

Export Infrastructure

# Commonwealth LNG: A Detailed Look At Calcasieu's Noisy Neighbors

\*\*\*Over the next few weeks we'll be rolling out a [new line of Energy EPC research](#), centered around the unique and insightful work of EPC Risks. We'll be following up with more details, but we're giving a preview to our existing research clients. Please let us know if you have any questions, and we're excited to share more details soon!\*\*\*

**Note: Since this report was initially published (and as expected) Venture Global has filed motion to intervene in Commonwealth's project development due to its planned activity and dredging in the Calcasieu Ship Channel. We'll continue to monitor.**

Commonwealth LNG ("CWLNG" or "the Project") is a proposed 8.4 MTPA LNG export facility located on a 393-acre site in Cameron Parish, Louisiana. The Project is on the west side of the Calcasieu Ship Channel ("the Channel") near the entrance of where the Channel spills into the US Gulf of Mexico. The Project is also located directly across the river from Venture Global LNG's ("VGLNG") 10.0 MTPA Calcasieu Pass LNG ("CPLNG") export facility (Figure 1).

We've analyzed the CWLNG project and how the Project's boundaries and shipping operations may be a kick to kiddlehopper for CPLNG, the State of Louisiana, and the U.S. Coast Guard.

CWLNG's execution plan is based upon modularizing the LNG process and pre-treatment units as well as the LNG storage tanks. Typically, a full containment 160,000 m3 LNG storage tank takes 36 to 42 months to construct and commission. CWLNG has proposed modularizing six (6) 40,000 m3 single containment LNG tanks...continued

**Figure 1. Proximity Between Commonwealth LNG & Calcasieu Pass**



Please see important disclosures at the end of this report.

March 6, 2020

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in 20 (first LNG tank arrives) to 28 months (tank farm completed). CWLNG is marketing and believes shortening the LNG storage tank schedule will reduce their overall EPC schedule by twelve (12) months relative to using traditional stick-built, large LNG tanks. We have identified several risks associated with modularizing the LNG tanks we suggest clarifying with CWLNG.

In theory, CWLNG's idea makes sense. An LNG tank is usually one of the longer lead items on an LNG project; therefore, shortening the tank schedule should result in a shorter EPC schedule. However, what CWLNG isn't marketing are possible risks, the scheduling assumptions, and capital investment required to shorten the Project's overall schedule.

An LNG project needs to spend ~\$90MM to complete the FERC regulatory process and sign an EPC LSTK contract. On CWLNG's EPC schedule, they are indicating a Limited Notice to Proceed ("LNTP") phase that shows seven (7) months of engineering and six (6) months of procurement services before Final Investment Decision ("FID"). The LNTP phase would require an additional \$50MM to \$75MM to advance the Project's engineering and procurement efforts sufficiently to buy the long-lead equipment, structural steel, and pipe shortly after FID.

We believe the LNTP phase is the only way CWLNG can possibly have the modules arrive 25 months after FID. In other words, if the LNTP money isn't spent, it would delay the LNG modules arriving on site by at least seven (7) months and the schedule benefits associated with the modularized LNG tanks would not be realized since the LNG modules wouldn't be there in time to support a 36 to 38-month EPC schedule.

As a comparison, Driftwood LNG has spent ~\$150MM on LNTP development activities, which includes engineering and reserving capacity at the supplier's facilities. By spending this LNTP/Pre-FID development money, we believe DWLNG has reduced their EPC schedule on Train #1 from 50 to 44 months (Notice to Proceed ("NTP") to Train #1 in Service).

Overall, we like a few aspects of the CWLNG Project, such as their selection of an experienced EPC contractor (TechnipFMC), the use of the most prolific LNG technology in Air Products and Chemicals, Inc., and CWLNG's team of experienced industry veterans. Furthermore, the idea of spending additional Pre-FID money to perform detailed engineering makes sense, even though it makes the schedule an artificial 36 months. That said, we believe several risks need clarified or resolved. Figure 2 summarizes the Project according to CWLNG's Resource Report #13 filed in August 2019.

**Figure 2.**

CLNG Project Description Resource Report #13 – August 2019	
Unit	Quantity
Total base capacity / normal operating conditions	8.4 MTPA
Design operating conditions	9.5 MTPA
EPC Schedule (Train #1) – FID to In-Service	32 months
EPC Schedule (All 6 Trains) – FID to In-Service	37 months
Onsite Power Plant Capacity	120 MW
FEED Completed	Early 2021
Preliminary Number of Piles	6,000 to 7,000
No. of LNG Vessels Per Week	Up to 3
LNG technology	Air Products and Chemicals, Inc. Single Mixed Refrigerant
EPC Schedule	36 to 38 Months
Onsite Workers during EPC phase (average/peak)	800/ 2,000
Gas Turbines	Baker Hughes
LNG Storage Tanks (40,000 m3)	6
1.4 MTPA LNG Liquefaction Trains	6
Storm Surge Berm Construction Height	26 ft. on the Gulf Side/ 21 ft. on the Inland Side
Storm Surge Wall Length	7,800 ft.
Marine Berths up to 216,000 m3	1
3-mile 30" new natural gas pipeline	1

In addition to the CWLNG terminal, Commonwealth LNG, LLC is planning to construct a 3.04-mile long, 30-inch diameter pipeline that will connect the LNG facility with existing intrastate and interstate pipelines for the purpose of supplying feed gas to the Project (yellow line in Figure 3). The pipeline will include interconnections with an existing interstate pipeline owned by Kinetica Partners, LLC, and two existing intrastate pipelines owned by EnLink Bridgeline Holdings LP.

**Figure 3. CWLNG Pipeline**

