

PLENTY OF GAS IN STORE

Increasing shale production, higher LNG imports and gas-price volatility make gas storage facilities a growth business.

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In the past three years, the natural gas industry has added more than 270 billion cubic feet (Bcf) of working gas storage capacity in the U.S., such that total in-ground capacity has reached 4.2 trillion cubic feet (Tcf), according to the Energy Information Administration.

But regional supply-demand dislocations, gas-price volatility, increasing shale production, and looming imports of liquefied natural gas (LNG), indicate that that may not be enough. This fall, storage will be as full as it has ever been.

“Our projections imply that inventories could stand at 3.87 trillion cubic feet at the end of the summer injection season, providing a test of U.S. capacity to store gas, with all the attendant bearish implications,” says Barclays Capital E&P analyst James Crandell in a recent report.

At press time, 1.9 Tcf of gas was in storage, up from the winter-ending total of 1.6 Tcf and about 23% more than the five-year average.

With gas supply plentiful, demand weaker, and price arbitrage of \$4 per thousand cubic feet today, versus \$5 by 2010 and \$6 by 2011 (if one believes the forward strip on Nymex), the motivation for building gas storage is clear.

Gas storage facilities can show gross margins of up to 60%, says John Hopper, president of Peregrine Midstream Partners LLC, formed in January in Houston. “Because you still have the same gas-price volatility as you’ve had forever, you still need multicycle storage, and we have cheap gas to put in storage. You need more storage because of this equation, and because all existing U.S. storage capacity is spoken for.”

Hopper, who co-founded Falcon Gas Storage



Co. Inc. eight years ago, recently left to form Peregrine. The startup has seed capital in place to start looking for storage prospects in the Rockies, desert Southwest and elsewhere. Since buying existing facilities commands such a premium, Peregrine will pursue greenfield and brownfield projects instead and seek private equity once a specific project is identified, he says.

Private equity should be no problem. Many of the largest energy-focused funds have recently raised midstream-specific funds. The latest was Tenaska Capital Management LLC’s October 2008 close of TPF II LP, a \$2.4-billion fund that will invest in gas storage, pipeline and other midstream and power-generation assets.

Capacity growth

Changing demand patterns also fuel storage-capacity growth. Whereas industrial gas demand has been flat to down, utility demand has increased as more gas-fired power plants have come online in the past few years. But their gas demand tends to be “spiky,” based on weather patterns, meaning storage is needed to smooth out both price volatility and weather seasonality, Hopper says.

Today, several projects are under construction or going through the permitting and environmental-study process. Projects under way in the Haynesville-Fayetteville-Deep Bossier shale-gas corridor and in the Northeast’s Marcellus play will store increasing shale production and connect to a spaghetti bowl of existing pipelines.

Some projects include Leaf River Energy Center LLC in Smith County, Mississippi, which plans to begin operating in first-quarter 2010 with 8 Bcf of initial storage capacity in an old salt dome. This is a project of NGS Energy LP.

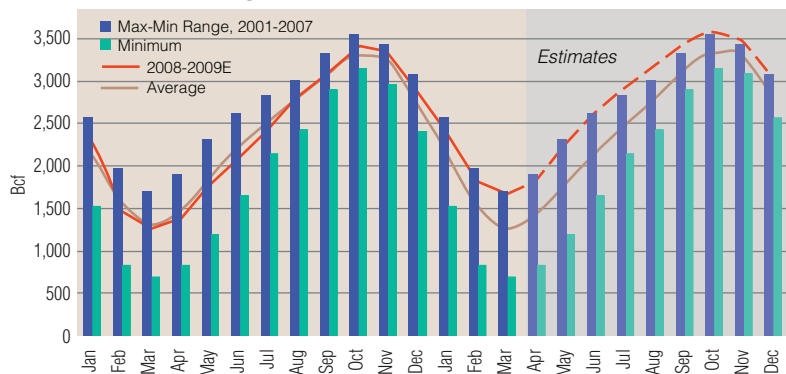
Orbit Gas Storage Inc. will add 5 Bcf in Kentucky. Chestnut Ridge in Pennsylvania will add up to 25 Bcf. The Bobcat storage project in Saint Landry Parish, Louisiana, will add up to 24 Bcf.

Atmos Energy projects its first of three 5-Bcf storage facilities in Franklin Parish will be operational in summer 2011.

Says Hopper, “You need storage to manage shale gas, and ideally, probably as far east as possible, east of the pipeline bottlenecks.”

Total working gas in storage for the week ended April 24 rose to 1.82 billion cubic feet, some 22% more than the five-year average for the spring shoulder season.

Natural Gas Storage



Source: EIA data, Stifel Nicolaus estimates. Prices are intraday 5/7/09



Inergy LP, one of the largest gas storage developers in the Northeast, is developing a number of storage assets in New York, including this LPG facility at Bath.

Indeed, location is one of the prime factors, says Mark Freed, vice president of High Sierra Energy LP. In April it began injecting gas at its first new storage project, the 10-Bcf Monroe facility in Mississippi that can take gas from the Black Warrior Basin and connect to several area pipelines. Firm agreements are in place for 9.1 Bcf from utilities and gas marketers.

The company was founded in Denver in 2004. It's been backed along the way by midstream capital providers Energy Spectrum, Swank Capital, Tortoise Capital Resources Corp., NGP Midstream & Resources, and more recently, senior secured construction financing from Fortis Merchant Bank.

“The biggest hurdle right now is obtaining the credit required to build something,” says chief executive Jim Burke. “The market has flipped to where you now require more equity in a project. Although Fortis led our deal, we had nine banks involved.”

Adds Freed: “We believe that long-term, the marketplace understands that more storage is necessary, as does the EIA, but because of the dislocation in the debt market, investors expect higher returns.”

Storage operators, lenders and investors have hiked their expectations to 20% and higher as the cost of capital has risen, but hurdle rates differ from utility to marketer to private MLP like Sierra.

Northeast salt mine

Salt caverns or domes that are depleted gas fields such as in Louisiana are commonly used for storage, but there is a twist in upstate New York—converting a working salt mine to gas storage after the salt is produced. It's a flagship project of Inergy LP, based in Kansas City, Missouri. The master limited partnership gets about two-thirds of its cash flow from its successful propane business, but about a third from the midstream sector. The latter is growing rapidly and will be a much larger part of the mix in the future, says John Sherman, president and chief executive officer.

Inergy is one of the largest independent storage operators in the Northeast, with capacity expanding to 42 Bcf.

Its first meaningful gas-storage investment was the 2005 acquisition of Stagecoach Storage, whose capacity it immediately doubled to

26 Bcf. A portion of Stagecoach is in Bradford County, northern Pennsylvania, and the rest is in Tioga County, New York—in the heart of the Marcellus play.

“It draws a premium revenue stream because it is the single closest natural gas storage facility to the Northeast market, about 150 miles from New York City,” says Bill Moler, senior vice president of midstream operations.

Inergy is developing five storage assets in New York: Stagecoach, Steuben Gas Storage, Thomas Corners, an LPG facility at Bath, and the Watkins Glen facility, which was acquired when it bought U.S. Salt LLC in August 2008. The latter, in Schuylers County, New York, mines high-grade salt for pharmaceutical, industrial and food uses.

Says Sherman: “We like the salt business, but the strategic value is the long-term gas storage. It's the gift that keeps giving because as we continue to solution-mine for salt production, we just bolt on additional gas storage capacity. Salt production yields an incremental Bcf of storage per year that will be plug-and-play, once we get the compressor and processing facilities in place.”

Meanwhile, the company's 7-Bcf Thomas Corners project, a Devonian reef storage field just northeast of Steuben, has a contractual start date of April 2010.

Falcon Gas Storage Co. Inc.'s new facility in North Texas in the Barnett shale region began operations just recently. “We had 6 Bcf to lease and got inquiries for about 20 Bcf. That's a normal ratio of 3-to-1,” says John Holcombe, vice president.

The company's 50-Bcf MoBay facility in southern Alabama was to start up in 2010, but that's been delayed to 2011 thanks to the credit crunch last September, he says. □

MARCELLUS LPG

Inergy LP's U.S. Salt gas storage facility in upstate New York will have 4- to 5 million barrels of LPG storage by 2010, a direct result of liquids-rich Marcellus shale development.

“There will be a lot more liquids in that market. We also have the ability to connect to Teppco's liquids pipeline from Watkins Glen, New York. Although that is not gas storage, it is necessary infrastructure to dispose of the by-products of gas that are going to be plentiful from the Marcellus,” says CEO John Sherman.

“We hear from Chesapeake, Range Resources, Anadarko and Southwestern Energy that dealing with those liquids is as big an issue as what do they do with the indigent Marcellus gas.”