGroup brings a large Houston terminal that it plans to link by pipeline to Nederland. Energy Transfer's latest public comments suggest it is still negotiating with potential shippers and has yet to sign up an anchor for the project.

Final Three

That leaves three projects still standing a chance of getting built.

SPOT Terminal

We mentioned the Enterprise Products Sea Port Oil Terminal in a note last October about Houston export dock infrastructure ([Houston Crude Export Capacity Adequate for Now](#)). The project consists of two SPM buoys located 30 miles offshore Freeport, Texas, capable of loading 2 mmb/d onto VLCCs, connected by pipeline to a new onshore storage terminal at Oyster Creek in Brazoria County, Texas, and from there to the company's ECHO crude terminal in southeast Houston. The SPOT project applied for a MARAD permit in January 2019 and posted a draft environmental impact statement in February 2020, making it the most advanced of the current permit applications. Enterprise made a final investment decision to proceed with the project in July 2019 after Permian producer Chevron committed as the anchor shipper. The project received another boost in December 2019 when Enbridge withdrew its COLT application in favor of a joint investment with Enterprise in the SPOT.

Enbridge and Enterprise are 50/50 partners in the Seaway pipeline, which ships up to 850 mb/d of crude between Cushing and Houston. Enterprise also receives crude at ECHO from its Permian Midland to Echo pipeline system as well as Eagle Ford crude via its Eagle Ford Crude Oil Pipeline system. This project remains the favorite to be the first deep-water offshore crude terminal constructed in the shale era. Enterprise expects to obtain the MARAD permit in 2021 and take two years to construct, meaning operations would start in 2023.

Texas GulfLink

The TGL project is a direct rival to SPOT, located near the proposed Enterprise terminal about 30 miles offshore Freeport, Texas, and serving the Houston export market. The design consists of pipelines from a new onshore terminal at Freeport to two fixed offshore deep-water platforms connecting to SPM buoys capable of loading 1 mmb/d onto VLCCs. The MARAD application was submitted on May 30, 2019, by Sentinel Midstream. The project has subsequently received investment from trading outfit Freepoint Commodities and is believed to be negotiating a joint venture with Magellan Midstream that would see the latter build a pipeline linking its East Houston terminal by pipeline to GulfLink. That link would provide direct access to the terminal for shippers on the Magellan-owned and -operated 275 mb/d Longhorn and the 425 mb/d BridgeTex pipeline (owned by Magellan, Plains All American, and Canadian pension fund OMERS).

Texas GulfLink would provide producers exporting crude from Houston with a heavyweight competitor to Enterprise's SPOT for offshore VLCC service. At the time of writing, the TGL application is subject to a MARAD-issued stop clock as of October 2019 pending submission of additional required air quality and biological resource information by March 20. Assuming the application proceeds, we anticipate completion approximately four months after SPOT with a similar two-year build time, meaning completion in 2023.

Bluewater

The Phillips 66 Bluewater crude offshore loading terminal is proposed to serve the Corpus Christi export market. Volumes of crude shipped out of Corpus Christi have expanded rapidly since new pipelines opened from the Permian in the latter half of 2019 (see our August 2019 note [Corpus Christi Constraints Threaten Crude Exports](#)). According to RBN Energy's weekly Crude Voyager analysis, 46% of Gulf Coast shipments during January and February 2020 left Corpus Christi, followed by 31% out of the Houston region, reversing Houston's dominance in 2019, when it shipped 40% versus 26% for Corpus Christi.

The Bluewater MARAD application was submitted in May 2019. The deep-water port would be approximately 15 nautical miles off the coast of San Patricio County, Texas, and allow up to two VLCCs to load crude from SPMs linked by pipeline to a new Gateway terminal at Ingleside, Texas (Exhibit 2). The Bluewater terminal will be linked to the Phillips 66 (75%) and Marathon (25%) owned 900 mb/d Gray Oak pipeline as well as the proposed Phillips 66 Red Oak pipeline linking Cushing and Corpus Christi. Bluewater will also be linked to a growing pipeline hub located south of the city of Taft outside Corpus Christi, which has connections to the 670 mb/d Plains Cactus II and the 900 mb/d EPIC pipelines from the Permian as well as NuStar and Plains pipelines from the Eagle Ford.

Exhibit 2 Bluewater Offshore Terminal Connections



Source: MARAD.

At the end of February 2020, Phillips 66 announced the formation of a 50/50 joint venture with Trafigura, under which the latter would invest in Bluewater and withdraw its Texas Gulf Terminals project. A final investment decision is planned for later this year. The MARAD permit application is currently awaiting submission of an environmental impact statement after a stop clock was issued by the Coast Guard in November 2019. If the permit process goes smoothly, the terminal could be up and running by the end of 2023.

Delayed Winner?

In terms of timing, shipper commitment, and final investment decision, the Enterprise/Enbridge SPOT is our favorite to get built before the other contenders and, frankly, the favorite to get built at all after the crude price rout. If current conditions continue and Permian production slows, we believe neither the GulfLink nor Bluewater projects will see the light of day. And while the SPOT project remains most likely to proceed, we expect Enterprise to slow their investment and delay building until prospects for crude production improve. ■■■

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