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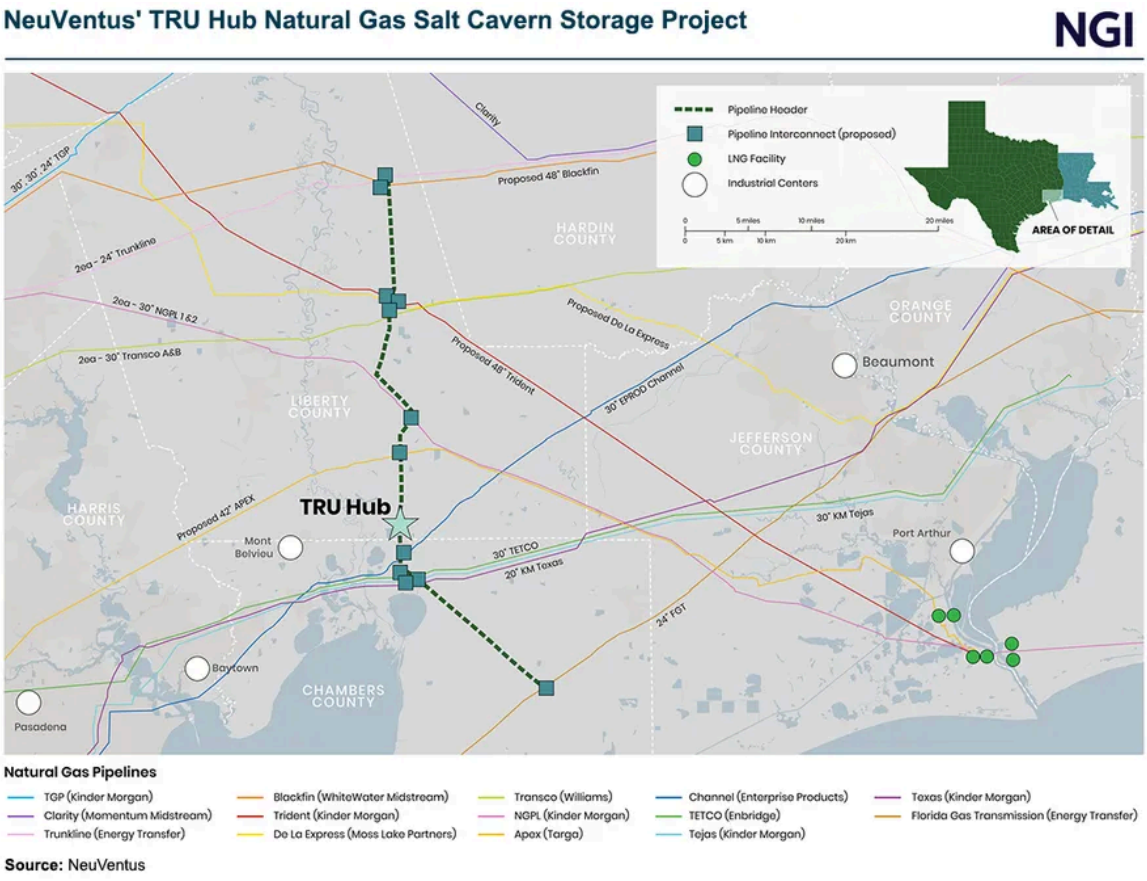
NeuVentus Joins Gulf Coast Natural Gas Storage Push with Texas Salt Cavern Approval

By Chris Newman 12 minutes ago

NeuVentus LLC has received final approval from the Railroad Commission of Texas to develop 12 salt caverns at its Texas Reliability Underground (TRU) Hub in East Texas, allowing it to move forward on an initial phase of storage for natural gas.



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The Austin, TX-based company's TRU Hub represents the latest entrant in a revival of salt storage development along the Gulf Coast after a decade-long lull in new projects. The facility is slated fo the Moss Bluff salt dome in Liberty County and would contain 12 caverns, with eight designated

for gas, either natural gas or hydrogen. The eight caverns would have space for up to 96 Bcf of natural gas.

NeuVentus plans to launch an open season in the coming weeks to gauge interest for a first phase of two natural gas caverns with a combined working capacity of 20 Bcf.

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"We've been having a lot of customer engagement to make sure that we're all on the right track," NeuVentus CEO Sam Porter told NGI.

The two caverns each have a permitted maximum daily injection rate of around 2.5 Bcf/d. Preliminary compression plans would provide capacity for 600 MMcf/d of injections and 1.2 Bcf/d of withdrawals across both caverns, according to NeuVentus.

The company expects to make a final investment decision (FID) by the end of 2025 and could begin service in 2028, Porter said. Another four caverns could be developed to store up to 128 million bbl of natural gas liquids.

Rising Rates

Conversations with potential customers have echoed what other storage developers have reported. Salt storage rates are rising as the Gulf Coast market faces dwindling capacity. LNG terminal projects are grabbing some of the remaining unclaimed cavern space.

"Everybody seems to all be waking up at exactly the same moment in time and realizing that storage is underbuilt. We need to fix that," Porter said.

Potential customers have indicated monthly rates have climbed high enough to support the greenfield project, and for contract periods long enough to secure financing, he said.

“It’s getting up into that range – I’m going to bookend it and say 25-35 cents/Dth. But it’s a function of volume, tenor and price,” Porter said. “It’s not just the rate. It's how certain the revenue stream is.”

Other salt cavern developers have said contract rates have climbed into the 20s cents/Dth. Auctions have netted shorter-term deals in the 30s cents/Dth. These levels compare to projects financed a decade ago at rates in the teens and single digits.

‘How Much Do We Need?’

Growing price and gas flow volatility as well as reliability concerns during extreme weather have driven interest in new salt storage capacity, which with its flexibility to both inject and withdraw can quickly react to fluctuations in gas demand.

The interest is coming from LNG exporters and utilities with a growing reliance on intermittent renewables and customer base of energy-intensive data centers.

Gas storage has “gone from being a very simple summer-winter spread for the Northeast’s gas burn in the winter for heating versus all these new value propositions,” Porter said.

Salt storage acts as “insurance” for LNG facilities that need somewhere to redirect contracted gas supplies during unexpected outages, he said. Utilities in Texas run renewables first and need gas as backup and reliability, especially during extreme weather. Trading firms are using storage to take advantage of short-term price fluctuations. “There's going to be volatility in the gas market, and that feeds directly into our play."

TRU Hub joins a growing slate of greenfield and expansion projects proposed to add around 130 Bcf of salt capacity along the Gulf Coast over the next few years.

“How much do we need? That's the big, big question,” Porter said. “Is it 300 Bcf? Is it 500 Bcf? Is it a Tcf? That’s unclear.”

The challenge for new entrants in the space is the limited number of developable sites, Porter said. There are hundreds of salt domes on the Gulf Coast, but a viable site requires land with the mineral rights not chopped up finely among many holders, as they tend to be, he said. “Getting all of those in one single counterparty takes a long time.”

A project also needs access to infrastructure. “You don’t want to build a 50-mile header just to get to your first pipeline. That’ll blow your economics.”

Pipeline Connections

For natural gas and natural gas liquids, TRU Hub’s site is right in the middle of Texas’ refining and petrochemical corridor, halfway between the Houston Ship Channel and Beaumont/Port Arthur export hubs.

A planned 45-mile header would connect TRU Hub with up to 12 gas pipelines (if Apex Pipeline and DeLa Express LLC move forward). However, NeuVentus initially plans to prioritize around 30 miles of pipe that would run south about four miles to a cluster of pipelines and north toward the Trunkline Gas Pipeline Co. LLC and Blackfin Pipeline.

Along this route, interconnections could be made with the Transcontinental Gas Pipe Line Co. LLC, Natural Gas Pipeline Co. of America LLC, Texas Eastern Transmission LP and Kinder Morgan Inc.'s planned Trident Pipeline and Tejas and Texas intrastate pipelines.

Giving it a headstart in the storage race, NeuVentus started out as a hydrogen midstream play in 2023, backed by investment firm Lotus Infrastructure Partners. Its target was supporting the HyVelocity Hub, one of seven hydrogen hubs selected by the U.S. Department of Energy, using tax credits in the Inflation Reduction Act.

But over the course of 2024, interest in hydrogen waned, while natural gas waxed, Porter said.

Storage Rush

Gulf Coast Midstream Partners LLC's (GCM) Freeport Energy Storage & Sequestration Hub (FRESSH) southwest of Houston was the first greenfield project out of the gate in early 2024. GCM expects to receive its Texas permit in the coming months, chief commercial officer Edmund Knolle told NGI. If an FID is made this year, a 26.2 Bcf first phase could begin service in late 2028 or early 2029, he said.

Management for the Black Bayou Energy Hub in southwest Louisiana plans to make an FID by the end of the year, Dan Craig, chief commercial officer, told NGI. The company aims to build two 17 Bcf phases, with the first starting up by mid-2028 and the other by 2030, Craig said. FERC published an environmental assessment of the project in April and could give approval by the end of September, he said.

"We had a very strong open season, with 70 Bcf of bids from over 30 counterparties," Craig told NGI. With those results, Black Bayou contracted out the first phase and is working on signing up customers for the second phase, he said.

In terms of expansions, Enbridge Inc.'s Tres Palacios salt storage facility in Matagorda County, TX, added a fourth cavern with 6.5 Bcf working capacity in December.

Sixth Street Partners-backed Caliche Development Partners LLC reached an FID late last year to double the size of the 14 Bcf Golden Triangle Storage Inc. facility southeast of Houston. It plans to add two caverns in 2026 and 2027.

Enstor Gas LLC recently greenlit a 33.5 Bcf expansion of the Mississippi Hub in Simpson County, MS, planned to come online in 2028.

Chris Newman

Chris Newman joined NGI in October 2023. He worked 18 years at Argus Media, starting in 2004 in Washington, D.C., where he covered U.S. thermal/coking coal markets and rail transportation. In 2014, he moved to Singapore to help lead Argus' coverage of steel and its raw material feedstocks. A graduate of the University of Virginia, Chris returned to his native Virginia in 2021.

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