



A slight feeling of disquiet

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It may seem strange, in a week where traders were actually paying folk to buy [their natural gas](#), but I am still a little disquieted about our medium term natural gas situation. (I was going to say long-term but 2010 isn't that far away any longer).

The feeling was regenerated when a reader directed us to [Robert Amsterdam's site](#). Currently he is posting about the story in today's [NYT](#) dealing with the construction of the new LNG port at [Sabine Pass, LA](#). The port is one of several that is being built to bring foreign natural gas to help with the coming shortage in the US. To quote CERA, as the article does:

Liquefied natural gas represents only a 3 percent share of total American natural gas consumption, which is mostly used for industrial purposes and home heating. Cambridge Energy Research Associates estimates that imported liquefied natural gas will account for 10 percent of American use by 2010, and potentially as much as 25 percent by 2020.

Bob Amsterdam believes that by 2010 this 10% will largely come from Russia in general, and our friends in Gazprom in particular, with the projected source of supply likely being [Shtokman](#).

However, as I [recently noted](#) there is a Shtokman delivery problem. Firstly the project hasn't been awarded yet, and secondly it appears as though the US is now being cut out of the distribution. At the present companies with major ties to the US don't appear to be faring too well in Russia. Shell continues to be harassed over [Sakhalin Island](#), and the Russian government position seems to justify concern.

President Vladimir Putin has signaled his intention to reassert state control over the energy sector, calling the industry the "holy of holies," as high oil prices have driven the country's economic growth in the last few years.

It was only this week that the Eni Vice President was writing a story in [Newsweek](#) stating that the world would soon be awash in energy. Russia, as you may remember, recently passed KSA in terms of the production of oil, and so some of the prediction may well have been based on the anticipation that Eni was going to get a slice of that bonanza.

Well it turns out that it may not be quite that [easy](#). There is some concern arising in Italy about the deal,

The accord on oil, gas, power and liquefied natural gas was to be signed after months of

talks. It was expected to give Eni access to Russian oil and gas fields and let Gazprom sell gas directly in Italy.

A source in one of the companies said Tuesday that Eni was not ready to let newcomers into its market, and that Gazprom did not want to see new companies in Russia's oil and gas fields.

Now, as it happens Eni has other interests in that part of the world, that are also of interest to Gazprom. Just [yesterday](#) Russia and Kazakhstan signed an agreement to produce gas from the Karachaganak field.

Russia will be represented by gas monopoly Gazprom, while Kazakhstan's KazMunaiGas state energy firm will own the other half.

Gazprom is keen to contract incremental supplies of gas from Central Asia to cover Russia's domestic needs, freeing up its own production to supply to lucrative European export markets.

Karachaganak is co-led by Italy's ENI and Britain's BG, which both hold 32.5 percent stakes, while U.S. Chevron owns 20 percent and Russia's LUKOIL has a 15 percent interest.

Truly it is a small world.

But this all gets us back to the LNG problem, since getting gas from Kazakhstan, and Turkmenistan may help Russia send LNG our way, if they decide they want to.

Which brings up a slightly different problem, that was recently raised in the [OGJ](#). It relates back to the problem the UK traders had with gas this week. Namely that natural gas is a product that, as a general rule, flows fairly swiftly from the well to the user. There is not a huge amount of storage that is built into the system. This can be a problem when, for example, winter (whether in Moscow or Denver) decided to be a bit harsher than normal for a while. Or when suddenly there is too much coming through a line. Problems with the supply line can lead to disruptions. This may well become more of an issue, as the gas starts to come in chunks from tankers, rather than flowing, controllably, from wells.

As the article points out there is a considerable variation between summer and winter use

The total swing from summer to winter can be 60 bcf/d or more. These seasonal swings are likely to become greater as residential and commercial heating loads continue to grow and more gas-fired power generation is added.

This current summer-winter gap is served by gas storage. Roughly 3.3 tcf of working gas underground storage capacity are throughout the US and Canada. These 385 or so facilities can deliver up to 50 bcf/d of withdrawals and inject up to 35 bcf/d. Current gas storage can barely handle current seasonal swings and more is needed to serve the growing gap between supply and demand. The market has evolved to the point where gas storage is not only needed to meet winter demand, but also to meet gas-fired electric generation summer load requirements as well.

Two problems are now anticipated as more of the countries supply comes in tankers. Firstly the shipper wants to unload the tanker and turn it around to go get some more, as soon as possible, whether there is an immediate need for the gas or not. (Recognizing that it may not be possible to meet the winter demand with immediate supply). And so there needs to be an increased storage capacity within the system especially since

This LNG corridor (around Sabine Pass) will be home to an estimated six LNG terminals between now and 2013, adding potential sendout volumes of 13 bcf/d. These LNG terminals include CMS Trunkline (existing, at Lake Charles, La), Freeport LNG and Freeport LNG expansion (2008 and 2010, respectively), Cheniere Sabine Pass (2009), ExxonMobil Golden Pass (2010), Sempra Cameron (2011), and Cheniere Creole Trail (2012-13).

By 2010, an additional 4.4 bcf/d of gas will be flowing, on average, through this region heading east toward Florida, mid-Atlantic, and Northeast markets. At maximum sendout, this figure doubles to 8.8 bcf/d. When Texas exports and Louisiana offshore gas production destined for these same eastern markets are added in, the total flow from this specific region will increase to 12 bcf/d (on average) and 16 bcf/d during peak sendout.

The second problem is that gas-fired electric generation facilities do not use a steady stream of gas all day, but as electric demand fluctuates, so their use of gas follows the same curve. Which means that there needs to be some capacity for storage in the system to cope with that shorter term fluctuation also. The question that the article raises is as to where all this storage should be built.

(Grin - do I hear a bid from Nantucket ?) I guess that Dave and I will puzzle out where we are going to get all this gas on another day.



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