



Exxon's XTO acquisition underlines investment case for US gas

Jonathan Waghorn and Mark Lacey, Co-Portfolio Managers of Investec's Global Energy Funds, consider how Exxon's recent acquisition of US gas producer XTO Energy underlines the investment case for US gas assets at current levels.

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Yesterday (14 December) Exxon announced its intention to buy XTO, the US gas producer, for \$41bn, which is by far the largest E&P (exploration & production) weighting in our portfolio.

We have always said that in our view XTO is by far one of the best managed companies in the global energy sector. Their resource base in unconventional gas is second to none and the company's returns to shareholders has been in the top quartile for the last eight years.

So why are Exxon buying XTO?

1. **US gas price** – Exxon presumably thinks that with the price of US gas languishing at around \$5.50/mmcf¹ it has upside from current levels. We estimate that they need a gas price of around \$6.50/mmcf to get to the current deal price for XTO, so it is clear that Exxon are assuming higher than \$6.50/mmcf in the long term as they obviously would not buy XTO for a zero sum return.
2. **Timing** – This is the first major purchase from Exxon since 2000 and they are a company that prides itself on strategically well timed acquisitions. With this purchase we believe Exxon are effectively saying that now is a good time to buy US gas assets. As Investec's Global Energy Fund Managers we have been saying for a while that in our view, it is cheaper to buy US gas assets on Wall Street right now, than it is to get gas out of the ground.
3. So what are the implications for other companies? – Prior to this deal being announced, assuming \$7.00/mmcf for 2011 and beyond, we estimate that our Funds' core gas E&P holdings had between 65% and 130% upside. This is based on using a combination of sum-of-parts and EV/flowing barrel valuation methodology.

We see Exxon's purchase of XTO as a signal that they believe now is a good time to buy US gas assets and we would agree. At present, in our Global Energy Funds, our US gas exposure through E&P and oilfield services is at around 30%, this compares to a benchmark position of 19%. Meanwhile, XTO is a top 10 holding in our Global Energy Funds as well as Investec's Global Dynamic Resources Fund as at 30 November 2009.

An update on the US gas market:

Overleaf is a simple table that illustrates how big the global gas market really is. World gas demand in 2008 was estimated to be around 3000bcm² of gas*. Converting this gas demand into barrels of oil equivalent (boe), puts into perspective how important this market is, with global gas demand being equivalent to around 60% of global oil demand at 50mboe/d³.

¹ Million cubic feet

² Billion cubic metres

³ Million barrels of oil equivalent a day

Global gas demand (Bcm):

(BCM)	1980	2000	2006	2015E	Growth Rate (2006 - 2015)
North America	659	799	766	860	1.3%
Europe	264	478	541	640	1.9%
Pacific	35	130	158	210	3.2%
Total OECD	958	1407	1465	1710	1.7%
Eastern Europe	438	606	676	820	2.2%
Asia	36	185	285	430	4.7%
Middle East	36	182	276	400	4.2%
Africa	14	62	90	130	4.2%
Latin America	36	100	124	180	4.2%
Total Non-OECD	560	1135	1451	1960	3.4%
World Demand	1518	2542	2916	3670	2.6%

*Source: IEA, Investec Asset Management estimates as at November 2009

In both developed and emerging markets, gas is seen as a fuel for the future, given its 'cleaner' credentials relative to coal and fuel oil. Over the past 18 years, global gas demand has grown at a compound annual average rate of over 2.5% per annum (which is more than double the rate of growth in oil consumption over the same period) and going forward we believe this growth rate has upside risk.

Looking specifically at the US gas market, the key factors influencing the market balance between the 2009 and 2011 period are highlighted in the supply and demand table (below).

US gas market demand/supply:

All Units: bcf/day		2002	2003	2004	2005	2006	2007	2008	2009e	2010e	2011e
Demand:	Residential	13.5	14.0	13.3	13.3	12.0	13.1	13.0	12.6	13.0	13.2
	Commercial	8.6	8.8	8.6	8.2	7.8	8.3	8.3	8.0	8.1	8.2
	Industrial	20.6	19.6	19.8	18.1	17.8	18.2	18.4	17.0	17.7	18.0
	Electricity	15.5	14.0	14.9	16.0	17.0	18.8	18.8	18.5	19.2	19.4
	LP&P Fuel	4.9	4.7	4.5	4.6	4.7	4.9	5.1	4.9	5.0	5.0
Total Demand	61.1	61.1	61.2	60.3	59.3	61.2	61.7	61.0	63.0	63.8	
		3.4%	-3.1%	0.1%	-1.4%	-1.6%	6.6%	0.6%	-4.2%	3.3%	1.3%
Supply:	Pipeline Imp	9.1	7.6	7.7	8.3	7.9	8.4	7.7	7.1	6.6	6.6
	LNG Import	0.4	1.2	1.6	1.6	1.5	2.0	1.0	1.7	2.3	2.5
		9.6	8.8	9.3	9.9	9.4	10.4	8.6	8.8	8.9	9.1
		-3.1%	-8.4%	6.2%	6.5%	-4.8%	10.1%	-16.7%	2.0%	0.9%	2.2%
US Production		51.8	52.3	50.8	49.5	50.6	52.8	56.1	56.1	53.4	52.1
		-3.8%	0.9%	-3.0%	-2.6%	2.3%	4.3%	6.3%	0.0%	-4.8%	-2.5%
Total Supply		61.4	61.1	60.1	59.4	60.0	61.2	64.8	64.9	62.3	61.2
<i>Supply vs Demand</i>		(1.7)	(0.0)	(1.1)	(1.0)	0.7	(0.1)	1.1	3.9	(0.7)	(2.6)

Source: Tudor Pickering, Investec Asset Management estimates as at August 2009

A. US industrial demand

Demand for natural gas in the US comes from residential and commercial heating, industrial usage and electricity generation. With regard to residential and commercial heating, weather is an extremely big determinant of gas usage. In 2006 and 2007, weather related demand proved to be a significant swing factor for storage levels (for the purpose of forecasting we assume 'normal' temperatures in the US going forward).

Weaker industrial demand, coupled with a warm start to the winter season in the US, are in our view the key reasons why US gas prices remain very weak at the moment. The primary users of industrial gas are provided in a table below and clearly these users are extremely sensitive to industrial production growth. Recent data suggests that industrial demand is still down around 9% (year-on-year) in 2009 (which is slightly lower than our forecast of -8% y-o-y). We forecast some modest industrial demand growth in 2010 (17bcf/d rising to 17.7bcf/d) this forecast is extremely dependent on the US 'recovering' from recession in 2010.

US industrial demand:

Industrial Gas Demand	Bcf/d	% of Industrial Demand
Chemicals	6.3	36%
Primary Metals	2.0	11%
Paper	1.4	8%
Food	1.7	10%
Petroleum/Coal	2.3	13%
Other	4.0	23%
Total	17.7	100%

Source: Tudor Pickering, Investec Asset Management estimates as at August 2009

B. Liquefied natural gas (LNG)

There have been some key new large scale LNG projects that have started up in the last six months and additional projects are scheduled to start up over the next 12 months. As a result, around 8bcf/d of new LNG volumes (globally) are scheduled to come on stream in 2009 and 2010. Around 6bcf/d of this gas is contracted with buyers (and cannot be diverted), but this still leaves at least 2bcf/d of LNG cargo that could end up in the US if production is not held back and an alternative destination is not available.

Expansion of regas and liquefaction capacity:

Regasification Capacity (Bcf/d)	2006	2007	2008	2009
North America	5.1	5.1	10.7	15.2
Europe	8.2	10.2	13.4	14.7
Total	13.3	15.3	24.1	29.9
<i>Percentage Increase</i>		15%	58%	24%

Liquefaction Additions (Bcf/d)	2H08	1H09	2H09	1H10
Nigeria (Train 6)	0.5			
Qatar (Qatargas 4, Rasgas 6)		2.0		
Australia (NWS 5)		0.6		
Indonesia (Tangguh)			1.0	
Yemen (Yemen LNG)			0.9	
Russia (Sakhalin II)			1.3	
Qatar (Qatargas 5, Qatargas 6, Rasgas 7)				3.0
Total	0.5	2.6	3.2	3.0

Source: Tudor Pickering, Investec Asset Management estimates as at August 2009

We still believe that US industrial demand will show some modest growth in 2010, but clearly the additional LNG supply could completely offset the additional demand growth, that is unless onshore production declines.

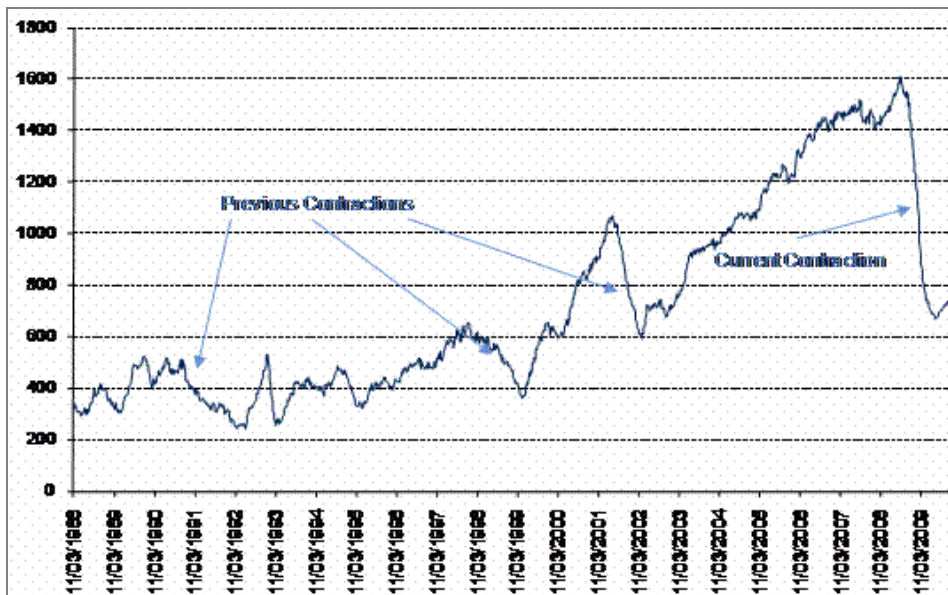
C. Onshore production

The total size of the US gas market is around 61bcf/d. The latest EIA 914 (Energy Information Administration) data suggests that onshore gas production averaged 55bcf/d in September, which is down from the peak production rate of 57.8bcf/d in November 2008.

The onshore US gas market is very different to the offshore oil market in terms of capital expenditure and drilling response. For example, even with oil prices falling over 60% from their peak, Petrobras is unlikely to slow or even curtail the development of its offshore Tupi field in Brazil. This is because it takes around four to six months to drill one well, and peak production of the field is expected to be reached in 2018 (the deepwater drillship required is contracted for up to five years). This compares to a typical gas well in the Barnett Shale in the US, which takes around 25 days to drill, and typically pays back its capital expenditure within six to nine months. With such wells, first year decline rates are around 65%, with a 1500 horsepower land rig being contracted on a six to twelve month rolling basis.

This is exactly why the US gas directed drilling activity can be curtailed so quickly. If we look back to previous downturns in US gas prices (1991, 1999 and 2001), we can see in the chart below that over a 15-18 month period, drilling activity was cut by between 45%–50% in order to 'rebalance' the market.

Baker Hughes US Gas Directed Land Rig Count



Source: Baker Hughes as at August 2009

The initial cut in onshore drilling activity this time has been even more dramatic, with the 50% cut in activity occurring in just seven months. This is a direct result of two things. First, collapsing demand in the first quarter of 2008 has driven down US gas prices making it uneconomic to drill. Second, the banking crisis has led to funding restrictions for the both the private drillers (45% of all onshore US gas production comes from private companies) and the highly geared public companies. However many equity issues (by the public companies) have led to a small recovery in land drilling activity in the last five months.

Please note that we believe this recovery will be moderated by how much gas prices rise over the next 12 months and so a warm winter coupled with no industrial demand recovery would result in drilling activity remaining at depressed levels.

Based on our estimates, we believe that US E&P companies will on average have reduced capital expenditure by around 25% in 2009. This would have been closer to a 50% reduction if it were not for these companies raising additional funds through the equity market. This is in-line with the declines of 26% and 19% in 1999 and 2002 respectively.

Whilst it is clear that the US gas market will be over-supplied in 2009, we feel that an investor should look past this and focus on 2010 and 2011, where we forecast that the US gas market could potentially be in a slight deficit in 2010, with this deficit widening further in 2011.

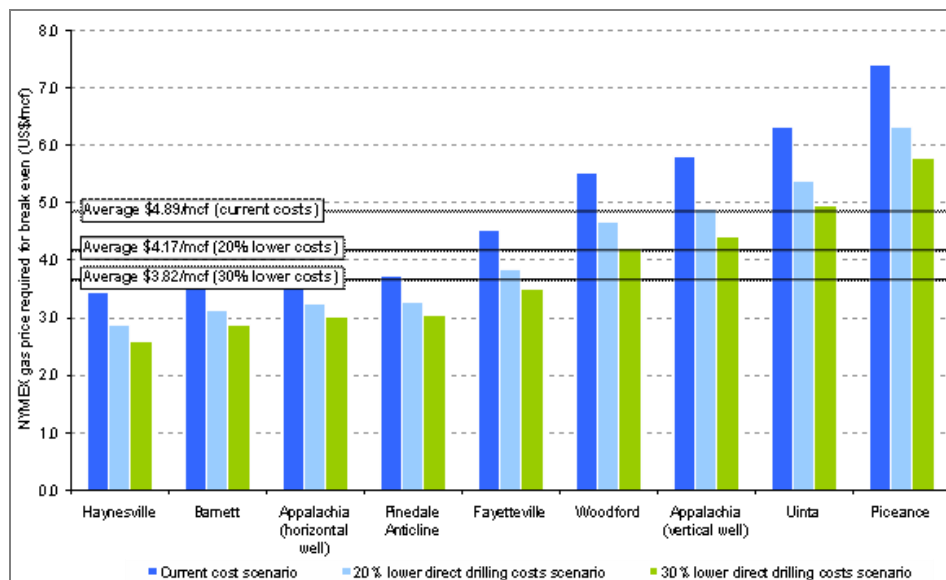
With drilling activity falling so fast, you may ask why we have not seen a drop in production in 2009? The flat production profile in 2009 is a direct result of the second half 2008 drilling activity bearing fruit in 2009. This is a function of gas wells being 'drilled' in 2008, but being 'completed' in 2009.

Note: Completion costs only make up around 40% of the total well cost. So during the initial period, as gas prices decline, E&P companies will still complete wells in a depressed environment because it is a good source of cash-flow, for a limited amount of additional capital expenditure. So whilst we have already seen an unprecedented drop in the US gas rig, we strongly believe that the full impact of reduced gas production will be felt in 2010.

We believe the risk to the gas market remaining over supplied in 2010 through 'over-production' remains extremely limited at this point in time. The first reason being, that even if US gas prices were to stabilise in the \$3 - \$5.00/mmcf range, we would not expect the majority of companies to increase drilling activity, given the basin economics.

For example if we look at the break-even economics of the 'best-in-class' gas basins in the US (such as Haynesville, Barnett and Pinedale), even assuming a 20% reduction in drilling costs, these areas would need over \$3.00/mmcf just to break even and closer to \$4.00/mmcf to cover their cost of capital. However, these three areas only make up around 15% of total onshore US gas production. If we look at higher cost areas (such as the Uinta and Piceance), assuming a 30% reduction in drilling costs, these areas need at least \$5.00/mmcf just to break even and closer to \$6.00/mmcf to cover their cost of capital.

US gas break-even economics (selected basins, \$/mmcf)



Source: Credit Suisse, Investec Asset Management estimates, August 2009

So putting all this information together, we forecast that the US gas market will be over-supplied in 2009, but we would reiterate that investors should look past this year and focus on 2010 and 2011, where we forecast that the US gas market could potentially be in a slight deficit in 2010, with this deficit widening further in 2011. We currently forecast a US gas price (for our company models) of \$6.00/mmcf in 2010 and \$7.00/mmcf thereafter (versus \$5.50/mmcf currently).

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