

## FERC has full workload with LNG export projects

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*(Larry Persily, assistant to the Kenai Peninsula Borough mayor, attended a North American gas forum in Washington, D.C., and prepared this report as part of the borough's ongoing efforts to share information about LNG market developments. No borough funds were spent on travel.)*

It's a busy time for LNG project applications at the Federal Energy Regulatory Commission.

FERC has files open for almost two dozen proposed liquefied natural gas export terminals. That's in addition to the five projects already approved by the agency. It was less than a decade ago that federal regulators had almost twice as many proposals for LNG *import* terminals — but that was before the U.S. shale gas boom ended any need to bring in gas from overseas suppliers.

The proposed export projects are scattered across the country, as far east as Maine, south to Georgia and Florida, all along the Gulf Coast and as far north as Alaska — seemingly anywhere there is a pipeline to move the surplus of U.S. shale gas to the coast for liquefaction and shipment to overseas markets. Or, in the case of Alaska, moving an almost 50-year-old gas discovery to market.

The agency is devoting more resources to its Office of Energy Projects to handle the workload, Joseph Kelliher, a former FERC chairman, said at the annual North American Gas Forum in Washington, D.C., Oct. 5-6. The higher the quality and the more complete the application — its environmental reports, data and details — the faster it will move, he said.

Less local controversy also helps, Kelliher added.

But multiple challenges from fossil fuel and LNG project opponents are slowing down the process, he said, as FERC spends more time on each environmental review.

### THOROUGH ENVIRONMENTAL REVIEWS

FERC Commissioner Tony Clark delivered the same message. The agency works harder and longer on each project to produce a thorough environmental review and decision that will stand up to the expected challenges in court. Several speakers noted it can take two years, or more, to receive a final environmental impact statement and decision on an LNG terminal from FERC.

Regardless of increased opposition to energy projects, the applicants — and the public — deserve timely decisions and certainty of law, Clark said. He cited the seven-year wait by TransCanada for a State Department decision on the proposed Keystone XL Alberta-to-U.S. oil

sands pipeline as a “debacle.” The State Department, not FERC, decides on cross-border pipelines.

Most of the U.S. shale gas bonanza, however, is staying at home. This past spring, for the first time ever, natural gas produced more electricity in the United States than coal-fired power plants. “It was just an absolute sea change that no one could have predicted,” Clark said.

Moving all that gas from shale formations to domestic customers and to the coasts for export requires a lot of pipeline capacity, much of which used to move in different directions from traditional gas-producing areas. “We’re changing the piping of the United States,” said Octavio Simoes, president of Sempra LNG, which is building an export terminal at Hackberry, La.

For example, instead of moving Gulf Coast gas to the mid-Atlantic and Northeast, pipelines will need to transport Marcellus Shale gas from Pennsylvania and Ohio to the Gulf Coast for export as LNG.

The boom in shale gas production has made the United States a must-see for foreign buyers of LNG, looking for new supply sources to diversify their portfolio. And looking for lower prices.

Most U.S. gas is quoted as “Henry Hub,” the name given to the pricing point for natural gas futures contracts. The trading benchmark is a distribution hub where several major gas pipelines connect in Erath, La. Simoes told the story of a group of overseas buyers who wanted to tour the “Henry Hub,” mistakenly thinking there might be something to see. But Henry Hub is merely an aboveground metering station. “There were 40 of them and they took a lot of photos,” Simoes said.

Sempra’s project, called Cameron LNG, is adding liquefaction and export capability to an underutilized import terminal. Commercial operations are set to start in 2018, Simoes said, and already Sempra is thinking about expanding the plant’s capacity.

Until global LNG markets settle down and develop a new pricing structure, Sempra expects to see more short-term contracts rather than the traditional long-deal deals.

## **INVESTMENT DECISIONS GET TOUGHER**

Too much new supply going after weak demand, coupled with the lowest prices in years, is making it tough on developers thinking about investing in new projects. Several speakers said that reluctance could mean tight global supplies in the 2020s.

“We think there is substantial risk of supply the end of the decade and into the next,” said Anatol Feygin, a senior vice president at Cheniere Energy, which is scheduled to open in Sabine Pass, La., the first LNG export terminal in the Lower 48 states by the end of the year.

There have been a lot of big changes in global LNG markets in just the past few years with new, lower pricing options, more flexible contract terms, and multiple new supply options from Papua New Guinea, Australia, the United States, as well as hopefuls from Canada to Israel to East African nations. “The world has not yet recalibrated to this new normal,” Feygin said.

Until that adjustment, low prices and fears of a long price recovery add uncertainty to investment decisions. “The economics on projects are quite stressed,” said Don Lemoine, vice president for gas monetization at global construction contractor Kiewit Energy Group.

Despite the turmoil, some fundamentals remain important. Buyers want known, reliable suppliers with a strong balance sheet, Simoes said. And suppliers still need long-term sales contracts to underpin the billions of dollars in financing needed to build an LNG project. Without that matchmaking, companies will not make final investment decisions and the market could be short of gas in the 2020s — and buyers will complain about high prices as they did in the past few years.

In addition to the Sempra and Cheniere projects, three other LNG export terminals are under construction in the United States — two in Texas and one on Chesapeake Bay in Maryland. And though U.S. LNG export promoters talk a lot about selling into the large Asian market, Europe and several emerging markets look good, too, Feygin and Simoes said.

## **MORE OPPORTUNITIES TO SELL LNG**

“We’re not putting as many eggs ... into the Asian basket as we did two or three years ago,” Feygin said of Chienere’s marketing efforts. Asian demand will depend in great part on how many nuclear power plants are restarted in Japan, and whether China’s economy and energy demand returns to strong growth. European demand will build over time, Feygin said, as will the Middle East which is increasingly looking at LNG to fuel its electrical generating plants.

Add to the list Pakistan, Thailand, the Philippines, South Africa, Argentina, Brazil and Chile, Simoes said. All are buying more LNG or starting to import the fuel. “I could go on and on with the list.”

How much European LNG demand grows will depend on the price of oil as a competing fuel, whether countries impose or raise carbon taxes, if local gas production continues to decline, and how much Russia fights — and lowers its prices — to protect its prime market.

“Russia has learned its lesson,” and is offering better contract terms, said Svetlana Ikonnikova, an energy economist at the University of Texas at Austin. Russia’s big exporter, Gazprom, makes most of its profits from gas sales to Europe and has taken note that many of its customers can take LNG as an option.

Some, like Lithuania, opted for a floating import terminal, rather than building a much more expensive and time-consuming onshore project. The floating storage and regasification unit

(FSRU) takes delivery from an LNG carrier, stores it onboard until it is needed, then regasifies the fuel and pipes it to shore.

Egypt just tied up its second FSRU, and Jordan and Pakistan are also turning to floating terminals, along with several South American countries. At least nine older LNG carriers have been sold this year, likely targeted for eventual conversion to FSRU vessels. Global FSRU import capacity jumped five-fold between 2008 and 2015, and could reach 130 million metric tons of LNG per year by 2021, Feygin said.