

Arctic chill exposes weakness of U.S. natural gas system

Posted: Jan 9, 2014

(Reuters) - Brutally cold weather this week laid bare critical weaknesses in the Northeastern U.S. natural gas system, leaving some states paying vast sums for supplies as arctic weather enveloped the region.

Despite its location alongside the biggest natural gas deposit in the country, the northeast region saw record price spikes on Monday as an unprecedented surge in demand from power plants and homeowners overwhelmed pipelines.

The rise in prices forced spot-market buyers in New York and New England to pay up to 20 times more for their gas than amply supplied hubs in Texas and Louisiana.

The volatility shows that nearly a decade into a drilling boom that has flooded much of the country with gas, a lack of pipelines has left some areas vulnerable to shortages this year and potentially for years to come.

It is a weak spot in what has been a huge resurgence in U.S. natural gas production over the past 10 years, and exposes how in some areas pipelines have failed to keep up with the new supplies that have come out of the ground.

"There's a reason why New England is the most volatile power and gas market in the country," said Addison Armstrong, senior director of market research at Tradition Energy in Stamford, Connecticut. "It has been slow on the uptake and now we're behind the curve in terms of getting additional capacity brought in there."

In New York on Monday, natural gas traded at an average of \$55 per million British thermal units on the Transco pipeline. Highs for the day reached \$90.

The average price broke highs first recorded in 2001, years before the region began importing gas from the Marcellus. In Boston, gas on the Algonquin pipeline swung up by \$18 per mmBtu then down by \$9 per mmBtu as forecasts turned warmer on Tuesday.

MARCELLUS GIANT

The Marcellus shale, centered in Pennsylvania, has emerged as the giant of the U.S. natural gas market. It currently produces 13 billion cubic feet of natural gas per day (bcfd), accounting for about 18 percent of total U.S. supply, up from just 2 bcfd in 2010, according to the Energy Information Administration.

Over the next three years, pipeline capacity from the Marcellus is expected to grow to carry 8.7 bcf more gas per day, 4.3 bcf of which will be directed to the Northeast, according to data from Jonathan Gould, a senior oil and gas analyst at Genscape.

But far less of that will reach New England, Gould said.

Moreover, even that growth rate is not enough to keep up with the robust production in the region, so flows from wells must be tapered, Gould said.

Despite years of supply bottlenecks, only one announced project is targeting New England states. Spectra Energy's Algonquin Incremental Market project will expand an existing system through Connecticut and Massachusetts carrying 342 million cubic feet of gas per day. The pipeline is not scheduled to be completed until November 2016,

however, and will not reach past Boston.

"There is a constraint getting all that gas out of the area," Gould said. "In the Marcellus, you've got so many gas wells and it's such a constrained system, that the pressure on the system keeps gas from flowing how it would normally flow."

It is a tough break for the six New England states that have been quick to change from coal to gas-powered electric plants. Natural gas now supplies most of the electricity to the region. Between 2011 and 2017, New England will have cut its electricity generated from coal by more than half, according to Reuters data.

Some companies are being forced to reroute gas originally meant for New England to other regions to alleviate the supply built up in the Marcellus, Armstrong said.

Building too much capacity too fast could flood the market and kill demand on days that are milder than seen recently. Developing gas supply becomes "lumpy," according to Gordon Pickering, a director in Navigant's Energy practice in Sacramento, who said gas companies tend to develop gas supplies before they develop pipelines.

"More supply means lower prices," said Pickering. "So pipeline decisions require a long-term view of the market."