U.S. LNG Export Projects Update

THE LEAD: DOE PREVAILS IN FREEPORT LNG CASE

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The United States Court of Appeals for the D.C. Circuit (D.C. Circuit) issued an opinion (Aug. 15) in Sierra Club v. United States Department of Energy. In its opinion, the court rejected Sierra Club's challenge to the DOE authorization for LNG exports from the Freeport terminal in Texas. In this case, the court resolves issues that had been left open by a pair of D.C. Circuit opinions issued in 2016 and clarifies the extent to which federal agencies are expected to analyze indirect environmental effects of LNG exports.

The Sierra Club raised concerns about the potential for LNG exports to induce additional domestic natural gas production and increase domestic reliance on coal. Sierra Club also argued that DOE's analysis of greenhouse gas impacts was inadequate and that Freeport's exports fail to satisfy the National Gas Act's (NGA) "public interest" standard.

The D.C. Circuit upheld DOE's determination <u>not</u> to analyze the potential effects of increased gas production at a local or regional level. The court found that DOE acknowledged the potential for locally significant impacts but reasonably avoided undue speculation as to the impacts in any particular location or region, a task that would not have provided meaningful information.

The court also accepted DOE's assertion that the connection between higher natural gas prices and potential impacts from increased reliance on coal is too speculative to measure, and it rejected Sierra Club's greenhouse gas claims as "flyspecking," which would require a broad and highly uncertain analysis to resolve. Finally, the court swiftly dispensed with Sierra Club's public interest claim by noting that the only issue Sierra Club raised was that DOE allegedly failed to thoroughly consider environmental impacts, an issue the court had already resolved in DOE's favor.

Insight: In upholding DOE's environmental review process in response to concerns often raised by opponents of



LNG export projects, the D.C. Circuit has provided additional certainty for LNG export applicants and resolved some concerns about delays for pending authorizations. Both developments are positive for the LNG export industry. The D.C. Circuit also made several observations in the opinion that are favorable to LNG export proponents. Among other points, the D.C. Circuit reaffirmed that the NGA contains a presumption in favor of export authorization to non-free trade agreement countries, and it reiterated the long-standing tenet that significant environmental impacts—even if they had been present in this case—would not necessarily have required a negative public interest determination, provided that other factors weighed more heavily in favor of granting the requested export authorization.

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CHENIERE ENERGY

Corporate News

Cheniere Energy reached another milestone in August when the first LNG cargo from the company's Sabine Pass LNG project was delivered to Lithuania. The occasion was marked by a welcoming ceremony at the Port of Klaipėda (Aug. 21) attended by representatives from Cheniere, Lietuvos Duju Tiekimas (the importer), Klaipėdos nafta (the LNG terminal operator), and U.S. and Lithuanian government officials. Lithuania's Foreign

Affairs Minister Linas Linkevicius said: "This is crucially important for the whole region. We want to cement our relationship with the United States in many aspects in addition to defense and security—energy trade is one of the strategic areas for cooperation." Earlier (Aug. 07), Cheniere reported in its Q2 2017 earnings release that some 160 cargoes of LNG had been shipped from Sabine Pass to "24 of 40 LNG importing countries."

Cheniere Sabine Pass (Louisiana)

There were two key developments at Sabine Pass during this period. In August, the "date of first commercial delivery" for Train 2 under Cheniere's contracts with Gas Natural Fenosa and Shell was marked. Also, Train 4 achieved first LNG production in late July and produced its first commissioning cargo in August. The four trains producing LNG at Sabine Pass have a combined output of 18 mtpa (4.5 mtpa each).

■ Cheniere Corpus Christi (Texas)

During the Q2 2017 earnings call, Cheniere CEO Fusco noted that progress on Trains 1 and 2 at Cheniere's Corpus Christi project had progressed to "nearly 70% complete" as of the end of June. In its latest (Aug. 21) FERC report, the company provided additional detail. Through July: engineering has progressed to 100.0%, procurement to 88.7%, and subcontract and direct hire construction work to 40.9% and 44.2%, respectively. The total project has

LNGAllies

ABOUT US

LNG Allies is a nonprofit organization working to expedite and maximize LNG exports to create U.S. jobs and economic growth, enhance the energy security of America's allies, and improve economic and environmental conditions worldwide.

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progressed to 69.6% complete against the plan of 69.5%. Trains 1 and 2 will be capable of producing 4.5 mtpa each.

SEMPRA LNG & MIDSTREAM

■ Cameron LNG (Louisiana)

In its most recent progress report to FERC (Aug. 21), Cameron LNG stated that activities through July 31, consisted of "civil works, structural steel erection, fireproofing work, installation of equipment, tanks and piping, electrical and instrument works, and tie-in within the existing facility." In addition, the contractor continued: (1) pulling vacuum on the liquefaction rundown line pipe-in-pipe shroud cavities; (2) installation of shoreline protection along the eastern ship channel boundary; and (3) installation of major equipment. Cameron LNG's first train is expected to enter service in 2019 with the second and third trains following later that same year.

DELFIN MIDSTREAM

■ Delfin LNG (Offshore Louisiana)

The joint venture agreement between Golar and Delfin Midstream to develop the Delfin LNG floating liquefaction project in the Gulf of Mexico was discussed during Golar's Q2 2017 earnings call (Aug. 30). Golar CEO Oscar Spieler said: "This is a brownfield deepwater port project that requires minimal additional infrastructure investment to support up to four FLNG [floating liquefaction] vessels, collectively producing up to 13 mtpa of LNG. We are in the process of developing our next-generation of LNG vessel (MARK II) which is expected to have a capacity in excess of 3 mtpa. MARK II can operate in harsher environments than MARK I, and our expectation is that the cost per ton of LNG produced by the MARK II solution will be lower than MARK I and will be the lowest cost LNG production in North America." Delfin CEO Frederick Jones said Golar's floating model increases flexibility for the project and will allow Delfin to offer "innovative commercial solutions," such as reduced credit requirements and medium-term off-take agreements of roughly 10 years. Jones told S&P Global Market Intelligence that FID on the initial FLNG vessel could come in 2018 with first LNG in 2021 or 2022.

TELLURIAN

Driftwood LNG

Tellurian, Inc. said in its Q2 2017 earnings release that Bechtel had completed the front-end engineering and design (FEED) study and submitted a lump-sum turnkey engineering, procurement, and construction (EPC) proposal for Tellurian's Driftwood LNG terminal. Tellurian CEO Meg Gentle stated in the release that the company anticipates signing a binding EPC agreement with Bechtel this Fall. The Driftwood facility will produce \approx 26 mtpa of LNG when complete. It is located on the west bank of the Calcasieu River, south of Lake Charles, Louisiana. The Driftwood project is under formal FERC review and is anticipating a number of milestones in 2018 and first LNG in the 2021 to 2022 timeframe.

VERESEN

■ Jordan Cove LNG (Oregon)

Jordan Cove LNG announced (July 06) that KBJ—a joint venture partnership of Kiewit Energy Group, Black & Veatch (B&V) Construction, and JGC U.S. Projects was selected to engineer and construct the Jordan Cove LNG export terminal in Coos Bay, Oregon. The project will utilize B&V's PRICO[®] technology. JGC will work closely with B&V to perform the engineering, procurement and module fabrication for the project. Kiewit, a direct hire union construction contractor with significant experience throughout North America, will manage the construction of the facility. The Jordan Cove project will be the largest single, private investment in the history of southern Oregon. Construction is anticipated to span 53 months and will require nearly 2,000 workers at peak. The Jordan Cove LNG terminal is expected to produce a maximum of 7.8 mtpa of LNG.

OTHER U.S. LNG EXPORT COMPANIES & PROJECTS

Alaska LNG (Alaska)

According to Alaska Gasline Development Corp. (AGDC), the Federal Permitting Improvement Steering Council has granted (Aug. 18) "covered project" status to the Alaska LNG project under the Fixing America's Surface Transportation Act (FAST-41). AGDC stated that: "FAST-41 enables federal agencies to adopt state environmental documents to satisfy federal laws and

provides mechanisms for resolving disputes among federal agencies regarding the review and permitting of Alaska LNG." Earlier (Aug. 08), AGDC announced that it had gained IRS approval to qualify as a tax-exempt political subdivision of the State of Alaska. According to AGDC, this means that the corporation will not be subject to federal income tax and can issue tax-exempt debt.

■ Dominion Energy Cove Point (Maryland)

During Dominion Energy's Q2 2017 call (Aug. 02), CEO Thomas Farrell said that the Cove Point LNG export facility under construction on the Chesapeake Bay is 95% complete. Farrell said that the developer has an agreement with a third party for cargoes that will be produced ahead of the project's official in-service date, which is expected later this year. "Engineering and procurement is essentially finished, and as we work towards commercial in-service... we will bring the project to a state of 'ready for startup' this quarter, and construction will reach essentially complete status," Farrell said.

■ LNG Ltd. (Magnolia LNG)

LNG Ltd. said in a news release (July 05) that it had entered into an "amended and restated" equity commitment agreement with Stonepeak Partners "to fund the full Magnolia LNG project equity requirement."

■ NextDecade (Company News)

NextDecade Corp. became a publicly traded company on July 24 following a successful merger with Harmony. The company's stock trades on the NASDAQ exchange under "NEXT." Earlier the company announced (July 19) that it had signed a MOU with the Port of Cork (Ireland) for the potential development of a Floating Storage and Regasification Unit (FSRU) and associated LNG infrastructure at the port.