

LNG arrives at two new US terminals

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Two LNG tankers arriving along the upper Texas Gulf Coast within 5 days of each other are delivering commissioning cargoes for two new LNG terminals, one in Louisiana and one in Texas.

On Apr 11, the 145,000-cu m Celestine River docked at Cheniere Energy's Sabine Pass terminal, in Cameron Parish, La., along the Sabine River border near Port Arthur, Tex. The tanker had loaded its cargo at Nigeria LNG. On Apr. 15, the 138,000-cu m LNG regasification tanker Excelsior arrived at Freeport LNG Development LP's Quintana terminal, about 70 miles south of Houston. The LNGR tanker had loaded its cargo in Trinidad and Tobago, historically the largest LNG shipper to the US.

These two terminals, which will undergo cooldown over the next several weeks, and receive two or three more cargoes each in the process, will be the first land-based LNG terminals to open in the US in more than 25 years.

Two more US terminals, also in Louisiana and Texas, are in final stages of construction and expect to start up later this year or in first quarter 2009. ExxonMobil Corp.'s Golden Pass terminal lies across the Sabine River from Cheniere's terminal. And east of Sabine Pass, near Hackberry, La., 18 miles from the Gulf of Mexico, Sempra Energy Subsidiary Sempra LNG is in the final months of building its Cameron

LNG terminal.

New technology

When it starts up its Phase I later this year, Freeport LNG Development (FLNG) will have nominal sendout capacity of 1.5 bcf/d with peak capacity of 1.75 bcf/d.

Unlike the four existing ITS land terminals at Everett, Mass.; Cove Point, Md.; Elba Island, Ga.; and Take Charles, La. that use submerged-combustion vaporization, FLNG employs an ambient-air system designed to draw heat from the air to regasify LNG. The process employs towers that consist of seven vaporizers with one installed spare employing vertical shell-and-tube exchangers of 250 MMcf/d each. The technology, says FLNG, allows the plant to operate within the Houston-Galveston nonattainment area because the towers emit no NOx. During cooler weather, FLNG converts its vaporization process to heaters similar to those used at other LNG terminals.

Phase 1 has installed two, 160,000-cu m LNG storage tanks (3 bcf of gas equivalent in each tank) and an LNG carrier berth that can accommodate the largest carrier envisioned, according to the company: Phase 2, if decided upon, would add a third 160,000-cu m tank and separate berthing for a second carrier.

FLNG is managed by a general partner owned 50% by Michael S. Smith and 50% by ConocoPhillips: Limited partners with "economic interests," according to company material, are Smith, Cheniere

Energy, Dow Chemical Co., and Osaka Gas. Company material says ConocoPhillips has agreed with FLNG for capacity rights of up to 1 bcf/d. Dow has also contracted to receive 500 MMcf/d.

Largest

Cheniere Energy's Sabine Pass terminal sits at the widest point on the Sabine River Navigation Channel and has two berths recessed far enough so that no part of the LNG vessel will protrude into the open waterway while docked, says company material.

Phase 1 construction has built 10.1 bcf of LNG storage in three tanks, each with an LNG capacity of 160,000 cu m and a maximum continuous, regasification rate of 2.6 bcf/d, the largest of any US terminal. Vaporization will take place in 16 high-pressure submerged combustion vaporizers. Takeaway is provided by a 16-mile, 42-in. pipeline.

Two or three more cargoes, from suppliers yet to be announced, will complete the cooldown process. Commercial operations are likely to start in May or early June, but as yet no supply contracts or spot supplies have been announced. Phase 2 is trades way and will add 1.4 bcf/d with three more 160,000-cu m single-containment tanks, 16 ambient-air vaporizers, each with a high-pressure sendout pump, and 8 more SCVs, also aided by a high-pressure sendout pump. +