

The New Appeal of LNG

A CLOSER LOOK

By Gary M. Stern

News Flash >>

www.energycentral.com

CHINA RENEWABLE SURGE

China is spending more than any other nation on renewable energy, according to a report in the Xinhua News Agency. It invested \$6 billion out of a total worldwide \$38 billion invested in renewables last year, according to Eric Martinot, at the Worldwatch Institute.

POWERGEN LOOKS FOR LOCALE

PowerGen, an alliance of companies looking to advance coal generation technology, is considering 12 potential sites for the \$1 billion project; our are in Illinois, according to a government release. The plant is expected to conquer the emissions problem of coal-burning. The project is expected to be running by 2012, according to a report in The News-Gazette in Champaign-Urbana, Ill.

FOR YEARS, TRANSMISSION of liquefied natural gas into the United States fell under the radar screen. Registering only 2 percent of domestic natural gas use, it was considered an afterthought by most utility and energy companies. That situation is drastically changing.

The number of LNG transmission facilities in the United States is ready to spike. Several facilities have been taken out of mothballs and returned to use, and a myriad of new terminals have been built or are under construction. "As natural gas fields that have been serving the domestic market for 40 years have entered a natural decline, industry and LNG developers have been picking up the pace," noted Michelle Foss, chief energy economist at the Center for Energy Economics at the University of Texas. But some experts are claiming that oil and energy companies investing in LNG facilities may not reap return on investment as quickly as they expect.

With the increase in transmission, LNG use in the United States will likely increase 5 percent to 7 percent by 2010, Foss said. Moreover, domestic gas fields in the United States furnish 70 percent to 75 percent of our own gas needs, which will drop to 50 percent to 70 percent by 2010. "The pace of LNG growth depends completely on the price of natural gas that supports LNG cargos coming here and the level of demand," she said.

PRICE IMPACT

When natural gas prices hovered around \$2 per million British thermal units in the late 1990s and early 2000s, only one LNG facility, run by Distrigas, a subsidiary of Suez Energy North America, was operating in the United States in Everett, Mass. As natural gas prices shot up to \$6 and above, four domestic LNG facilities started accepting LNG cargoes from countries such as Trinidad, Qatar and Nigeria. Those four facilities are El Paso's terminal in Elba Island, Ga., Southern Union Panhandle in Lake Charles, La., Dominion's in Cove Point, Md., and Excelerate Energy's Gulf Gateway in the Gulf of Mexico, noted William Cooper, executive director of the Center for Liquefied Natural Gas in Washington. More than 70 proposed LNG facilities are on the drawing boards, though not all of them will materialize.

"Domestic supply can't keep up with domestic consumption. What we're seeing is the plateau of

domestic supply and an increase in demand," noted Gavin Law, the head of Global LNG for Wood MacKenzie, the Houston-based energy consulting company. Furthermore, Law noted that even as LNG prices were spiking to \$6 and \$7 and higher, the Japanese, Spaniards, and Koreans — who produce little or no gas in their native countries — were out-bidding American utilities and paying whatever prices the market would bear. "That means that Japan, Spain or Korea could end up buying what was originally destined for the United States," Law said.

Although North America uses 68 billion cubic feet of gas daily, it is 4 billion cubic feet short or about 5 percent of the supply demanded, explained Robert Ineson, director of natural gas for North America at Cambridge Energy Research Associates, who is based in Woodlands, Texas. "New plants are needed because demand is growing, supply declining, and we're short. We've locked in demand because we're unwilling to build power plants that depend on gas, coal, oil and nuclear, which are politically unpopular," he added. Hence, the rush for many energy companies to build LNG facilities.

FEDS UPBEAT

The U.S. Department of Energy is bullish on LNG. "We see LNG imports increasing by 10 percent to 12 percent annually for several years," explained Damien Gaul, economist with the Energy Information Administration (DOE). "If more LNG facilities are built, it would create greater supplies of natural gas and electric power producers will have more options," he said.

Besides the four revitalized LNG facilities, a number of new LNG transmission facilities are under construction by Cheniere Energy in Texas, Sempra in Louisiana, Shell in Mexico, and YPR Repsol (a Spanish company) in New Brunswick, Canada, because investors see "the gap between domestic production and the likelihood of increasing demand," Ineson said. Most of these plants will take three to five years to construct and will likely start transmission between 2008 and 2010.

What impact will this spike in LNG have on gas prices in the United States? Ineson expects that "once they ramp up, it will cause natural gas prices to fall. Once you add supply to the system,

you loosen the market." In about 2008, Cambridge Energy expects that gas prices will fall into the \$4.50 range for a couple of years as ramped up production of gas increases. The companies that invested millions to build new plants and anticipated reaping \$6-gas prices or higher and earning a quick return on investment will likely have to wait longer to recoup their investments. In fact, Ineson said that Cambridge Research has told its clients who are exploring LNG construction "to slow down, though some have disagreed with us."

"No one builds unless there's a price signal that they feel is sustainable. Independent developers like Freeport LNG and Cheniere Energy are responding strongly to market signals," Foss said. Furthermore Foss estimated that building LNG regassification terminals can cost a total of \$2 billion including production, shipping and receiving terminals, and companies wouldn't invest that money if they couldn't recoup their costs. Yet even she acknowledged that "expanding LNG as part of the U.S. supply portfolio increases inter-fuel competition and makes it more likely that, during peak periods, natural gas prices will not be as high as they would be otherwise."

Furthermore, Ineson noted that demand for LNG facilities would be highest in the East Coast, yet opposition to building facilities there is strongest because of environmental hazards and fear of terrorism attacks. Hence, most facilities will be built in the Gulf Coast, where they are more readily accepted or shipped in from Canada or Mexico to the East Coast, where transmission costs will raise prices.

Of the many planned LNG facilities, "Some will be built, but most will face opposition due to safety and environmental factors," noted Fred Kuffler, a partner at Montgomery, McCracken, Walker & Rhoads in Philadelphia that has handled LNG cases. "Groups are concerned about the explosiveness of gas abetted by post 9/11 terrorist concerns," he said. Landing LNG facility in Logan Township, N.J. has been stalled for several years due to environmental and safety concerns, including ships sailing under the Memorial Bridge and the Interstate 95 connection, he said.

Foss noted that if the United States wanted to rely on its own domestic gas resources. "We'd have to develop Alaska, drill in sensitive places like the Rocky Mountains that many people oppose, and drill offshore in areas besides Texas and Louisiana. Until America deals with that, we have no choice" but to import LNG from other countries, Foss said.

Despite the potential for a drop in prices, Ineson sees shipping more LNG into domestic facilities as a positive step. If transmission were not increased,

Expanding LNG as part of the U.S. supply portfolio increases inter-fuel competition ...

"you'd have a severe problem that might require allocation of resources. It could lead to turning off heat, power or shutting down industry," so the increased transmission of LNG into the United States is sorely needed. Furthermore, "it allows us to do things like burn gas for electric power instead of burning coal, which has air quality implications," he said.

Foss depicts LNG developers Cheniere Energy and Freeport LNG as likely winners. They have solid business models, strong financing, credit worthiness, strategic locations and have done their due diligence. She expects them to be commercially successful as gas well reserves in the United States decline, global competition for LNG proliferates, and demand in this country remains strong. Ineson, however, noted that if prices decline to the \$4.50 level, expect disappointed investors. We'll see more supply and lower than expected returns. ☞

Energy Business **GATHERINGS** www.energycentral.com/events

To view any of these events, please go to www.energycentral.com/quicklink and type the quick link code () into the quick link box.

AUGUST

1 ~ 3 | 2006 PRB Coal Use Risk Management Strategies & Tactics
Milwaukee () E13240

2 ~ 4 | T&D Asset Management 2006
Chicago () E13935

9 ~ 11 | Offshore Gas Operations
Houston () E12868

SEPTEMBER

4 ~ 5 | European Nuclear Power Debate
London () E14003

7 ~ 9 | Outage Management for Power Plants
Chicago () E13895

12 ~ 13 | Issues in Power Quality
Montreal () E13732

14 ~ 15 | Fundamentals of Short-Term Hourly Forecasting
San Diego () E13449

14 ~ 15 | Coal Marketing Days
Pittsburgh () E13981

21 ~ 22 | Pipeline Development and Expansion
Houston () E14089

26 ~ 27 | 2nd Annual Nuclear Fuel Strategies
Washington () E14017