

## **TAPI – life in the line?**

The drive to push regional energy projects forward could support more than TAPI

## **Argentina requires less LNG**

Structural reforms by the new government will dampen the country's reliance on LNG imports

## **In Focus: MEA LNG imports**

MEA is sourcing more LNG from other regions as portfolio players become involved

## **US LNG exports**

The Sabine Pass LNG plant is expected to come online in late February or early March

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## **Asia Pacific**

Spot LNG prices slide as bearish fundamentals persist at the peak of winter

## **Europe & Russia**

Colder temperatures are doing little to drive up demand in major markets

## **Middle East & Africa**

Saudi Arabia's subsidy reforms may not have the desired effect on gas-for-power demand

## **Americas**

Gas production growth in the US is moderating

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Gazprom

**3 Editorial**

Oil prices have continued to plunge so far this year, bringing many grades of crude close to their operating cost breakeven price.

**Global outlook**

- 4 Executive summary
- 6 Forecast highlights
- 7 Forecasts
- 8 Oil market outlook
- 9 Interfuel competition

**Regional analysis**

- 10 Asia Pacific
- 14 Europe and Russia
- 18 Middle East and Africa
- 21 Americas

**Features**

**25 TAPI – life in the line?**



Construction on the long-delayed Turkmenistan-Afghanistan-Pakistan-India pipeline has begun. But some of the drivers of progress could support more than TAPI

**27 Reforms will curb LNG’s future in Argentina**



Structural reforms by the Argentine government will curb energy subsidies and boost domestic gas production, reducing the country’s reliance on imported LNG.

**29 In Focus**

Middle East & Africa LNG imports

**31 Regulation in brief**

A round-up of global policy and regulation headlines

**Next issue**

The next issue of *Global Gas Analytics* will be published on 17 February 2016



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## Oil price rout continues

Oil prices have continued to plunge so far this year, bringing many grades of crude close to their operating cost breakeven price. **By Peter Stewart, chief energy analyst**

NORTH Sea Brent, the international benchmark grade for crude oil, has dropped below \$30 per barrel. This is the lowest Brent has fallen to since 2004, and it has led to a fresh round of predictions that prices could drop as low as \$10/bbl – the nadir reached during previous collapses in 1998 and 1986. It also tees up the prospect of a price rebound later in the year as political tensions appear once again on the oil market's radar.

Oil prices have dropped by 74% from their mid-2014 high of more than \$110/bbl, and they have halved over the past six months. The price collapse followed Saudi Arabia's decision to abandon its traditional role as OPEC's 'swing producer', effectively leading to a production free-for-all among the organisation's members.

Investment bank Goldman Sachs predicted in September last year that oil prices could drop to \$20/bbl, the operating cost breakeven price for some shale oils. Because oil often sells at a discount to benchmark prices, many internationally traded grades of oil are already close to or, in a few cases, below this level.

LNG prices have also tumbled, and further weakness is expected as the first US LNG export cargoes hit the market.

Despite political tensions in the Middle East, an immediate reversal in oil prices is unlikely because oil stocks are still continuing to build at a rate of around 1-1.5 million barrels per day at a time when storage tanks are already nearly full. Moreover, Iranian oil exports are expected to rise by 600,000 b/d over the next 6-12 months with the removal of US and European sanctions, although this has been widely anticipated.

Saudi Arabia took the decision to abandon its swing producer role in late 2014 to maintain its share of the market in the face of competition from more expensive suppliers. US shale oil production was expected to become uneconomic when prices dropped below around \$60/bbl, but the impact on US production has been slower than expected because of hedging by producers, better well productivity and the wide range of breakeven costs in various shale formations.

Moreover, the shale oil boom was largely funded by debt, often to smaller independent companies. To keep paying their creditors, these companies have to keep producing oil as long

as prices remain above their breakeven operating cost. This creates a vicious circle – prices spiral lower, with companies having to pump more oil the further they drop.

OPEC oil producers are in a similar boat. Fiscal breakeven prices for OPEC members range from around \$52/bbl for countries such as Kuwait to above \$100/bbl for producers such as Libya and Venezuela. As prices decline further, oil producers – including non-OPEC Russia – must pump more and more oil onto the already-glutted market to maximise revenues.

Saudi Arabia, the world's largest oil exporter, announced its 2016 budget in December. It plans deep spending cuts, higher taxes, energy subsidy reforms and a privatisation programme that will include parts of state oil firm Saudi Aramco. Austerity will largely target industry rather than ordinary citizens to maintain political stability.

While the situation is likely to get worse before it gets better, oil prices could rebound later in 2016 once they hit the operating cost breakeven price. Moreover, political concerns are likely to start driving oil prices again after months of being ignored because of the oil glut.

As part of its austerity programme, Saudi Arabia will be forced to rein in payments to foreign allies such as Egypt, which have burgeoned since the 2011 Arab Spring. This could put further strain on the delicate balance of power in the Middle East.

It's often claimed that the market direction on the first trading day of a new year sets the tone for the year ahead. On the first full trading day of 2016, Brent prices bounced to above \$38/bbl as the ever-fragile ties between Saudi Arabia and Iran deteriorated. Riyadh cut diplomatic ties with Tehran after its embassy was ransacked by protestors. The riots followed Saudi Arabia's execution of Sheikh Nimr al-Nimr, a prominent cleric, and 46 others alleged by Riyadh to be "terrorists".

Given the already extremely volatile situation in the Middle East – with Saudi Arabia and Iran fighting a proxy war in Yemen, and international powers embroiled in an ever-more complex conflict on multiple fronts in Syria and Iraq – the escalation of the tensions between Riyadh and Tehran have rattled the market. The removal of US and European sanctions on Iran could further exacerbate the simmering tensions.

# Global outlook

Microsoft

## Executive summary

### MARKET DEVELOPMENTS

- Spot LNG prices in Asia have continued to fall, dropping to around \$6.5/MMBtu. Peak winter demand levels have failed to boost prices as strong supply continues to keep the market glutted.
- European hub prices have fallen since the start of December. The NBP month-ahead is around 31 p/th. Despite higher demand levels, ample storage and supply will continue to limit price gains over the coming weeks.
- The Henry Hub front-month futures price hit an intraday low of \$1.68/MMBtu on 18 December – its lowest level since March 1999. The price has averaged \$2.25/MMBtu so far in January – a fall of 23.1% on an annual basis.
- Spot LNG prices in Latin America have remained below \$10/MMBtu during the peak summer demand period. Weakening consumption in the region's biggest markets is weighing on spot prices. It has averaged \$7/MMBtu so far in January.
- The Brent crude front-month futures price fell below \$30 per barrel in mid-January – its lowest level since October 2003. High oil supplies, weakening demand from key consumers and the strong US dollar are all weighing on the price.
- The United States, EU and UN lifted most of the economic sanctions against Iran in January. This will allow foreign investment and technology to flow into the country, potentially boosting oil and gas production and weighing on oil prices.

### ASIA PACIFIC

- Demand in Northeast Asia will grow by around 1% on an annual basis in Q1, with consumption in China and Taiwan compensating for declines in Japan and South Korea. Colder temperatures will provide limited support to demand.
- Lower gas prices could harm Chinese gas production growth. While production will still rise this year, increases could be lower than they were in 2015.
- New LNG supplies from Australia are hitting the market, with Australia Pacific LNG being commissioned at the start of January. The project's ramp-up cargoes will enter an already oversupplied spot market, putting further pressure on weak prices.

Figure 1 Interfax gas indices

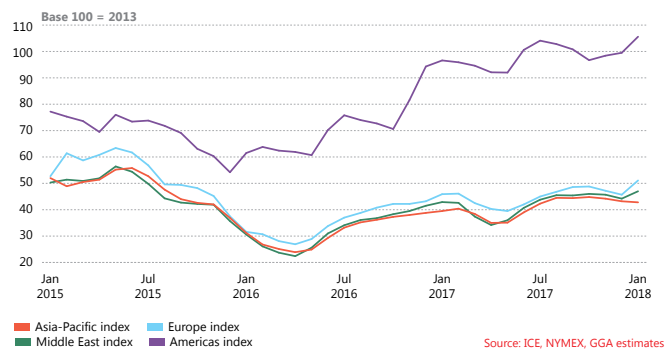


Figure 2 NBP and Henry Hub

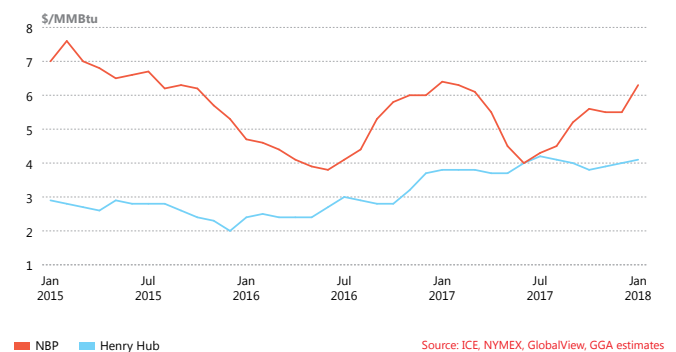
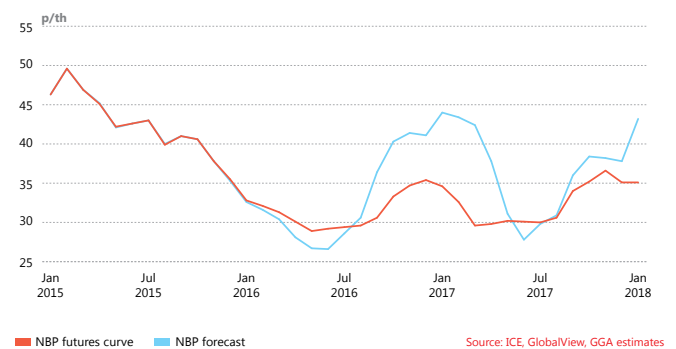


Figure 3 NBP futures and forecast



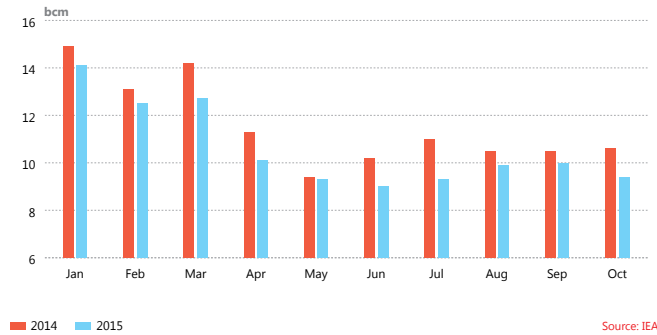
- LNG demand from Japan and South Korea is expected to fall year on year in Q1. Although some spells of cold temperatures are expected to hit the region, the weather is unlikely to significantly boost either country's need for additional LNG supplies over the rest of winter.



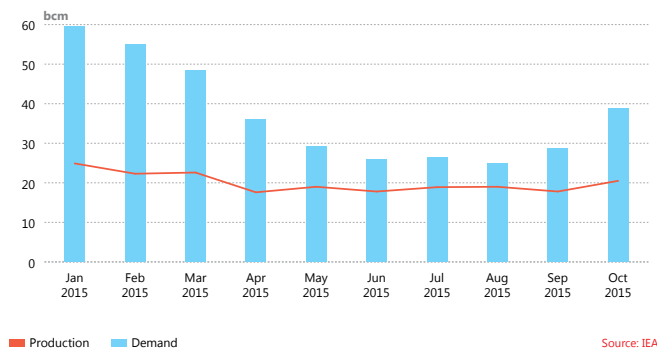
**EUROPE AND RUSSIA**

- Demand from Europe's six largest markets is expected to grow by around 3% year on year in Q1. Colder weather hit has the region, providing limited demand support.

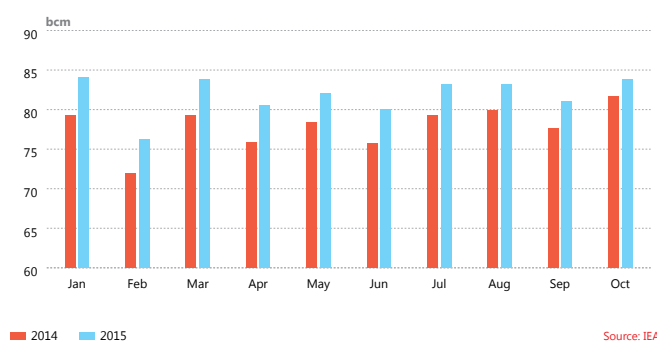
**Figure 4** OECD Asia Pacific net LNG imports



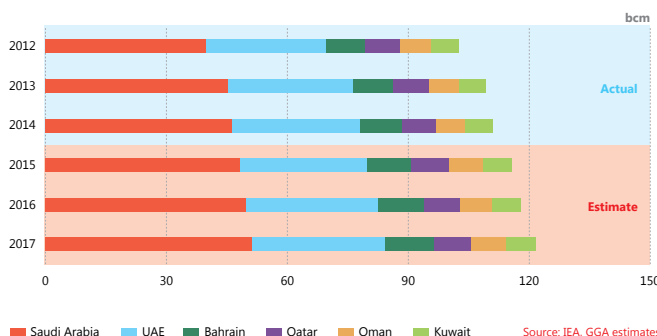
**Figure 5** OECD Europe supply and demand



**Figure 6** Production in OECD Americas



**Figure 7** GCC gas production by the power sector



- Output from Europe's main producers will fall in Q1 on an annual basis as declines in Dutch output outweigh increased supplies from the UK and Norway. Cuts to production from the Groningen field will cause Dutch output to drop further in 2016.
- European storage levels have fallen at an increased rate since the start of the year as colder weather has put pressure on supplies. However, stock levels are still strong enough to provide a secure supply through the remainder of the winter.
- Russia supplied 159 billion cubic metres of gas to Europe in 2015, making it the region's largest supplier. Russia is expected to hold that position as strong exports continue in January.

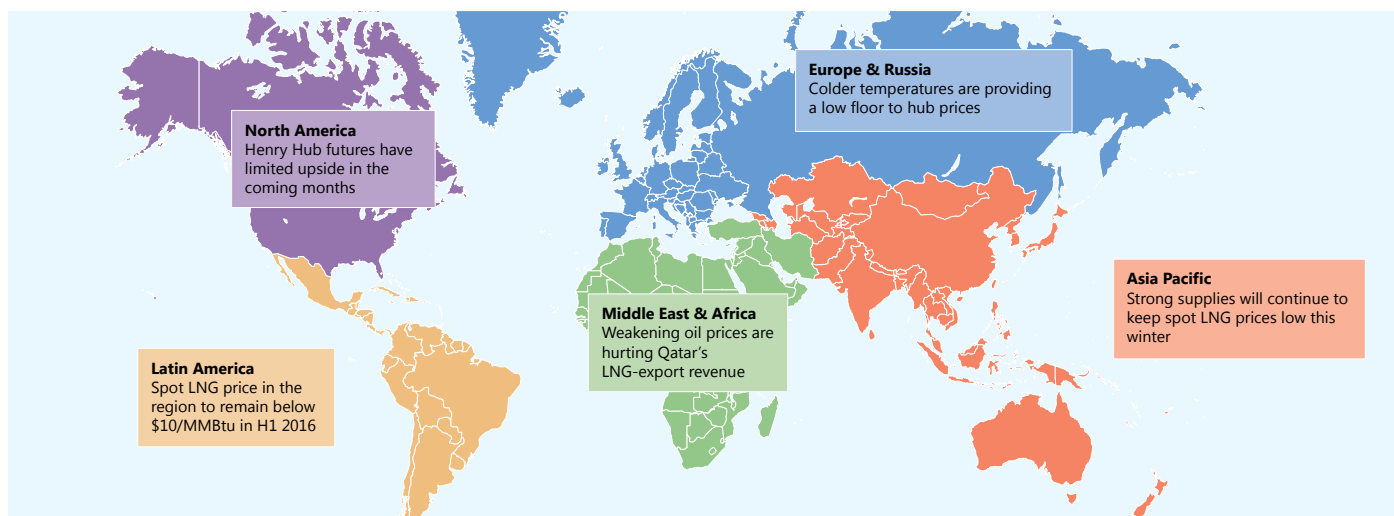
**MIDDLE EAST & AFRICA**

- Saudi Arabia has raised the gas feedstock price for power generators in a bid to curb growing demand. However, GGA expects Saudi gas-for-power demand will still increase by 3.1% on an annual basis in 2016, to 49.7 bcm.
- Algeria will struggle to boost its gas output in the short term, even if the delayed In Salah southern fields come online in Q1. In Salah's initial production will barely counter the decline in output from northern fields.
- Demand for LNG from the Middle East and Africa (MEA) is expected to grow further in 2016 if planned FSRUs from Egypt and Ghana are installed. The region's LNG imports are expected to see double-digit growth this year.
- The share of LNG entering the MEA from other regions will grow in 2016 because of the increased participation of portfolio players. The MEA sourced 23.1% of its LNG from other regions in 2015, up from 19.3% in 2014.

**AMERICAS**

- Argentina is expected to further reduce its reliance on LNG imports in 2016. Increasing domestic gas production and subsidy reforms by the new government are hurdles to Argentine LNG imports.
- The rate of gas production growth in the US is expected to slow in 2016 as a result of weakening output from the country's shale acreages. Gas production in the Marcellus play is expected to grow by 4.8% on an annual basis in H1 2016 compared with 17% in H1 2015.
- Interest rate hikes by the US Federal Reserve will hit Latin American countries. As the region's currencies weaken against the dollar it will make it more expensive to import energy products, including gas and LNG. Rate increases will also reduce upstream investment in emerging economies.
- The first LNG exports from Train 1 of the Sabine Pass plant have been delayed until late February or early March because of technical issues. Train 1 will have a capacity of 4.5 mtpa, and BG Group has a 3.5 mtpa sales-and-purchase agreement for LNG from the train.

## Forecast highlights



- Spot LNG prices in Asia have come under increased pressure and have dropped to around \$6.5/MMBtu. Prices are expected to fall further over the coming weeks as bearish fundamentals look unlikely to ease.
- The falling price of oil will weigh on oil-indexed LNG prices over the coming months. Prices in long-term contracts with oil links had started to stabilise in recent months, but further falls will be seen in the spring and summer.
- Colder temperatures have provided a low floor to European hub prices, a situation that could continue into February. Strong supply and ample storage volumes will keep pressure on hub prices over the rest of the winter.
- Forecasts for a mild winter in the US will limit gains in the Henry Hub front-month futures price, which is likely to fall once the 2016 gas injection season gets under way in April. GGA expects the price to average \$2.8/MMBtu in 2016.
- Spot LNG prices in Latin America are expected to remain below \$10/MMBtu in H1 2016 as demand from key consumers continues to wane. This will intensify efforts by regional LNG suppliers to find customers in other regions.
- The East-West gas spread in Canada (the difference between the Dawn and AECO hub prices) is expected to remain narrow on an annual basis in the coming months because of healthy gas storage levels.
- Weak oil prices will continue to weigh on gas and LNG export prices from Qatar in 2016. Qatar's average export price for gas and LNG was around \$7/MMBtu in Q3 2015. Weakening LNG prices will continue to benefit LNG consumers in the region.
- Oil prices are expected to remain under pressure in 2016 despite some rebalancing of the market in H2. The weakening economies of key consuming countries, the strong dollar and additional supplies will cap potential gains.

## Methodology

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### INDICES

The Interfax gas indices express standardised values for gas traded relative to a 2013 base period. The aim is to allow meaningful comparison of gas values across regions, and to identify broad

trends in the overall price.

Values are normalised to reflect the base year = 100, with current market values expressed as a multiple of this base value, with weightings in the basket based on known indexation patterns in each region.

### GAS PRICE FORECASTS

*Global Gas Analytics* bases its gas price forecasts on an analysis of market fundamentals. Although spreadsheets are used to analyse the suitability of various forecasting measures, and to assist analysts in coming to a view on the market, the forecasts are not the result of a forecasting model. The forecasts are based on analysis of supply and demand trends, supplemented by technical analysis and Commitment of Traders data published by the Commodity Futures Trading Commission. Interfax analysts are not registered investment advisers, and the forecasts contained herein reflect an opinion on market direction and are not provided as investment advice.

## Forecasts

**Table 1** Interfax gas price forecasts, \$/MMBtu

Commodity	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017
UK NBP	5.3	4.7	4.6	4.4	4.1	3.9	3.9	4.6	5.9	6.3
Dutch TTF	5.1	4.5	4.4	4.2	4.1	4.1	4.0	4.6	5.7	6.1
Zeebrugge	5.1	4.5	4.4	4.2	4.1	4.0	4.0	4.6	5.7	6.1
German import price	5.2	5.0	4.8	4.4	4.2	3.9	3.9	4.9	5.9	6.4
Japan/Korea Spot	7.2	6.7	6.1	5.5	5.2	5.2	5.5	6.9	7.5	7.8
Japan import price	8.4	7.3	6.4	5.7	5.4	5.4	5.7	7.2	7.8	8.0
Henry Hub	2.0	2.4	2.5	2.4	2.4	2.4	2.5	2.9	3.2	3.8

\*Interfax indices and forecasts are for information purposes only and should not be relied on for investment decisions. For details of methodology and legal disclaimer, see page 6 of *Global Gas Analytics*

**Table 2** Exchange-traded gas future market curves, \$/MMBtu

Commodity	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	2017
NBP ICE Futures	4.3	4.2	4.2	4.0	3.8	3.9	4.4	4.7	4.1	4.3
Henry Hub CME/NYMEX	2.1	2.1	2.2	2.3	2.3	2.4	2.6	2.8	2.6	2.7

For regional detail and local currency forecasts, see regional commentaries. Values in this table reflect the daily settlements on 20 January.

**Table 3** Interfax long-term price forecasts

	2016	2017	2018	2019	2020	2021
NBP, p/th	32.9	36.5	40.6	43.5	45.0	47.5
Henry Hub, \$/MMBtu	2.8	3.9	4.3	4.7	5.0	5.4
Japan/Korea Spot, \$/MMBtu	6.5	7.7	8.4	8.8	9.4	10.0
Brent Crude, \$/bbl	37.1	48.7	55.5	61.9	64.9	68.3

**Table 4** Consensus view: US gas forecasts, \$/MMBtu

	Avg. 2016	Avg. 2017	Avg. 2018	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Average	2.7	3.2	3.5	2.4	2.5	2.9	3.1
High	3.0	3.8	4.0	2.7	2.8	3.1	3.5
Low	2.4	2.7	2.9	2.2	2.3	2.4	2.5

Source: *Global Gas Analytics* poll of analyst forecasts

**Table 5** Consensus view: Brent crude oil forecasts, \$/bbl

	Avg. 2016	Avg. 2017	Avg. 2018	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Average	43.9	55.8	66.5	36.2	41.7	46.5	50.9
High	55.0	65.0	70.0	41.0	50.0	65.0	65.0
Low	37.0	46.0	61.0	30.0	36.0	37.0	41.0

Source: *Global Gas Analytics* poll of analyst forecasts

**Table 6** Consensus view: UK gas forecasts, p/th

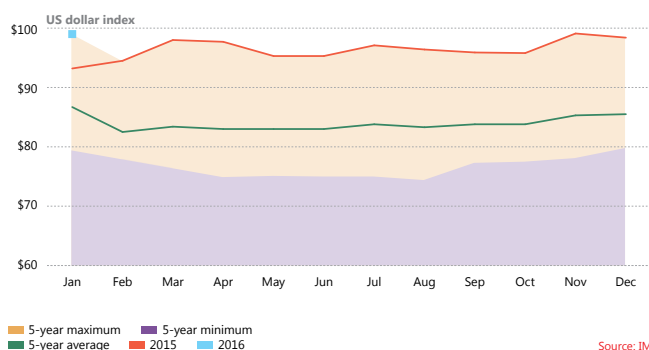
	Avg. 2016	Avg. 2017	Avg. 2018	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Average	34.3	37.1	41.7	37.0	32.6	31.8	36.2
High	37.2	40.1	48.5	38.5	35.2	35.4	40.0
Low	31.5	33.0	33.0	34.0	30.0	27.0	30.0

Source: *Global Gas Analytics* poll of analyst forecasts

## Oil market outlook

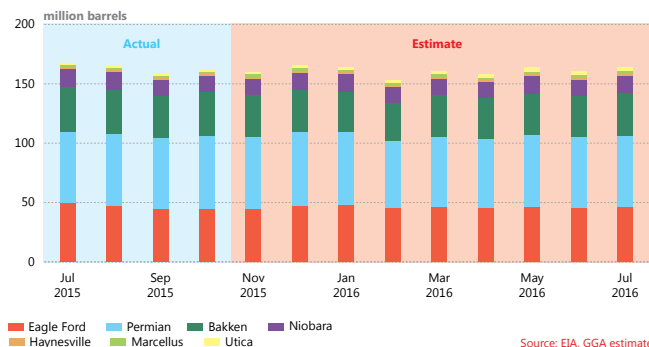
- Brent and WTI front-month futures prices fell below \$30/bbl in January, with further downside possible in H1 2016 as fundamentals remain predominantly bearish. However, the oil market is expected to start rebalancing in H2 2016, providing support to prices later in the year.
- The Brent crude front-month futures price has averaged \$31.5/bbl so far in January, \$7.4/bbl lower than the December 2015 average. The front-month average price for WTI crude is \$31.5/bbl, a fall of \$5.9/bbl from last month's average. Both average prices are more than 30% lower on an annual basis.
- Strength in the US dollar index, which reflects the strength of the dollar against major global currencies, is weighing on oil prices. The US Fed hiked its interest rate in December 2015, its first increase since 2006. The central bank is expected to raise the rate four times this year.
- Monetary tightening measures by the US Fed will add to the weakness in emerging market economies, dampening oil demand prospects. The International Energy Agency expects global oil demand to average 1.2 MMb/d in 2016 compared with 1.8 MMb/d in 2015.
- Healthy oil supplies from OPEC and non-OPEC countries are inciting bearish market sentiment. OPEC oil supplies averaged 31.8 MMb/d in 2015, compared with 30.8 MMb/d in 2014. Non-OPEC supplies averaged 56.9 MMb/d in 2015 compared with 55.6 MMb/d in 2014.
- The prospect of additional Iranian barrels entering the market in 2016 increased following the lifting of most international sanctions against Iran earlier this month. Tehran claims it could boost oil exports by 500,000 b/d within weeks, and that exports could be increased further in the coming months. This will also put pressure on oil prices.
- Oil production from shale acreages in the US drives the country's overall oil output. But producers are feeling the pinch of low oil prices and the country is set to see a year-on-year decline in oil output from shale plays in 2016.
- In December 2015, the US ended a 40-year ban on crude oil exports from the country that will also add to the glut. The first oil shipment of crude was sent to Europe in January, and another is expected to be shipped to China in March.
- Asian gasoil margins are expected to come under pressure due to increased supplies from China. The Chinese government has authorised 9 mt of gasoil exports in 2016 – compared with 1.36 mt allowed in the first round of quota announced last year. The margin has averaged \$10/bbl so far in January, compared with \$12.3/bbl last month.
- The discount of Singapore fuel oil to Oman crude has averaged \$5.7/bbl so far in January, compared with \$8.2/bbl in December 2015. This was because of loading delays of western arbitrage inflows into Singapore that is expected to ease in February.

Figure 8 US dollar index profile



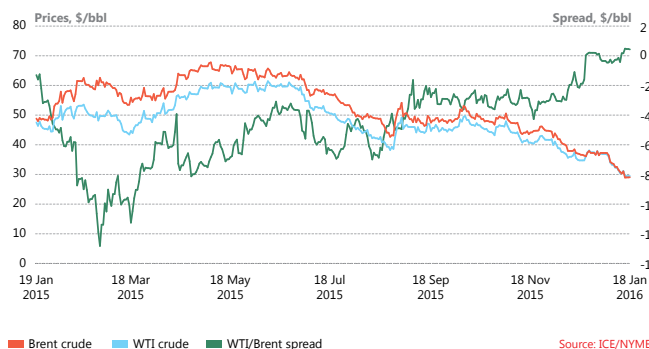
Source: IMF

Figure 9 US oil production profile from shale plays



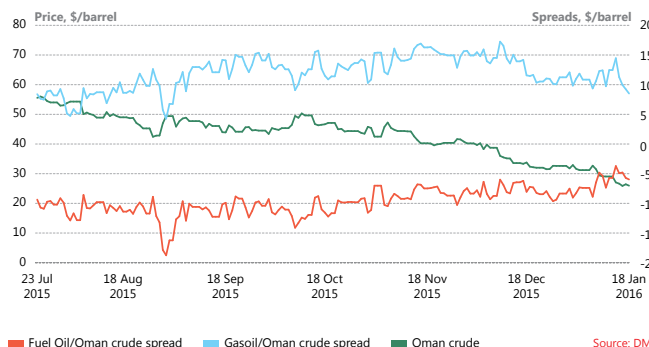
Source: EIA, GGA estimates

Figure 10 Spread between WTI and Brent crude futures



Source: ICE/NYMEX

Figure 11 Singapore fuel oil and gasoil crack spreads



Source: DME



## Interfuel competition

### GAS VS. OIL: SAUDI GAS-FOR-POWER DEMAND TO GROW DESPITE SUBSIDY REFORMS

- Low oil prices have forced Saudi Arabia to tighten its belt on oil and gas subsidies and raise fuel prices for power generators. However, the country's efforts to increase the use of gas in its power sector will lift the industry's demand for the fuel in the coming years.
- The Saudi Arabian power sector's demand for gas is rising fast, having increased at an average yearly rate of 6.5% since 2010. The industry consumed 48.2 billion cubic metres of gas in 2015, an increase of 4% on an annual basis.
- The country generated 310.7 TWh of electricity in 2015, up by 4.1% on an annual basis. Gas accounted for 54.2% of the power generated while the rest came primarily from oil and oil products. This is an increase from 2010, when gas generated 46.1% of Saudi Arabia's electricity.
- Riyadh has increased the price of gas, heavy fuel oil (HFO), diesel and crude oil for power generation. The gas price has been raised by 67% for this year on an annual basis, to \$1.25/MMBtu. Meanwhile, the diesel price has been hiked by 225%, to \$2.18/MMBtu; HFO is up by 100%, to \$0.86/MMBtu; and crude has been increased by 40%, to \$1.02/MMBtu.
- Saudi Arabia is promoting the use of gas in its power sector to reduce its reliance on burning crude and therefore leave more oil for export. However, it has had limited success in minimising the use of crude for power generation, especially during the peak summer demand period. It hopes increased prices will discourage the use of oil and oil products.
- There are plans to increase the share of gas in the country's power sector in the coming years. The kingdom has plans to install nearly 28 GW of additional generation capacity by 2020, almost half of which will be gas-fuelled. A major chunk of the other half is expected to burn multiple fuels, including gas.
- Saudi Arabia is also developing its non-associated gas acreage to give it greater flexibility in meeting gas demand. Non-associated gas projects – such as Midyan, Wasit and Fadhili – will play a major role in the country's gas supply by 2019.
- GGA expects Saudi Arabia will generate 317 TWh of electricity in 2016, an increase of 2% on an annual basis. Gas will generate 55.7% of the country's power, with the rest coming from oil and oil products.

### GAS VS. OTHERS: FUEL DIVERSIFICATION REMAINS A CHALLENGE FOR GAS IN SPAIN'S POWER SECTOR

- Spain's gas-for-power output witnessed double-digit growth in 2015. However, this was a consequence of reduced hydropower generation in the country. The growing dominance of renewables and nuclear will prevent gas from increasing its share in the country's generation mix.
- Gas came third in Spain's power generation mix in 2015,

Figure 12 Saudi power-generation portfolio

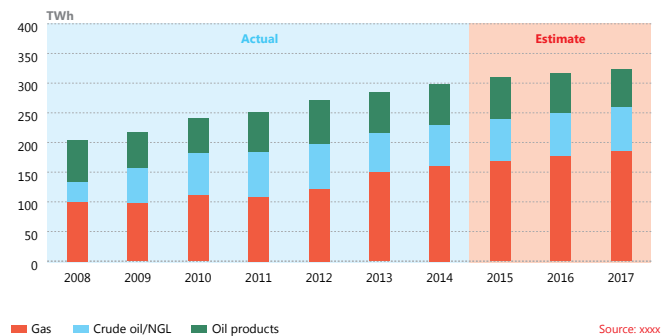
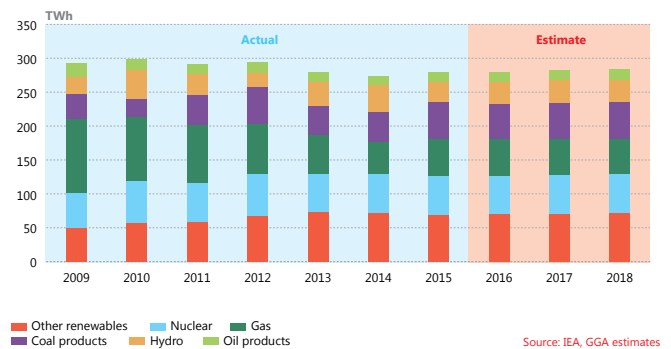


Figure 13 Spanish power-generation portfolio



behind renewables (excluding hydro) and nuclear. The country generated 279 TWh of electricity in 2015, 20% of which was produced by gas. Hydro, other renewables and nuclear are still the preferred baseload options, accounting for 55% of Spain's power generation last year.

- However, the output from Spain's gas-for-power sector increased by 18% in 2015 on an annual basis, to 55.7 TWh. This was because hydro and nuclear generation fell by 28% and 1% respectively. Gas was not the only beneficiary – coal-fired power generation rose by 22% last year, to 54.6 TWh. The ICE Rotterdam coal front-month futures price has averaged \$1.68/MMBtu so far in January, whereas the average front-month futures price for gas at the TTF hub is \$4.6/MMBtu.
- The growing popularity of wind power is another hurdle for gas in Spain. The country's wholesale electricity price for wind averaged €46.14/MWh last year. This made it the cheapest source of power – the price for gas-generated electricity was more than €50/MWh.
- Spain is also developing a subsidy-free segment of its wind sector. The government gave a contract to Forestalia in January to develop 300 MW of wind capacity with no subsidies and expects to increase the practice.
- GGA expects Spain will produce 279 TWh of electricity in 2016, unchanged from 2015. The combined share of hydro, other renewables and nuclear is expected to be 56.8%, whereas gas will generate 19.1% of the country's power.

# Asia Pacific

Jesse Richmond/flickr

## Highlights

- Temperatures have dropped, but demand remains weak
- New LNG supplies from Australia will add to the supply glut in Q1
- Despite colder weather, the upside for additional LNG purchases is limited
- Spot LNG prices dropped below \$7/MMBtu at the start of the year

## ECONOMIC OVERVIEW

GDP growth in some major Asian markets will improve this year - but not in China.

Trading on China's stock market stopped twice during the first week of 2016 when circuit-breakers halted trading after falls of 7% on two days. The value of China's currency also fell at the start of January. However, despite speculation about the potential implications for the wider economy, the slowdown in China's economic growth is expected to be gradual. China's GDP is estimated to have grown by 6.9% in 2015, and it will expand by 6.7% in 2016, according to the latest World Bank *Global Economic Prospects (GEP)*. The lower value of the renminbi should boost exports as it will make them more competitive. Despite a decline in GDP growth this year, gas market expansion is expected to be stronger than it was in 2015. This growth will be partially driven by the lower gas price.

Japan's GDP growth is expected to improve this year. The Japanese economy is estimated to have grown by just 0.8% in 2015, but the World Bank forecasts growth of 1.3% in 2016. However, poor domestic demand and weak demand for exports will limit economic expansion. Japan is not expected to hit its inflation targets until 2017. Japan's improved GDP growth this year is not expected to result in corresponding growth in the gas market. As more nuclear plants restart during the year demand for gas from the power sector will decline. This will balance out any gains in other sectors, limiting the potential for gas market growth.

India's GDP will grow by 7.8% in 2016, according to the *GEP*. This is an improvement compared with last year, when growth was 7.3%. India's economic expansion is forecast to outpace that of any other country in the region. India has benefited from lower oil prices and strong rates of investment, and continued reforms should support the 2016 growth forecast. Indian gas demand is also expected to rise, and the country will continue to take advantage of cheap LNG over the coming months.

## GAS CONSUMPTION

China is expected to drive gas demand growth in Northeast Asia in Q1.

China's gas demand growth is likely to pick up in 2016, although growth is not expected to return to rates seen in

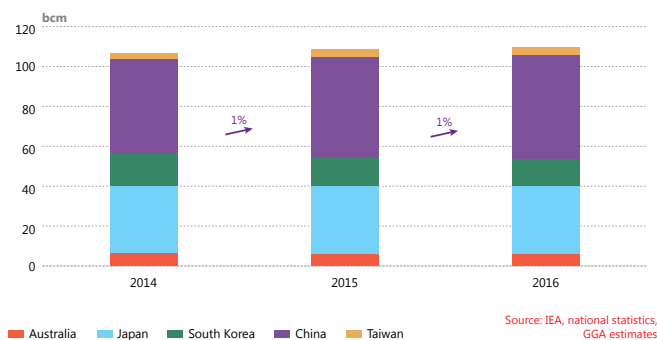
**Table 1** Asia GDP growth forecast

	2015	2016	2017	2018
<b>Japan</b>	0.8%	1.3%	0.9%	1.3%
<b>China</b>	6.9%	6.7%	6.5%	6.5%
<b>Indonesia</b>	4.7%	5.3%	5.5%	5.5%
<b>Thailand</b>	2.5%	2.0%	2.4%	2.7%
<b>India*</b>	7.3%	7.8%	7.9%	7.9%

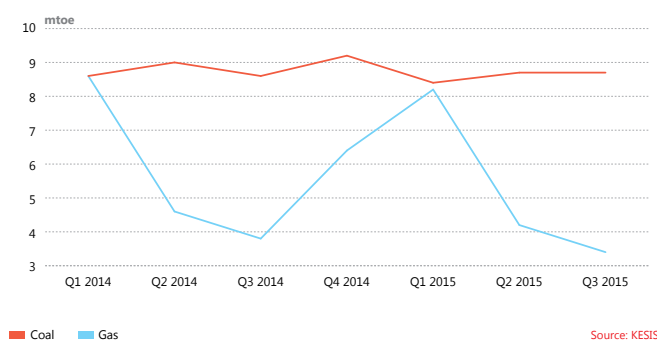
\*Data for India are reported on a fiscal year basis.

Source: World Bank Global Economic Prospects, January 2016

**Figure 1** Asia Pacific key market demand, Q1



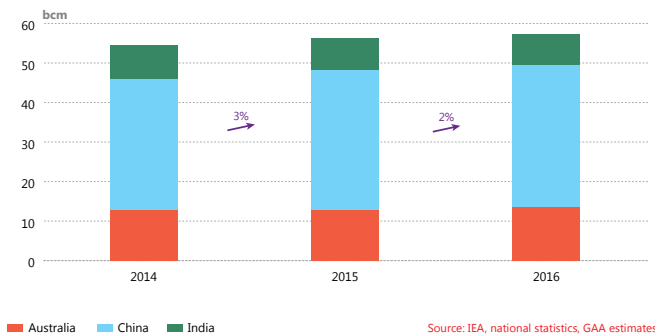
**Figure 2** South Korea final consumption - coal and gas



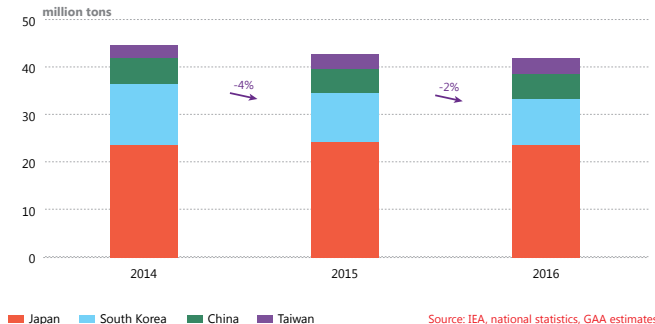
recent years. Government targets for greater switching from coal to gas are expected to result in improved gas demand from the industrial and power sectors this year. The areas targeted for coal-to-gas switching are mostly in the wealthier regions in the south, east and northeast of the country. They include Beijing, Tianjin, Hebei and Shandong – all of which are in northeastern China. The northeast suffers from some of the worst air pollution in the country. Cleaner power is therefore receiving targeted government support, and this is expected to result in increased gas use this year.

Although China’s push for gas consumption is regionally

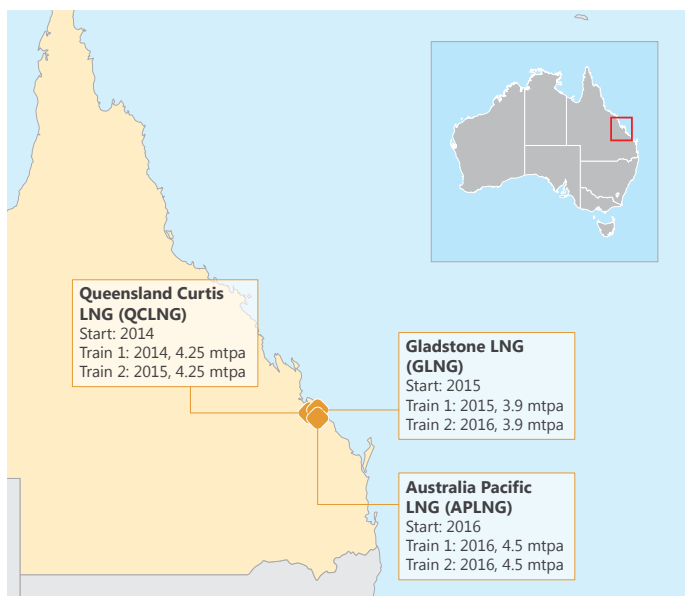
**Figure 3** Asia Pacific gas production, Q1



**Figure 4** Northeastern Asian LNG imports, Q1



**Figure 5** Queensland LNG projects



focused, demand is expected to increase on a national level. The price of gas was reduced late last year and will support the implementation of coal to gas switching.

Colder temperatures should boost consumption over the coming weeks as well. Temperatures in key gas consuming regions in the northeast are forecast to be around average in January and February. Although severe cold is not forecast, even largely average weather should support annual demand growth as last winter was relatively mild. Demand in China is expected to rise by around 4% year on year in Q1, helping to pull up total gas demand in the region. Total gas demand from Northeast Asia and Australia is expected to rise by roughly 1% on an annual basis in Q1.

Temperatures in Japan and South Korea are also expected to largely be around average over the coming weeks and will be cold compared with December. As long stretches of severe cold are not forecast, any increases in heating-related demand are unlikely to be enough to lift total demand in either Japan or South Korea in Q1.

South Korea’s final consumption of gas is estimated to have fallen by around 7% over the first nine months of 2015, according to data from the Korea Energy Economics Institute. This is in contrast to the patterns seen for coal and final energy consumption. Total final consumption was up by nearly 1% on an annual basis over the first nine months of 2015, while coal consumption grew by 4% over the same period. Gas was pushed out of the power mix by coal and nuclear last year, and this trend will not only continue, but could actually intensify this year.

Over the remainder of the winter in South Korea, unless there are prolonged and severe cold periods - which are not forecast, increases in heating demand will be significantly outweighed by declining gas consumption in the power sector. South Korean gas demand is expected to fall by around 7% on an annual basis in Q1, but this decline is likely to accelerate during the rest of the year as coal and nuclear increase their shares in the energy mix.

**STORAGE**

Storage levels in Japan and South Korea remain strong.

Japan and South Korea had good levels of gas in storage at the start of winter. And with demand faltering in both countries, drawdowns are understood to have been limited so far. South Korea had roughly 4.5 billion cubic metres of gas in storage at the start of November, while Japan had 4.6 bcm. Although the peak of winter will see storage levels fall, drawdowns are not expected to be significant. Not only will this help to cap the need for additional LNG imports over the coming months, it will also limit the need for LNG for storage restocks during the spring.

**GAS PRODUCTION**

Gas output from China could slow in Q1, and over the rest of the year.

Chinese gas production grew by just 1% year on year in November. With lower prices and an over-supplied market, there will be little incentive to ramp up production. Lower prices will hit supply from more expensive sources in particular. Annual production growth in Q1 is anticipated to be around 2%. Although this is an improvement from the growth seen in



November, it is slower than the 3% increase achieved last year. Even with declining production growth, the Chinese market will remain well supplied over the coming months.

Australian production was broadly flat year on year in 2015, but output is expected to grow in 2016. Total production reached roughly 54 bcm in 2015. As supply feeding into new LNG projects continues to ramp up, Australia's output levels will improve in 2016.

**TRADE**

**Rising Australian LNG exports will hit a glutted market in Q1.**

Australia Pacific LNG (APLNG) has started operations. Train 1 was not commissioned before the end of 2015 as planned, but the first ship left the liquefaction plant shortly after, on 9 January. The second train is scheduled to be commissioned by the end of this year and will bring total capacity at APLNG to 9 mtpa.

Although most of the LNG from the project is tied up in long-term contracts, the ramp-up cargoes will need to find buyers in an already glutted spot market. Although the peak winter period will lend seasonal support to demand in Northeast Asia, the cold temperatures are not expected to significantly boost the requirements for additional LNG cargoes. APLNG is the third LNG export project in Queensland to start up over the past two years.

The 8.5 mtpa Queensland Curtis LNG (QCLNG) commissioned its first train in 2014, with the second starting operations last year. The first train at Gladstone LNG (GLNG) has a capacity of 3.9 mtpa and also started up in 2015. When fully commissioned, the three east coast LNG projects will have a combined capacity of around 25 mtpa.

On the northwest coast, Gorgon LNG is scheduled to start up at least one train in 2016, and Wheatstone LNG is still aiming to commission its first train by year-end. The three trains at Gorgon will each have a capacity of 5.2 mtpa, while both trains at Wheatstone will each have a capacity of 4.5 mtpa. The northwest coast projects will bring another 25 mtpa of liquefaction capacity to the market over the next 12-24 months. The ramp-up volumes from the new plants on both coasts will help keep the LNG market loose and regional spot prices low in 2016.

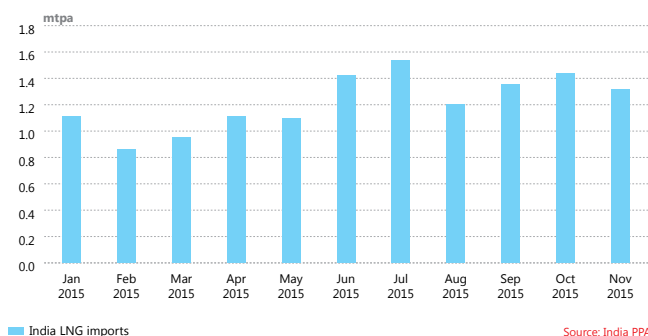
Last year total LNG imports into Japan, South Korea, China and Taiwan amounted to approximately 150-155 mtpa. The new Australian LNG supply coming online this year will be around 25 mtpa – equivalent to 16% of total Northeast Asian LNG imports last year.

New contracts should boost the volume of LNG entering China this year, as new projects and contracts start up. LNG imports into Taiwan are also expected rise year on year in Q1. However, imports into Japan and South Korea are expected to decline on an annual basis over the coming months. The weight of a fall in import requirements from the two largest LNG importers in the world will drag on LNG imports for the region as a whole. Northeast Asia's total LNG imports are expected to fall by 2% year on year in Q1. LNG imports into Southeast Asia could increase over 2016, but while they will help to balance declines seen in Northeast Asia, they will not outweigh them.

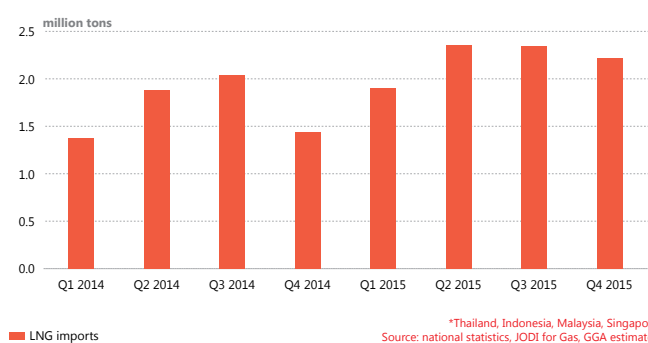
**PRICE TRENDS**

Prices in long-term LNG contracts will fall over the coming months.

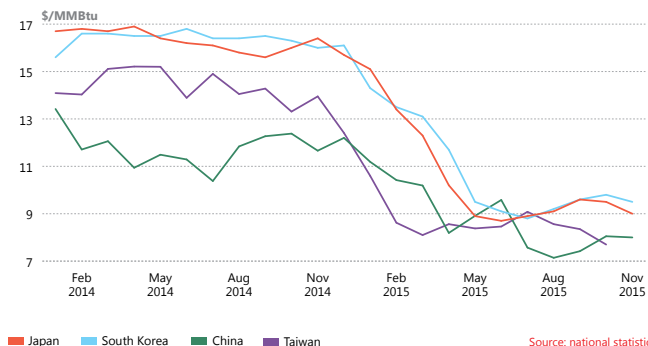
**Figure 6 India LNG imports**



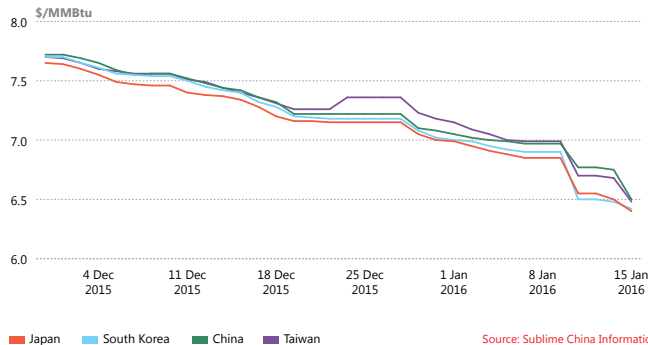
**Figure 7 Southeast Asian LNG imports**



**Figure 8 Asia Pacific LNG import prices**



**Figure 9 Asia Pacific LNG CIF spot prices**



Japan's average LNG price in November was \$9/MMBtu, while South Korea's was around \$9.5/MMBtu. Prices in both countries were down year on year and month on month. With oil prices having dropped even further in recent weeks, oil-linked LNG prices will also decline over the coming months.

With average oil prices taken over a three- or six-month period, the impact of the most recent drops in oil will be start to be seen in contracted LNG prices during the spring. If there are even further drops in oil prices, the price of LNG in oil-indexed contracts will be even lower over the summer. This could put pressure on spot LNG prices during the peak summer demand months in Northeast Asia.

The average price of China's piped imports fell below \$6/MMBtu in November. The cheapest imports were from Kazakhstan, at around \$3.7/MMBtu. Even relatively expensive imports from Myanmar were below \$10/MMBtu. The average price of China's LNG imports in November was low compared with Japan and South Korea, but at nearly \$8/MMBtu the price was significantly higher than the country's piped supplies.

### SPOT, FORWARD AND FUTURES MARKETS

Asia's spot LNG prices dropped below \$7/MMBtu at the start of the year.

Spot LNG prices in Asia fell below \$7/MMBtu during the first week of January as weak demand and strong regional supply put further pressure on prices and unravelled the modest gains seen at the end of 2015. By the middle of January, the average spot price in the region had fallen to around \$6.5/MMBtu.

Further declines in spot LNG prices are expected. Even with comparatively cold temperatures expected to hit the region over the coming weeks after a mild start to the winter, heating-related demand is unlikely to increase enough to support spot price rises. Prolonged and severe cold is not expected over the peak of winter as the weather in Japan and South Korea in January and February is forecast to largely be around average.

With gas demand and requirements for LNG in Japan and South Korea expected to fall on an annual basis over Q1, there will be little demand-side support for prices. New nuclear and coal generation will continue to push out gas demand in South Korea's power sector, and a similar picture is expected in Japan. Although there is upside for demand from some markets – including India and among smaller buyers in Southeast Asia – this will not be enough to balance out the declines from the major buyers. Additionally, India is and will remain price-sensitive. Although Pakistan and India are taking advantage of cheap spot LNG, when the price goes up they will stop importing even if it causes domestic supply problems and power shortages.

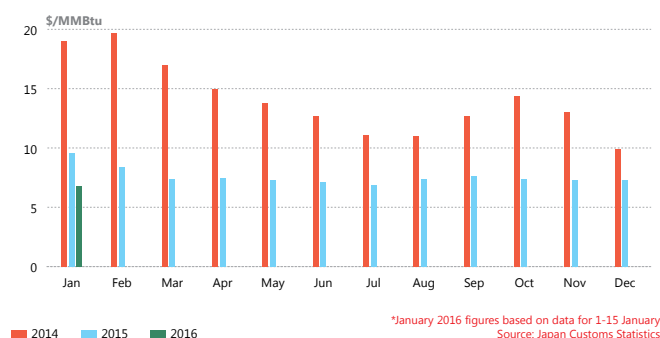
Additional supply from Australia will hit the market this month and new exports from the US will commission in Q1. This will add to the supply glut and further weigh on spot LNG prices, which are expected to average below \$6.5/MMBtu in February before falling further in March.

**Table 2** South Korea LNG imports, November 2015

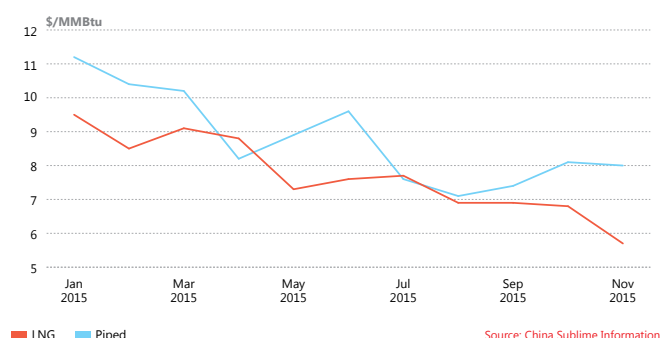
Region	\$ mln	Vol, tons	\$/ton	\$/MMBtu	% of vol
Asia	379	830,493	456.5	8.8	31%
Mideast/Africa	789	1,492,072	528.6	10.2	55%
Europe/Russia	167	383,563	435.0	8.4	14%
<b>Total</b>	<b>1,335</b>	<b>2,706,127</b>	<b>493.2</b>	<b>9.5</b>	

Source: China Sublime Information

**Figure 10** Average spot import prices in Japan



**Figure 11** China import prices



**Table 3** China pipeline imports, November 2015

Source	Value, \$ million	Volume, tons	\$/ton	\$/MMBtu	% of total vol
Kazakhstan	3.88	20,469	190	3.66	1%
Turkmenistan	387.38	1,508,179	257	4.96	83%
Uzbekistan	0	0	0	0.00	0%
Myanmar	151.89	298,319	509	9.83	16%
<b>Total</b>	<b>543.16</b>	<b>1,826,967</b>	<b>297</b>	<b>5.74</b>	

Source: China Sublime Information

**Table 4** Interfax Asian gas forecasts

Commodity	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017
LNG DES Japan Spot, \$/MMBtu	7.2	6.7	6.1	5.5	5.2	5.2	5.5	6.9	7.5	7.8
LNG DES Japan Contract, \$/MMBtu	8.4	7.3	6.4	5.7	5.4	5.4	5.7	7.2	7.8	8.0
LNG FOB Qatar Netback, \$/MMBtu	6.4	5.9	5.4	4.9	4.6	4.6	4.8	6.1	6.7	6.9
Japan Crude Cocktail, \$/bbl	44.2	37.4	30.3	28.1	26.6	26.4	28.0	38.4	42.5	44.3
Fuel Oil FOB Singapore, \$/t	178.6	148.6	126.8	112.5	101.9	96.1	105.4	154.2	158.9	179.5

\*Interfax indices and forecasts are for information purposes only. For details of methodology and legal disclaimer, see page 6 of *Global Gas Analytics*

# Europe & Russia

Tim Adams/flickr

## Highlights

- Gas demand from Europe's largest markets will see limited grow in Q1
- Europe will remain well supplied this winter despite cuts to Groningen's output
- Drawdowns on stocks have picked up pace but storage volumes are still healthy
- Colder temperatures will not be enough to boost hub prices in Q1

## ECONOMIC OVERVIEW

Eurozone economies will expand at an increased pace this year.

The GDP of countries in the eurozone is expected to grow by an average of 1.7% this year, up from an estimated 1.5% in 2015, according to the World Bank's January *Global Economic Prospects* forecast. The low global oil price is helping the economies of EU member states to improve growth. Consumer spending has increased and unemployment has dropped, both of which will support steady economic expansion this year and next, when GDP growth is also expected to be around 1.7%. The higher rate of growth will support the region's gas markets to expand slightly. However, Europe is not expected to significantly increase its appetite for gas this year.

The low oil price will damage parts of the UK's economy. The country's GDP is expected to grow by around 2.4% this year, the same as in 2015. Lower oil prices will reduce costs and support growth in some sectors. However, Scotland has been harder hit – substantial job losses in the oil industry mean it has higher unemployment and lower consumer spending than elsewhere in the UK. The UK's tax revenues from oil production are also falling. Despite this, the country may use more gas this year. Consumption from the UK's power sector is expected to improve in 2016 because the drop in NBP prices is helping to make gas more competitive against coal.

## GAS CONSUMPTION

There will be limited growth in the demand for gas in Q1 despite colder temperatures.

Gas demand from Europe's largest markets is not expected to grow substantially in Q1 2016, despite the colder temperatures that hit much of the region in January. Temperatures were generally closer to seasonal norms at the start of the year than in December across most of Europe, especially in northern markets. Although increased heating-related demand will support overall consumption, the demand from the top six markets is only expected to grow by around 3% year on year in Q1. By contrast, the annual growth figure was 13% in Q1 2015, but this was largely weather-driven as the quarter was substantially colder than Q1 2014.

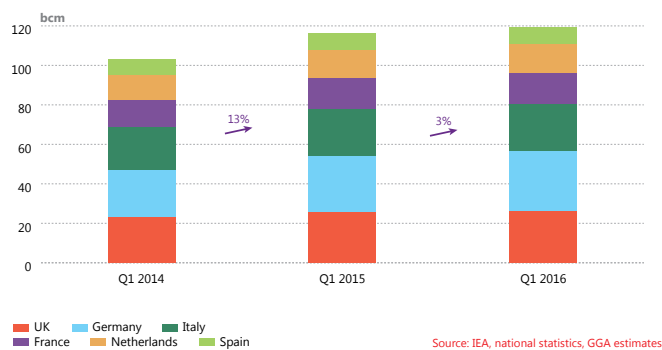
Demand for gas from the power sector in the UK increased by 77% year on year during the first half of January. Higher rates

**Table 1** Europe GDP growth forecast

	2015	2016	2017	2018
<b>Euro area</b>	1.5%	1.7%	1.7%	1.6%
<b>UK</b>	2.4%	2.4%	2.2%	2.1%
<b>Russia</b>	-3.8%	-0.7%	1.3%	1.5%

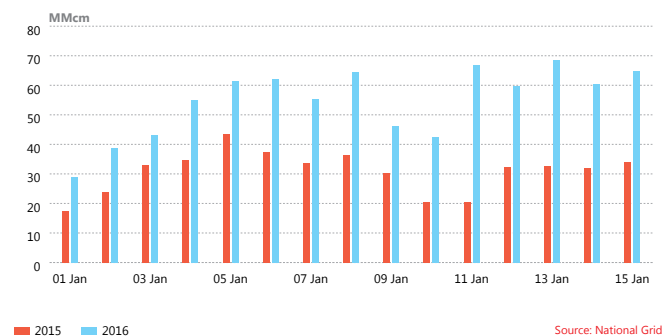
Source: World Bank Global Economic Prospects, January 2016

**Figure 1** Demand in key European markets, Q1



Source: IEA, national statistics, GGA estimates

**Figure 2** Gas demand from the UK power sector



Source: National Grid

of consumption are being supported by the country's carbon price floor, which was increased last April. The power sector accounted for around 27% of demand over the first nine months of 2015. The increase seen in gas-fired power generation this month stands in contrast to patterns seen during parts of last



year. Demand for gas from the power sector declined on an annual basis in Q3 2015 as higher prices meant gas was pushed out by coal and renewables. However, with prices expected to remain low in 2016, the use of gas for power generation in the UK is expected to rise. This should help increase the country's

Figure 3 European gas storage – major markets

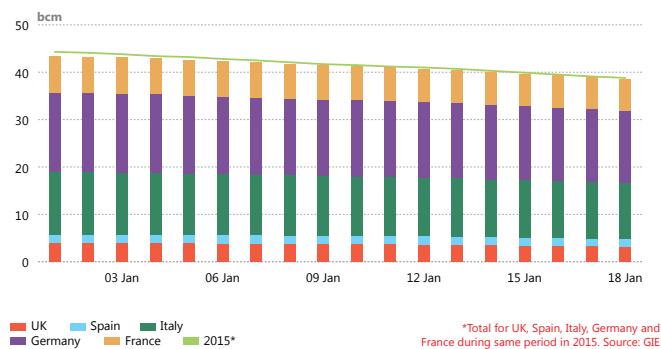


Figure 4 Ukraine storage

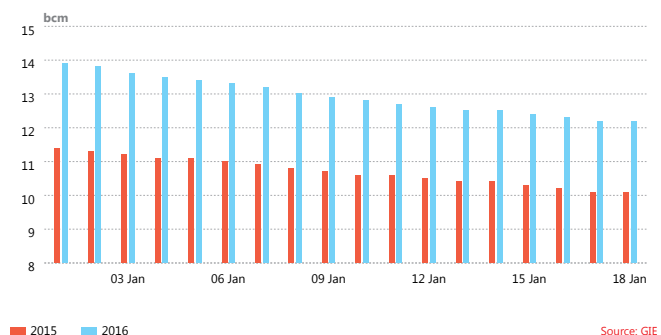


Figure 5 European production, Q1

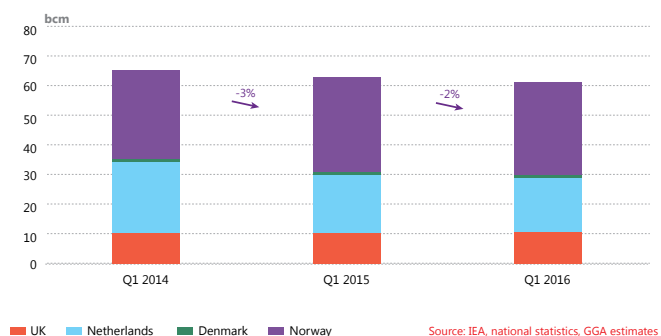
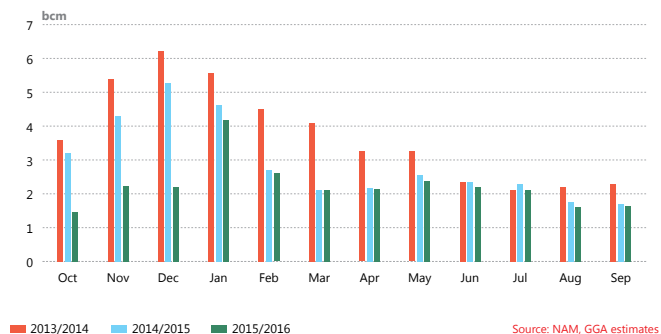


Figure 6 Groningen production by gas year



overall demand for the fuel.

**STORAGE**

Colder temperatures are increasing the pace of gas storage withdrawals in Europe.

The volume of gas in Europe's storage facilities has fallen by over 9 billion cubic metres so far in January, according to Gas Infrastructure Europe (GIE) data for the EU28. This is a substantially higher withdrawal figure than was seen during the same period in 2015. Temperatures have dropped across much of Europe in recent weeks. Although there has been no prolonged period of severe cold, temperatures are significantly lower than they were in December. The pace of net withdrawals could ease as temperatures are forecast to be largely in line with or slightly above seasonal averages for much of Europe over the coming month.

The gas storage volumes of Spain, the UK, Germany, France and Italy have fallen over recent weeks and are now marginally lower than they were at the same time last year. The combined stocks of the countries – five of the largest markets in Europe – are around 38 bcm, accounting for roughly 68% of the EU28 total. France has seen significant drops in storage levels since the end of last year as the pace of net withdrawals picked up in January. Stocks have fallen by over 1 bcm since the end of December - roughly a 15% reduction in stocks. This is more than twice the volume of net withdrawals seen over the second half of December. Storage levels in France are now around 6% lower than they were at the same time last year.

Despite the drawdowns, Europe is still well stocked at the peak of winter. The mild start to the season meant relatively little stored gas was used in November and December, ensuring the region has plenty in stock at the height of the withdrawal period. Europe has around 56 bcm of gas in storage, sufficient to ensure secure supplies for the rest of the winter.

Ukraine has made relatively steady net storage withdrawals over recent weeks. The country's stocks have fallen by around 1.9 bcm since the start of the year, and Ukraine now has roughly 12 bcm of gas in storage – approximately 2 bcm more than at the same time last year. Ukraine has not resumed importing gas from Russia, but there is no great pressure to do so as its storage volumes are healthy for the time of year. Ukraine is reportedly set to receive a \$500 million loan from the World Bank for gas purchases, this could be used for supply from Russia or Europe. The country has continued to import gas via reverse flows from Europe. Colder temperatures could persist during the latter half of the winter, but Ukraine is unlikely to face immediate supply security issues, even without Russian flows resuming over the coming weeks.

**GAS PRODUCTION**

Cuts to supplies from Groningen have already had their greatest impact.

The output from the Netherlands' Groningen field has been limited to 27 bcm for the 2015-2016 gas year (which runs from October 2015 to September 2016), but this could be increased to 33 bcm if the winter is especially cold. Temperatures in Europe have dropped this month after a relatively mild December and are closer to normal for the time of year. However, it is unlikely there will be a severe or prolonged cold snap during the rest of January or in February, meaning there is

little prospect of the 33 bcm limit being applied.

Groningen has produced 6 bcm so far this gas year, leaving roughly 21 bcm for the next nine months. This represents a 5% drop in the field's output compared with the same period in 2015. This will be a far less severe drop than was seen at the start of this gas year. During Q4 2015, Groningen's output fell by 54% year on year. Although the supply cut will continue to affect overall Dutch production through September, the worst of the output cuts from the crucial field for this gas year have already been made.

However, Groningen could be subject to further reductions next year, which would put even greater restrictions on swing supply in subsequent winters.

The UK's gas output is estimated to have increased in 2015 despite low prices during the latter part of the year, and there is some upside for UK supply this year. The country's production increased by around 7% last year, according to International Energy Agency data and GGA estimates.

However, this growth is likely to be difficult to maintain. The global drop in oil and gas prices is hitting investment and the prospects for future supplies from the UK. This will likely limit increases in gas production over the coming months and during 2016 overall. The longer low prices persist, the sooner UK gas production will go into decline. UK gas supply could stay broadly flat over the next few years, but if oil prices remain under pressure and higher cost production is uneconomic, output may start to drop more quickly than expected. UK supply will help mitigate the impact of reductions in Dutch output, but European production is still expected to fall, by around 2% year on year in Q1 2016.

**TRADE**

Russia increased its share of the European market last year.

Russia exported 159 bcm to Europe in 2015, up by 8% on an annual basis. This helped ensure the country was the region's top supplier last year. Russia's share of the European market (including Turkey) increased to 31%, according to IEA data and GGA estimates. The growth in exports has come at a time when the Russia's domestic production is falling. Russia's output declined by 3% in 2015, while supply from Gazprom dropped by 7%. Weak domestic demand hit requirements for production at home, and Gazprom is also continuing to face domestic competition.

Limited demand growth from key European markets is expected to limit Europe's requirement for Russian gas in Q1. However, because Russian gas is relatively cheap, the country is well placed to defend its share of the European market, despite lower prices. Russian supplies to Europe are expected to be around 15 bcm in January, up 36% year on year, but still down compared to January 2014 export volumes.

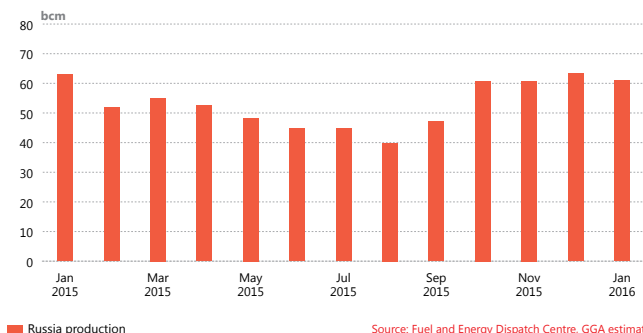
LNG imports will also help keep Europe well balanced this year. Europe is expected to continue to soak up surplus cargoes as Northeast Asia's demand for LNG continues to falter. The trend for greater volumes of LNG arriving into key European markets – including the UK and Spain – seen in late 2015 is expected to continue during Q1.

**PRICE TRENDS**

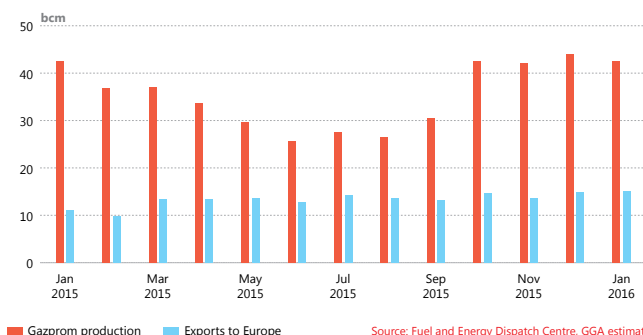
Colder temperatures are failing to heat up the market.

The weather turned colder across much of Europe in January,

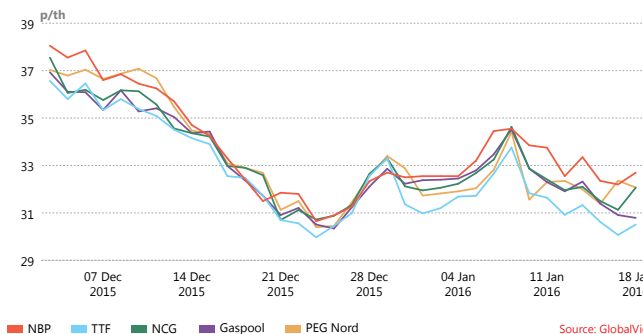
**Figure 7** Russian production



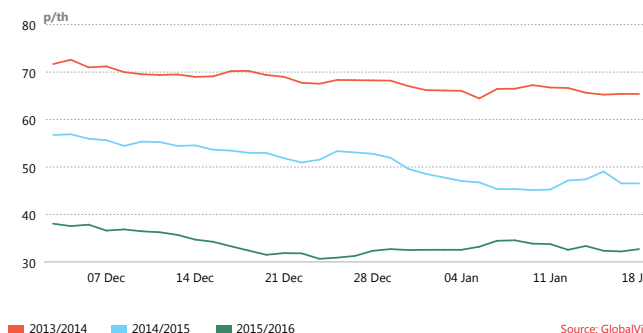
**Figure 8** Gazprom production and exports to Europe



**Figure 9** European day-ahead hub prices, December-January



**Figure 10** NBP day-ahead, December-January



in sharp contrast to the mild temperatures that dominated December. However, day-ahead prices in Europe's major hubs failed to rally significantly. As of mid-January, NBP day-ahead prices were around 32 p/th. Although prices at the NBP recovered from lows of below 31 p/th at the end of December,

the increase in heating-related demand was balanced by strong supply, limiting any upside in prices. NBP day-ahead prices are currently around 14 p/th lower than they were at the same time last year, and they are roughly half what they were at the same time in 2014.

Fundamentals are also weighing on the day-ahead prices at major continental hubs. The TTF dipped below 31 p/th in mid-January, with the NCG and the French PEG Nord only marginally higher, at around 32 p/th. Temperatures are forecast to generally be around average for the rest of winter, which could help provide a floor to hub prices in the region. However, unless there is a severe and prolonged cold snap, any increase in demand will do little more than nudge prices upwards.

**SPOT, FORWARD AND FUTURES MARKETS**

Prices in Europe will remain under pressure in Q1 and beyond.

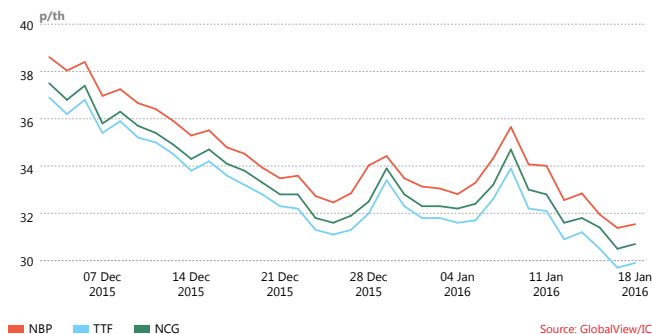
The NBP month-ahead fell to around 31 p/th in mid-January – a 18% drop from the start of December. A similar decline was seen at the TTF and NCG, which were near 30 p/th and 31 p/th respectively in mid-January. As the region hits the peak of winter, the weather is offering little support to prices. Fundamentals are therefore likely to continue to be bearish over the coming weeks. Barring an unexpected supply issue or a severe stretch of cold – which is not forecast – there is little on the horizon to boost prices.

Market fundamentals are not the only factors weighing on the gas price. Around 30% of gas sold in Europe is indexed to oil, meaning the global decline in oil prices will hit gas prices in the region, albeit with a lag of around three to four months. As spring gets under way, oil prices of below \$30 per barrel will start to affect Europe’s wholesale gas prices. If oil prices fall further during Q1 and Q2, oil-indexed gas prices could face further drops over the summer.

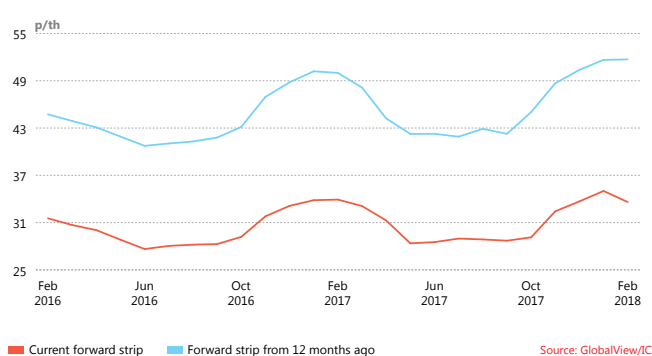
Prices on the forward strip reflect the downward trend hitting gas prices. Peak winter prices on the current NBP 24-month forward strip are around 32 p/th, roughly 15% lower than the strip from one month ago. Summer prices on the current strip are around 28 p/th, down by roughly 16% from last month’s strip. The pressure on prices looks unlikely to lift, which should help make gas cheaper for the power sector, particularly in the UK due to the support of the UK’s carbon price floor.

The TTF accounted for 50% of Europe’s over-the-counter (OTC) trading in December. The gap between activity at the TTF and the NBP widened during 2015. OTC trading at the TTF increased by 14% last year, whereas at the NBP it fell by 9%. Although trading at Italy’s PSV hub was minimal, it saw the most significant rise in OTC activity last year, increasing by 36%.

**Figure 11** NBP, TTF, NCG month-ahead, December-January



**Figure 12** NBP 24-month forward strip comparison



**Table 2** European hub gas trading volumes, December 2015

	Total OTC volume, TWh	% total	YTD total market volume annual % change
<b>UK NBP</b>	632	30.0%	-9%
<b>Netherlands TTF</b>	1,055	50.0%	14%
<b>Germany NCG</b>	147	7.0%	-3%
<b>Germany Gaspool</b>	93	4.4%	-12%
<b>France hubs</b>	30	1.4%	11%
<b>Austria VTP</b>	20	1.0%	-17%
<b>Italy PSV</b>	53	2.5%	36%
<b>Zeebrugge Hub</b>	44	2.1%	-6%
<b>Other gas</b>	34	1.6%	2%
<b>Total gas</b>	2,109	-	-

Source: LEBA, www.leba.org.uk

**Table 3** Interfax European gas forecasts

Commodity	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017
<b>NBP, p/th</b>	35.3	32.6	31.6	30.4	28.1	26.7	27.1	31.8	40.9	43.2
<b>TTF, €/MWh</b>	16.0	14.2	13.7	13.3	12.8	12.8	12.7	14.6	17.8	19.1
<b>Zeebrugge, p/th</b>	33.9	31.0	30.3	29.3	28.2	27.9	27.7	32.1	39.1	42.0
<b>Brent crude oil, \$/bbl</b>	38.9	31.5	29.2	27.7	27.5	32.3	32.5	41.8	44.7	45.5
<b>Heating oil FOB ARA, \$/t</b>	334.0	273.8	271.0	239.9	235.5	274.0	277.6	360.7	374.3	387.3
<b>Fuel oil FOB ARA, \$/t</b>	143.5	111.0	106.6	92.2	84.6	90.7	105.4	175.4	185.8	193.0

\*Interfax indices and forecasts are for information purposes only. For details of methodology and legal disclaimer, see page 6 of Global Gas Analytics



# Middle East & Africa

David Stanley/flickr

## Highlights

- Gas-for-power demand in the GCC is rising despite subsidy reforms by several members
- Plans for FSRUs in Egypt and Ghana will further boost the region's LNG imports in 2016
- Prospects for Algerian gas production are dim despite proposed output from In Salah
- Qatari gas and LNG export prices are falling, hurting export revenue

## MACROECONOMIC OVERVIEW

Oil and gas exporters in the Middle East and Africa will continue to tighten their belts and reduce subsidies in 2016 amid low oil, gas and LNG prices.

Saudi Arabia is feeling the strain of low oil prices, announcing cuts to energy subsidies in December 2015 that increased the costs of crude oil, heavy fuel oil, diesel and gas. The country upped the price of the gas feedstock it supplies to power plants, from \$0.75/MMBtu to \$1.25/MMBtu – although this is still lower than international prices.

Oman will cut its overall spending in 2016 by 11.2% compared with last year, slashing subsidies by 55.6% and oil and gas sector spending by 14.8%. Oman doubled gas prices last year for several industrial and power sector consumers to \$2.5-3/MMBtu. Further increases to gas prices are expected in 2016.

In January, most international sanctions on Iran imposed by the US, the EU, and the UN were lifted, allowing the flow of much-needed foreign investment and technology into Iran's oil and gas sector. The lifting of sanctions followed the decision by the International Atomic Energy Agency that Iran had abided by an agreement last year with the P5+1 countries to curtail its nuclear programme. However, less comprehensive sanctions by the US over Iran's missile programme will be maintained.

Iran expects \$30-50 billion of foreign investment over the next five years, some of which will go to its upstream sector. The country will also have access to assets held abroad and frozen by the sanctions. Although US companies will not be able to do business directly with Iran, they will be able to do so via their foreign subsidiaries. Tehran claims it will be able to boost oil exports by 500,000 b/d within weeks, with potential for further increases in the coming months. *GGA* expects Iran's marketed gas production will increase by 3.8% on an annual basis in 2016 – to 187.1 billion cubic metres.

## GAS CONSUMPTION

Gas demand in the MEA is expected to grow faster than production in 2016 despite subsidy reform in several countries.

The key MEA countries – the Gulf Cooperation Council (GCC) members, Iran, Egypt, Turkey, Algeria, Nigeria, Yemen and Libya – consumed a total of 499.2 bcm in the first 10 months of 2015, a 5.8% increase on an annual basis. *GGA* expects consumption

**Table 1** Quarterly and annual year-on-year GDP growth rates

	Q1 2015	Q2 2015	Q3 2015	2016	2017	2018
<b>Qatar</b>	4.1%	4.8%	3.8%	*4.9%	*4.2%	*3.6%
<b>Egypt</b>	3.0%	4.5%	*4.0%	*4.3%	*4.5%	*4.7%
<b>Saudi Arabia</b>	2.3%	3.8%	3.6%	*2.2%	*2.9%	*3.0%
<b>Nigeria</b>	4.0%	2.4%	2.8%	*4.3%	*4.5%	*4.7%
<b>South Africa</b>	2.2%	1.3%	1.0%	*1.3%	*2.1%	*2.5%

Source: regional government sources. \*IMF WEO projections

to increase by 3.8% year on year in H1 2016, to 316.9 bcm.

Gas-for-power consumption will drive overall demand in the GCC countries this year. *GGA* expects gas demand from the GCC's power sector to have increased by 4.3% on an annual basis in 2015, to 115.6 bcm, with power accounting for 44.8% of gas consumption.

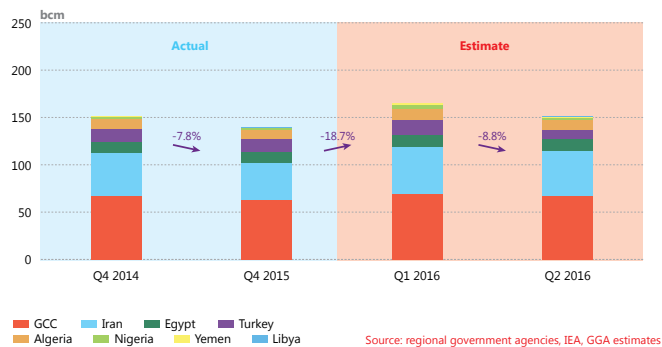
Gas-for-power demand is also rising in North African countries such as Egypt and Algeria. In December, the Egyptian government announced it was scrapping its plan to phase out energy subsidies by 2020. The decision was motivated by low oil and gas prices, continued financial help from the GCC countries, and the prospect of additional gas from the newly discovered Zohr field. Subsidised gas will further boost Egypt's gas-for-power demand, which stood at 30.4 bcm in 2015 – an increase of 14.3% on an annual basis. *GGA* expects it to rise by 4.9% in 2016 from 2015.

Algeria is struggling to meet growing gas demand from its power sector as it tries to maximise gas and LNG export revenues amid weak growth prospects for gas production. Algeria plans to bring seven gas-fired power plants online in 2016, which will have a combined capacity of 3.81 GW. However, it is becoming difficult to find enough feedstock gas for new power plants, and this is expected to delay commissioning of some of the proposed plants until 2017 or later. The power sector was the biggest consumer of gas in Algeria in 2015, accounting for 42.6% of demand. *GGA* expects demand to increase by 1.7% on an annual basis in 2016, to 17.6 bcm.

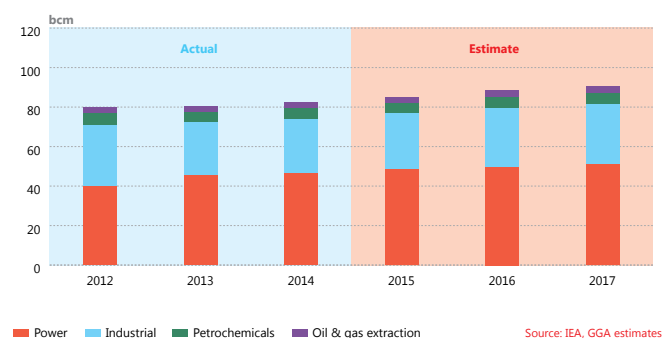
Turkey's mild winter forecast will cap gains in gas demand until February. However, consumption is expected to gather

pace in Q2 and Q3 as a warmer-than-average summer is expected. There is a 40% chance of above-average temperatures between January and March and a 50% chance of above-average temperatures between April and June. Total Turkish gas demand is expected to remain unchanged at 16 bcm during the

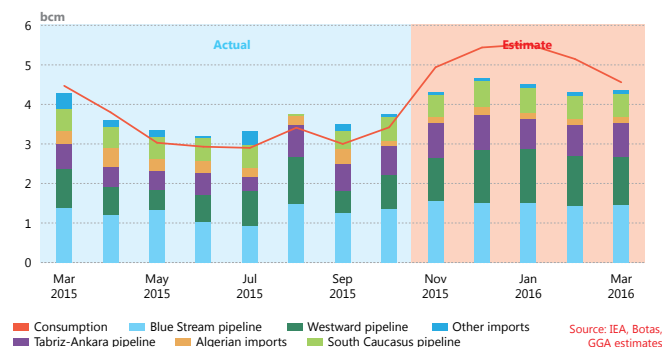
**Figure 1** Middle East & Africa gas consumption



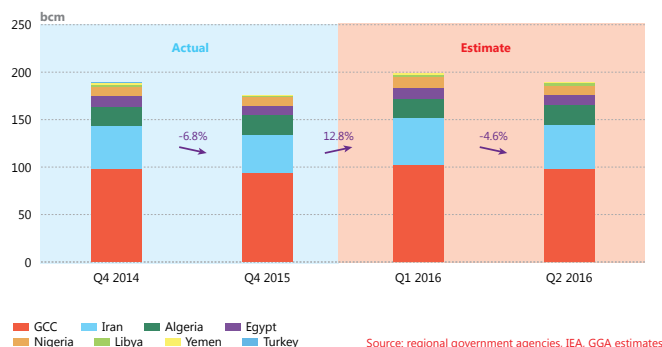
**Figure 2** Saudi gas consumption by sector



**Figure 3** Turkish gas consumption and imports



**Figure 4** Middle East & Africa gas production



winter (December-February). However, it is expected to increase to 25.3 bcm in H1 2016 – up by 2% on an annual basis.

**GAS PRODUCTION**

Low prices are taking their toll on gas production in the MEA, which will further increase the region’s reliance on imported gas and LNG in 2016.

The key regional countries produced 627.9 bcm of gas between them in the first 10 months of 2015, a 4% increase on an annual basis. GGA expects production to rise by 1.9% on an annual basis in H1 2016, to 388 bcm.

The prospects for gas output from Algeria, Egypt and Libya are weak in 2016. Combined marketed gas production from the three fell by 2.1% on an annual basis in the first 10 months of 2015, to 112.9 bcm. GGA expects a year-on-year fall of 2% in H1 2016, to 66.8 bcm.

Algeria is struggling to boost gas output in the near term despite expectations of commercial production from its southern In Salah fields in 2016. First gas from the acreage was due in 2015, but has been delayed until Q1 2016. Gas from the field is expected to compensate for production declines at the northern fields. In Salah gas will be delivered to Algeria’s gas hub at Hassi R’Mel, where some will be sold to the domestic market and the rest exported to Italy via the Trans-Mediterranean pipeline. Marketed gas production in Algeria declined by 1% on an annual basis in the first 10 months of 2015, to 67.3 bcm. GGA expects it to increase by around 1% on an annual basis in H1 2016, to 40.4 bcm, if production starts from In Salah southern fields in Q1.

Egypt hopes to bring gas production from the Zohr and West Nile Delta projects online in late 2017 or early 2018. However, 2016 will be another challenging year for the country’s gas output as production declines from ageing fields. Egypt’s marketed gas output was 37.4 bcm in the first 10 months of 2015 – a fall of 4.8% on an annual basis. GGA expects it to decline by 4.5% on an annual basis in H1 2016, to 22.1 bcm.

Gas production in Yemen has been severely affected by the civil war in the country, and the situation is not expected to improve in 2016. Most of Yemen’s marketed gas is exported as LNG, but exports stopped in April 2015. Marketed gas production in Yemen fell by almost 50% on an annual basis in the first 10 months of 2015, to 4.7 bcm. GGA expects it to decline by 50% on an annual basis - to 1.8 bcm - in H1 2016.

The Israeli government has high hopes for commercial production from its Leviathan field after a gas framework agreement was passed in December. However, there are additional hurdles ahead. The country’s Supreme Council still needs to approve the framework, which may happen in February. A ruling by the International Chamber of Commerce in favour of Israel against Egypt has strained relations between the two countries. Egypt has been ordered to pay \$1.8 billion in damages for halting gas exports to Israel in 2012. Israel sees Egypt as a key destination for Leviathan gas, but Egypt is already developing its Zohr field and may not need Israeli volumes.

**TRADE**

The MEA’s LNG imports are set to increase in 2016, helped by persistent rises in regional demand.

MEA countries imported 21.4 bcm of gas as LNG in 2015, a 62.1% increase on an annual basis. New regional LNG importers

Egypt and Jordan contributed towards the increase, while existing customers in the region also increased their intake because of low prices.

Regional LNG imports are expected to see double-digit growth on an annual basis in 2016. Egypt is expected to install its third FSRU this year, while Ghana also intends to rent an FSRU. Egypt has increased its LNG intake despite not being in its peak summer demand period. It imported 550 million cubic metres (MMcm) of gas as LNG in December 2015 – its highest monthly figure since imports began in April 2015. The country is on its way to becoming the biggest importer of LNG in the region once it installs its third FSRU.

Ghana could become the first country in sub-Saharan Africa to start importing LNG using an FSRU if its plans to install the vessel in Q2 2016 are realised. West African Gas Ltd. (WAGL) – a 60/40 joint venture between Nigerian National Petroleum Corp. and Sahara Energy Resources – has contracted the Tundra FSRU from Golar LNG for five years, with the option to extend the deal for a further five. The vessel has a send-out capacity of 14 MMcm/d and will be moored in the port of Tema at a jetty being adapted by WAGL.

Portfolio players are supplying a greater share of the MEA's LNG, and their importance is set to grow in the coming years. Combined with a glutted global LNG market, this means more LNG from outside the region will enter the MEA. Regional LNG importers such as Kuwait, the UAE, Egypt and Jordan rely on portfolio supplies. BP and Shell dominated LNG portfolio supplies into the MEA before 2015. But last year saw increased participation from other players, such as Trafigura and Vitol.

In 2015, around 77% of MEA LNG imports were sourced from within the region and delivered by traditional and portfolio players. This compares with 80.7% in 2014. The share of LNG volumes sourced from Asia Pacific increased from 1.9% in 2014 to 6.7% last year partly as a result of shipments from Australian projects. Europe's share also increased, from 8.5% in 2014 to 9.6% in 2015, because of re-exported volumes.

Efforts by traditional suppliers such as Qatar, Nigeria and Algeria to defend their market share resulted in MEA LNG exports increasing by 1% on an annual basis in 2015, to 184.1 bcm. It is worth noting Egypt and Angola did not export any LNG in 2015, while Yemen's exports were severely curtailed. Excluding those three countries, the MEA exported 182.2 bcm of gas as LNG in 2015 – an increase of 5.3% on an annual basis.

**PRICE TRENDS**

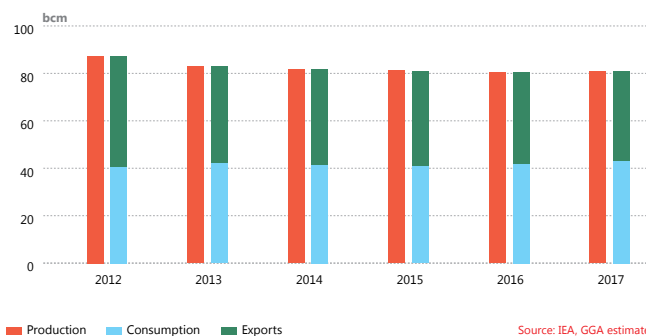
Europe remains the preferred destination for Algerian LNG cargoes despite higher netbacks from Asia and Latin America.

Weak LNG demand from Northeast Asia and Latin America, together with glutted LNG markets in the two regions, is providing a tough environment for Algerian exports. The country has several long-term supply contracts with European buyers, which means Europe remains its preferred destination. Algeria will try to increase its shipments to Europe in 2016 as it seeks to maximise export revenues.

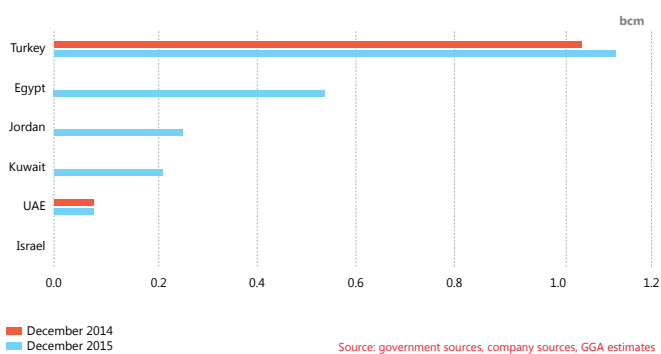
Algeria's LNG netbacks from Europe were \$5.7/MMBtu for December 2015 delivery – compared with \$6.1/MMBtu from Asia and \$6.6/MMBtu from Latin America. However, Algeria exported 1.2 bcm to Europe in December 2015 compared with 730 MMcm in December 2014 and 1.1 bcm in November 2015.

Qatar's gas and LNG export price has fallen in line with

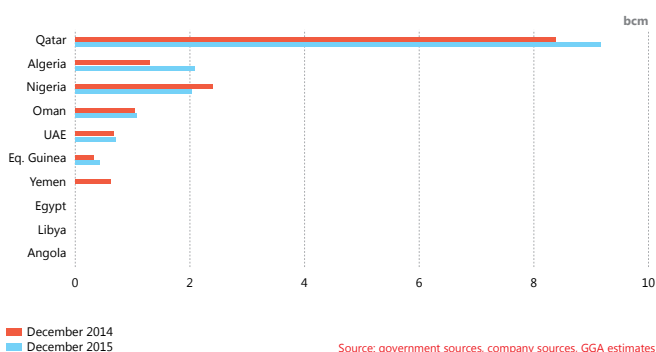
**Figure 5 Algerian gas fundamentals**



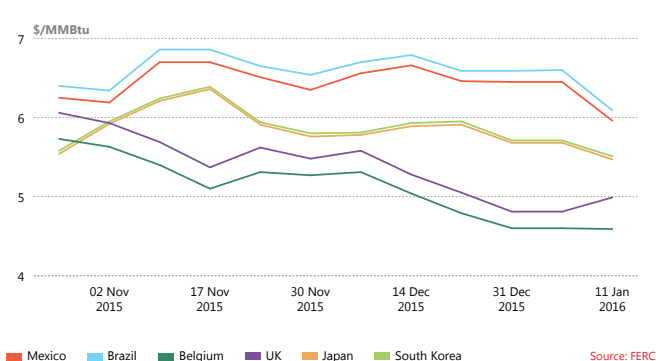
**Figure 6 Middle East & Africa LNG imports**



**Figure 7 Middle East & Africa LNG exports**



**Figure 8 LNG netback prices to Algeria**



the weak oil price, and it may fall further if crude continues to decline. Qatar's average export price for gas and LNG was around \$7/MMBtu in Q3 2015, much lower than the \$12/MMBtu seen in Q3 2014 and the \$7.3/MMBtu in Q2 2015. This is contributing towards the decline in country's export revenue.



# Americas

Phil Whitehouse/flickr

## Highlights

- Brazil, Mexico and Argentina are expected to import less LNG in 2016 compared with 2015
- Low gas prices will support gas-for-power demand in the United States and Canada this year
- Bolivia is expected to extend gas pipeline supply contracts with Brazil and Argentina beyond 2019
- A tightening of monetary policy by the US Fed would deter investment in Latin America

## MACROECONOMIC OVERVIEW

The United States Federal Reserve raised its benchmark interest rate in December 2015 – its first increase since 2006 – with further rises anticipated in 2016.

The Federal Open Market Committee (FOMC) has increased interest rates by 25 basis points, bringing Federal Fund rates to 0.25-0.50%, from 0-0.25%. The FOMC has eight meetings scheduled in 2016 and analysts expect four rate hikes this year. This tightening of monetary policy has bolstered the US dollar and reflects the Fed's belief that the US economy is strengthening. The US dollar index, which reflects the strength of the dollar against other major global currencies, has averaged 98.9 so far in January, an increase of 6.1% on an annual basis.

Latin American gas and LNG importers will end up paying more as the dollar strengthens against local currencies, and several have already reacted to the Fed's move. Brazil and Colombia had embarked on monetary tightening measures to control inflation even before the rate increase. Peru increased its interest rates just days before the Fed, while Mexico and Chile upped theirs within 24 hours of the US hike.

The strong dollar index is weighing on oil prices, constraining the revenues of regional oil exporters such as Colombia and Venezuela. The WTI crude front-month futures price dipped below \$30 per barrel in January and has averaged \$31.5/bbl for the month so far – a decline of almost 33% on an annual basis. This will harm upstream investment in Colombia and Venezuela.

## GAS CONSUMPTION

Low gas prices in the US and Canada are supporting demand in the two countries despite weak weather-related consumption.

The US and Canada consumed a total of 727.5 billion cubic metres of gas in the first 10 months of 2015, an increase of 4.7% on an annual basis. GGA expects consumption to increase by 2.6% on an annual basis in H1 2016, to 477.4 bcm.

The low Henry Hub front-month futures price has encouraged gas consumption by the US power sector. The price averaged \$2.72/MMBtu in the first 10 months of 2015, a fall of 37.6% on an annual basis. Consequently, gas-for-power demand in the US increased by 17.9% in this period year on year, to 230.6 bcm. GGA expects the power sector to consume 147 bcm of gas in H1 2016, an increase of 18.7% on an annual basis.

**Table 1** Quarterly and annual year-on-year GDP growth rates

	Q1 2015	Q2 2015	Q3 2015	2016	2017	2018
<b>US</b>	2.9%	2.7%	2.1%	*2.8%	*2.8%	*2.7%
<b>Canada</b>	2.1%	1.1%	1.2%	*1.7%	*2.4%	*2.3%
<b>Mexico</b>	2.5%	2.3%	2.6%	*2.8%	*3.1%	*3.2%
<b>Brazil</b>	-2.0%	-3.0%	-4.5%	*-1.0%	*2.3%	*2.4%
<b>Argentina</b>	2.1%	2.3%	*-0.7%	*-0.7%	*0.0%	*0.1%

Source: regional government sources. \*IMF WEO projections

**Table 2** Regional heating/cooling-related gas demand forecast in US

	Jan 2016		Feb 2016		Mar 2016	
	Degree days (F)	Gas demand (MMcm)	Degree days (F)	Gas demand (MMcm)	Degree days (F)	Gas demand (MMcm)
<b>New England</b>	1,202	2,479	1,007	1,872	885	1,885
<b>Middle Atlantic</b>	1,093	9,285	923	7,540	793	7,517
<b>East North Central</b>	1,196	11,522	990	9,422	822	8,354
<b>West North Central</b>	1,278	4,017	1,026	3,202	818	2,801
<b>South Atlantic</b>	650	8,685	511	6,653	408	6,983
<b>East South Central</b>	807	3,660	615	2,855	465	2,870
<b>West South Central</b>	591	8,192	430	6,653	314	7,674
<b>Mountain</b>	888	4,291	717	3,518	604	3,246
<b>Pacific</b>	512	5,993	409	4,688	381	4,960

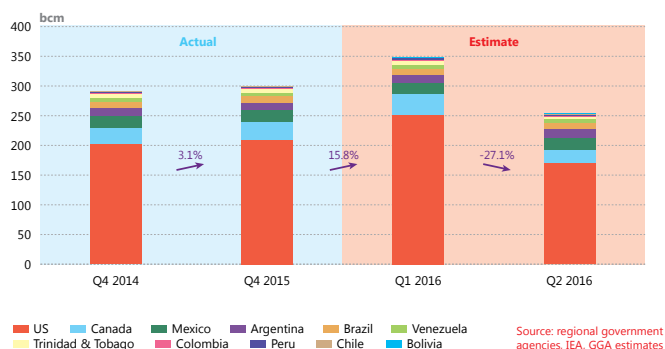
Source: EIA, GGA estimates

Weather-related gas demand in the US is expected to remain weak in the coming months as mild weather persists. The Total Degree Days (TDD) in the US is expected to average 492 F in H1 2016, a 9.6% decline on an annual basis. GGA expects weather-related gas demand in the US to fall by 10% on an annual basis.

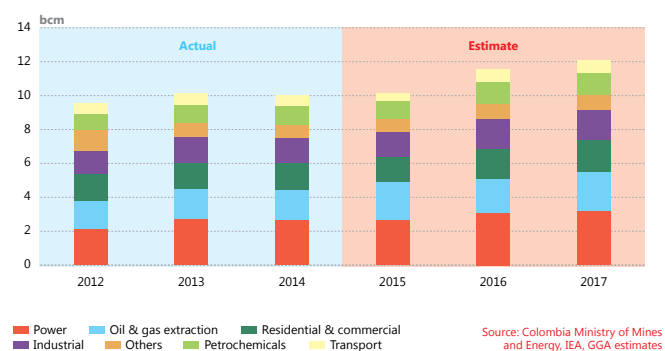
in H1 2016, to 242.1 bcm.

The weather is expected to continue to support gas demand in Latin America and the Caribbean. Total gas demand from Mexico, Argentina, Brazil, Venezuela, Trinidad & Tobago,

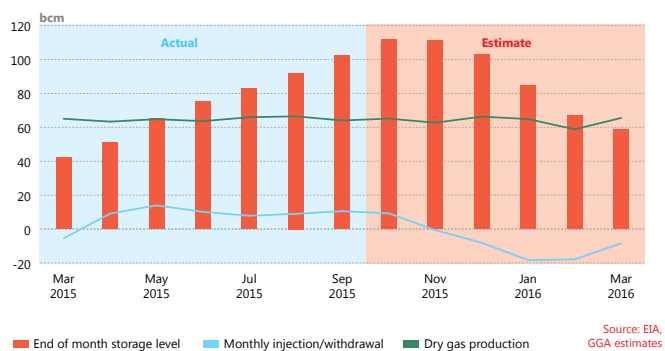
**Figure 1** Gas consumption in the Americas



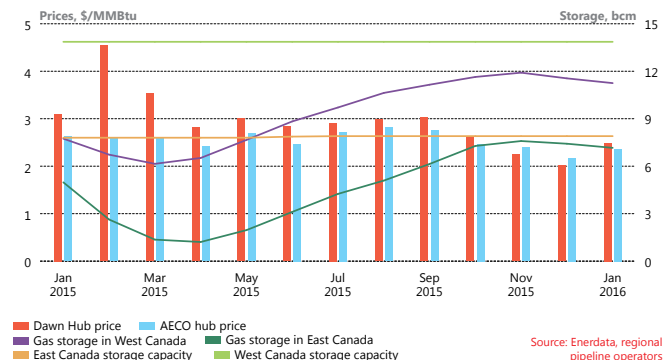
**Figure 2** Colombian gas consumption by sector



**Figure 3** US storage profile and gas production



**Figure 4** Canadian gas storage and prices



Colombia, Peru, Chile and Bolivia increased by 1% on an annual basis in the first 10 months of 2015, to 212.1 bcm. GGA expects it to rise by 1% year on year in H1 2016, to 127.4 bcm.

Northern and northeastern parts of Brazil are expected to have average rainfall in Q1 2016, but drought is likely to return in Q2 2016. There is a 70% chance of below-average rainfall in northeast Brazil in Q2 2016, coinciding with a 95% chance of above-average temperatures, which will support gas demand in the country. Total gas demand in Brazil in the first 10 months of 2015 increased by 1% on an annual basis, to 35.9 bcm. GGA expects it to rise by 2% year on year in H1 2016, to 22.2 bcm.

Colombia's gas supply crunch is expected to intensify in Q1 2016 because of drought in the country and in neighbouring Venezuela. This has also delayed planned pipeline gas exports from Venezuela to Colombia.

Venezuela has a 70% chance of below-average rainfall in Q1 2016, while Colombia has 60%. The countries are expected to have more than a 90% chance of above-average temperatures during the quarter. GGA expects the combined gas demand of Colombia and Venezuela to reach 9.6 bcm during the summer, a 2.5% increase on an annual basis.

**STORAGE**

The US and Canada have healthy levels of gas in store, which will help them to meet increased gas-for-power demand.

A late start to the gas-withdrawal season and a mild winter have left high levels of gas in storage. The US had 98.34 bcm of gas in store in the week ending 8 January 2016. This was an increase of 20.3% on an annual basis and 15.8% higher than the five-year average. Canada had 17.83 bcm of gas in store, 81.9% of capacity and a 33.4% increase on an annual basis.

The US withdrew a net 15.11 bcm of gas between the start of the current withdrawal season and the week ending 8 January, compared with 21.42 bcm during the same period in the 2014-2015 withdrawal season. Meanwhile, the drawdown on Canadian stocks was 1.79 bcm compared with 4.08 bcm last season. GGA expects the US to have 58.5 bcm of gas in storage by the end of the 2015-2016 withdrawal season compared with 41.97 bcm at the end of the last withdrawal season.

**GAS PRODUCTION**

Persistently low oil and gas prices in the US and Canada could trigger supply tightness in the second half of 2016.

Low oil prices are already discouraging investment in the once-lucrative US shale acreages, slowing gas production growth in the country. Meanwhile, ample pipeline supplies from the US are weighing on Canadian gas production.

Combined marketed gas production from the US and Canada amounted to 778.4 bcm in the first 10 months of 2015, a 5.8% increase on an annual basis. However, the year-on-year growth rate moderated slightly from 6.6% in Q1 2015 to 4.5% in Q3 2015, partly as a result of declining oil prices. GGA expects the two countries to produce 482.2 bcm of gas in H1 2016, a rise of 4.2% on an annual basis.

Production growth is already in freefall in the Marcellus shale as it moderated from 18.9% year on year in Q1 2015 to 9.6% in Q3 2015. GGA expects the Marcellus to produce 86.6 bcm of gross gas in H1 2016 – a rise of only 4.8% on an annual basis.

The decline in gas production from Latin America and the Caribbean is expected to intensify in 2016, weighed upon by

weak oil prices and dwindling macroeconomics in the region. The combined marketed gas production of Mexico, Argentina, Brazil, Venezuela, Trinidad & Tobago, Colombia, Peru, Chile and Bolivia fell by 2.3% on an annual basis in the first 10 months of 2015, to 185.5 bcm. GGA expects it to decline by 4.3% in H1 2016 year on year, to 107 bcm.

Mexico is seeing some of the sharpest output declines in the region. Mexico's marketed gas production hit 38.6 bcm in the first 10 months of 2015 – a fall of 8.5% on an annual basis. GGA expects a year-on-year decline of 4.3% in H1 2016, to 22.3 bcm.

## TRADE

Argentina is expected to be less reliant on LNG imports in 2016 because of increasing domestic gas production, mild weather and subsidy reforms by the new government.

Argentina imported 5.3 bcm of gas as LNG in 2015, a 13.1% decline on an annual basis. It joined Brazil and Mexico in 2015 to see a fall in LNG imports. The country's new government is planning to implement subsidy reform measures that will reduce gas demand. GGA expects Argentina's LNG demand to decline by 4.5% on an annual basis in 2016, to 5.1 bcm (see *Reforms will curb LNG's future in Argentina*, January 2016).

Latin America's LNG demand prospects for 2016 are looking weak. Brazil, Mexico and Argentina – the region's three biggest consumers – are importing less LNG. Rising gas production has lowered Brazil's LNG needs, while cheaply available pipeline gas from the US is dampening Mexican LNG demand.

Latin American countries imported 26.6 bcm of gas as LNG in 2015, a 8% drop on an annual basis. Mexico's LNG imports fell by 23.1% year on year, while Brazil's dropped by 5.4%. GGA expects the combined LNG imports of Mexico, Brazil, Argentina, Chile, Puerto Rico and the Dominican Republic will fall by 3.9% on an annual basis in 2016, to 27.2 bcm.

Low oil prices will also hinder LNG exports from Trinidad & Tobago and Peru in 2016. The countries' weak economies, together with low oil prices, are already dampening upstream investment. The combined marketed gas production of Peru and Trinidad declined by 5.5% on an annual basis in the first 10 months of 2015, to 43.3 bcm. GGA expects it to fall by 2.8% on an annual basis in H1 2016, to 21.2 bcm.

Trinidad and Peru exported 22.1 bcm of gas as LNG in 2015, a 6.4% fall on an annual basis. GGA expects exports to decline by 3.2% on an annual basis in H1 2016, to 13.2 bcm.

The maiden LNG export cargo from the US Sabine Pass LNG plant is expected in late February or early March. The delivery was initially planned for late January, but it was delayed because of instrumentation issues found during the final phases of plant commissioning and cooldown. However, Train 1 is still ahead of the schedule guaranteed in Bechtel's contract.

Sabine Pass is one of the five LNG plants being built on the Atlantic coast of the US – the other four being Freeport LNG, Cameron LNG, Dominion Cove Point and Corpus Christi. They will add a combined 80 mtpa of LNG export capacity by 2020.

## PRICE OVERVIEW

Low weather-related gas demand will limit the upside in the Henry Hub front-month futures price during H1 2016.

Spot gas prices in the US and Canada are expected to remain weak in the coming months, weighed on by healthy gas storage levels. Also, spot LNG prices in Latin America are likely to remain

Figure 5 Gas production in the Americas

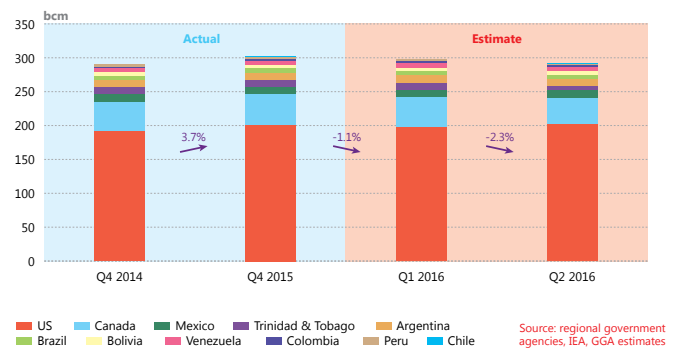


Figure 6 US gas production profile from shale plays

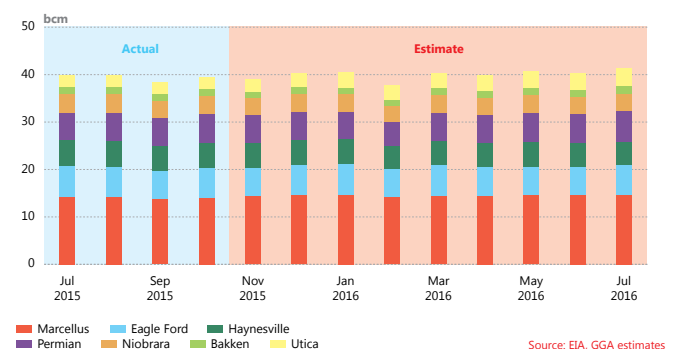


Figure 7 LNG imports - Americas

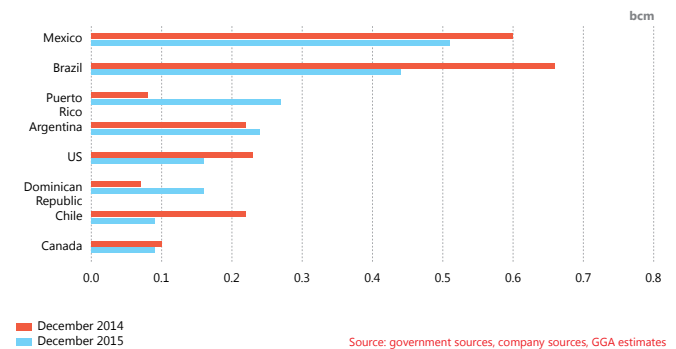
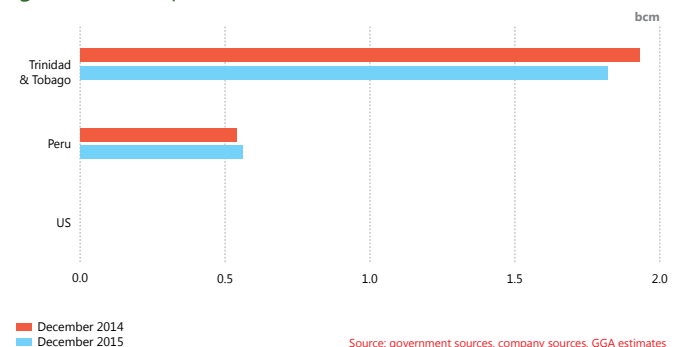


Figure 8 LNG exports - Americas



below \$10/MMBtu in H1 2016 due to weak regional demand.

## FORWARD AND FUTURES MARKETS

The Henry Hub front-month futures price will struggle to move above \$3/MMBtu before the 2016-2017 gas-withdrawal season

despite increased gas-for-power demand.

The US and Canada are expected to end the current gas-withdrawal season with healthy stocks compared with the previous withdrawal season. The onset of 2016 gas-injection season in April will also limit gains in the front-month price.

Mild weather has forced the front-month price to trade in a narrow range of \$2.04-2.50/MMBtu so far in January. This compares with \$2.64-3.35/MMBtu in January 2015 – almost 1.5 times as wide as the current range. The price has averaged \$2.25/MMBtu so far this month, a 10.3% gain compared with December 2015. However, it is still a year-on-year fall of 23.2%.

Greater nuclear power plant outages in the US in January have provided only limited support to the front-month price. The nuclear outage level has averaged 3.9 GW so far in January compared with 2 GW in January 2015.

### SPOT, WHOLESALE AND RETAIL MARKETS

The Transco Z6 price in New York is showing increased volatility so far this winter, although the volatility is less severe than the last couple of years.

The Transco price has averaged \$4.16/MMBtu so far in January compared with \$2.39/MMBtu for the Henry Hub spot. The Transco price reached \$6.66/MMBtu on 12 January, highlighting the region's vulnerability to cold weather. The price traded between \$1.73/MMBtu and \$35.37/MMBtu last winter (December 2014-February 2015).

A gas leak from a storage facility in the Los Angeles suburb of Port Ranch, ongoing since October 2015, has had only a limited impact on the SoCal Border spot gas price, which has traded in tandem with the Henry Hub spot.

Healthy storage levels are expected to keep the East-West gas spread in Canada (the difference between Dawn Hub and AECO hub prices) tight during the winter. The spread has averaged \$0.1/MMBtu so far in January 2016, compared with \$0.48/MMBtu in January 2015.

### LNG AND IMPORT PRICES

Weakening demand for LNG from Brazil, Mexico and Argentina will keep spot LNG prices below \$10/MMBtu during H1 2016.

The spot LNG price for February delivery in Latin America has averaged \$7.0/MMBtu so far this month. This is below the January average of \$7.3/MMBtu and the average delivered price of \$9.4/MMBtu for February 2015.

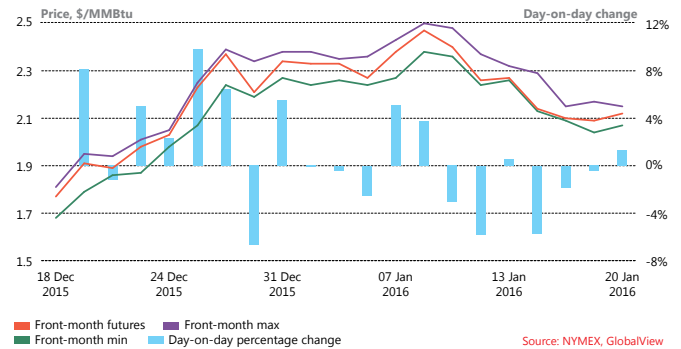
Bolivia is negotiating with Brazil and Argentina on pipeline gas contracts that are due to expire in 2019. GGA expects the contracts to be extended without any significant modifications. Bolivian gas export prices to the two countries are linked to fuel oil prices and are currently cheaper than the prices paid by Brazil and Argentina for spot LNG. Brazil paid an average of \$4.46/MMBtu for Bolivian gas in Q4 2015 while Argentina paid \$4.99/MMBtu. This compares with an average spot LNG price of \$7.2/MMBtu during the period.

**Table 4** Interfax Americas gas forecasts

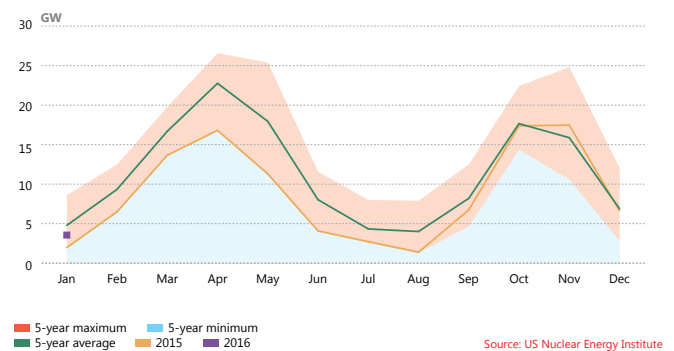
Commodity	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017
Henry Hub, \$/MMBtu	2.0	2.4	2.5	2.4	2.4	2.4	2.5	2.9	3.2	3.8
LNG Export Parity, \$/MMBtu	5.5	5.9	6.0	5.9	5.9	5.9	6.0	6.4	6.7	7.3

\*Interfax indices and forecasts are for information purposes only. For details of methodology and legal disclaimer, see page 6 of *Global Gas Analytics*

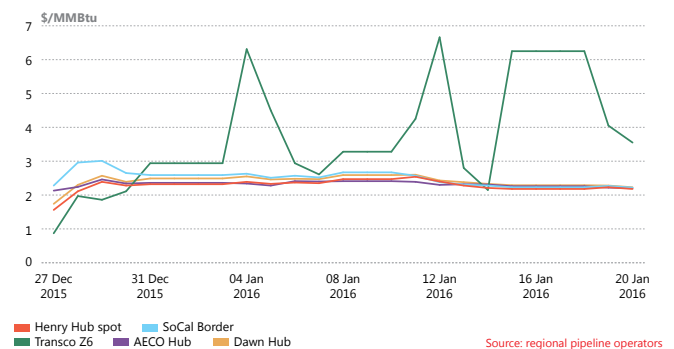
**Figure 9** Henry Hub front-month futures dynamics



**Figure 10** US nuclear power plant outages



**Figure 11** Selected North American spot gas prices



**Table 3** LNG landed price in Americas (\$/MMBtu)

Terminal	Jan 2016	Dec 2015	Jan 2015
Cove Point USA	5.2	4.9	7.9
Lake Charles USA	2.0	2.1	3.3
Canaport Canada	6.0	6.4	15.9
Manzanillo Mexico	7.8	7.9	10.7
Rio de Janeiro Brazil	7.2	7.2	9.2
Bahia Blanca Argentina	7.2	7.2	9.6

Source: US FERC





Press Association

## TAPI – life in the line?

Construction on the long-delayed Turkmenistan-Afghanistan-Pakistan-India pipeline has begun. But some of the drivers of progress could support more than TAPI. **By Catriona Scott**

THE Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline passed an important milestone in December. It was officially inaugurated when construction on the Turkmenistan section started. Turkmen President Gurbanguly Berdimukhammedov, attended the pipeline's ground breaking ceremony with Afghan President Ashraf Ghani, Pakistan's Prime Minister Nawaz Sharif and India's Vice President Hamid Ansari. Although the successful completion of the pipeline is far from secured, the event was a crucial step in the right direction.

The TAPI pipeline has been planned, negotiated and delayed for decades. The 33 billion cubic metre, 1,800 km pipeline would bring benefits to the four countries involved – but political, security and financial issues have made material progress difficult. Although development is unlikely to be quick, a path could be emerging. The need for new energy connections in the region is strong and the progress on TAPI is reflective of this. The Indian and Pakistani gas markets are supply-short and momentum for bringing forward options for gas imports is increasing. LNG supplies are ramping up in both markets, and piped supplies - from Turkmenistan and Iran - are being pursued.

Supply for the TAPI line will be sourced from the massive Galkynysh gas field in southern Turkmenistan, which has estimated reserves in the region of 14 trillion cubic metres. A relatively short 200 km section will take the gas to Afghanistan. The line is then planned to go through Herat and Kandahar in Afghanistan before passing through Quetta and Multan in Pakistan. The line will then extend to Fazilka in India, near the Pakistan/India border. So far only construction on the Turkmenistan section has officially started.

TAPI would provide Turkmenistan with access to new markets in addition to new revenues. Turkmenistan was estimated to have had around 17.5 tcm of proven gas reserves at the end

of 2014, making it the fourth-largest gas reserve holder in the world. The majority of its production is exported. The country started exporting gas to China in late 2009. Not only was access to China important from a commercial perspective, it also marked a significant break from dependence on flows to Russia. Volumes of exports to Russia have fallen since 2009 and at the start of this year, Russia actually stopped buying gas from Turkmenistan. If the TAPI line does not go forward, Turkmenistan will lose out on access to crucial new markets.

Pakistan and India will be the main recipients of gas from TAPI. The two countries are expected to receive approximately 84% of the supply, amounting to 14 bcm/y each. This will be a significant increase in imports to both markets, particularly Pakistan.

Pakistan and India have had the expansion of their gas markets constrained by a lack of supply. Although India has been importing LNG for years, the relatively high price of it compared with domestic gas has limited use. Last year, the country took advantage of lower spot LNG prices and took more cargoes. However, faltering domestic production has continued to limit market expansion. Pakistan started importing LNG in 2015, albeit on a relatively small scale. Although the country plans to expand its LNG import capacity, it will also take pipeline imports to provide the volume of gas the country needs to achieve government targets for market expansion.

In addition to potential piped supply from Turkmenistan, an import line from Iran to Pakistan and India has also been proposed. Although this line has seemed unlikely to go ahead, with the lifting of most sanctions on Iran, the environment for investment in the country is changing. The proposed line would stretch approximately 2,700 km and deliver gas within Iran as well as to Pakistan and India. While imports via one pipeline could be critical, it is unlikely that both TAPI and the line from

Figure 1 Proposed TAPI pipeline



Iran would be needed in the mid-term. If the line from Iran looks more likely to progress, the pressure for those backing TAPI to push developments forward will mount.

Afghanistan would receive around 16% of the gas from the TAPI line – which would provide a significant boost to its existing energy supplies. Transit fees could also provide significant benefits to the country.

Despite the advantage TAPI would bring to all four countries involved and the support it has from other nations – including the United States – progress has been stalled by political, security and financial issues. Completion of the line by the proposed start date of 2019 is likely to prove very challenging.

In addition to the multiple complex security and political challenges in the region there is the question of cost. Financing for the \$10 billion TAPI project is far from final. The project leader is Turkmengaz, which together with Afghan Gas Enterprise, Pakistan’s Inter State Gas Systems and India’s Gail forms the consortium behind the TAPI Pipeline Company. The shareholders agreement was signed at the end of October 2015 – another step forward for the project. But neither Turkmengaz nor the other companies involved have the funds to pay for the line.

The Asian Development Bank has been made the transaction adviser to the project. Funds for the project have yet to be obtained and are likely to take time to secure. Equity and debt financing from multilateral, regional and/or development agencies as well as commercial financial institutions will be sought.

Although political relations between India and Pakistan remain complicated and are plagued by eruptions of violence and mistrust, positive steps have been taken. At the end of December, Indian Prime Minister Narendra Modi made a surprise visit to Pakistan to meet Sharif. Although the meeting

was brief – lasting just a couple of hours – it was still significant. It was the first time an Indian prime minister had visited Pakistan in more than 10 years. Security and territorial issues – including those over Kashmir and relations with Afghanistan – remain, but the prospect of relations being strong enough to support TAPI is improving. The pipeline would be a positive regional connector - physically and politically.

Security issues in Afghanistan and Pakistan present greater challenges, however, and are likely to take more time to resolve – or at least resolve to an extent which will allow the pipeline to be built. In Afghanistan, instability caused by fighting between Afghan forces, the Taliban and other militant groups makes the construction of a pipeline through the country improbable. However, even here the challenges are potentially not insurmountable. The Taliban showed some support for the line when they were in power. Negotiations may be possible.

Pakistan’s defence minister has pledged to hold talks with the Taliban to agree support for the line. Doing so would not only reduce security risks, it could also support better relations between Pakistan and Afghanistan. Pakistan’s perceived support for the Taliban is one cause of tension between Islamabad and Kabul. Even if a deal with the Taliban can be done, however, Pakistan’s own security issues will also need to be resolved, including those in Balochistan.

The future of the TAPI pipeline is uncertain and the challenges it faces are significant. However, the benefits it would bring are driving its development forward and improving its prospects. India and Pakistan need more gas, and are expected to continue to work to develop pipeline import options from Turkmenistan and Iran. While India and Pakistan may have other options, for Turkmenistan and Afghanistan, the benefits TAPI could provide are unlikely to be found elsewhere. It may not be commissioned this decade, but the need for TAPI could see the project realised.



Press Association

## Reforms will curb LNG's future in Argentina

Structural reforms by the Argentine government will curb energy subsidies and boost domestic gas production, reducing the country's reliance on imported LNG. **By Abhishek Kumar**

ARGENTINA'S new government has introduced market reforms to encourage upstream investment and domestic gas production, a move applauded by financial markets. However, the measures will dent the country's reliance on imported gas and LNG in the coming years.

Centre-right candidate Mauricio Macri was elected as Argentina's president in November 2015, narrowly beating the centre-left contender Daniel Scioli and ending a succession of Peronist presidents that had lasted for more than a decade.

Macri's policies will also support gas production from shale acreages such as Vaca Muerta in the Neuquén Basin. Ill-conceived government policies in previous years have taken their toll on Argentine gas production, even though the country has some of the most prospective oil and gas fields in the Americas. Argentina's marketed gas production fell by an average rate of 2.1% per year between 2005 and 2014, which is partly the reason why it relies on imported gas and LNG.

Argentina was the third-largest importer of LNG in Latin America last year after Brazil and Mexico, and like them its LNG imports were down last year on an annual basis. Argentina imported 5.3 billion cubic metres of gas as LNG in 2015, a decline of 13.1% year on year. Argentina also imports pipeline gas from Bolivia, volumes which remained unchanged at 6 bcm in 2015 compared with 2014.

The rise in Argentina's LNG imports was driven by high gas-for-power demand. But the new government wants to cut energy subsidies, which will reduce Argentina's dependence on imported gas and LNG. The country's new energy minister, Juan José Aranguren – a former Shell executive – plans to gradually increase electricity tariffs, which have been frozen in key consuming regions for more than a decade. He considers subsidising energy “a crime” in an energy-importing country such as Argentina. Argentina's gas-for-power demand rose by

7.1% on an annual basis in 2015, to 18 bcm. *GGA* expects it to fall by more than 4% in 2016 as subsidy reforms are introduced.

*GGA* expects Argentina's marketed gas production will rise by 3% on an annual basis this year, to 40.9 bcm, and by 7% in 2017 compared with 2015. Meanwhile, domestic demand is expected to increase by 2.9% in 2017 from 2015, to 52.7 bcm. This will dampen the country's LNG demand, which is expected to fall by 10% over the same period, to 4.8 bcm.

### FOREX REFORMS TO HIT LNG IMPORTS

Macri's pivotal policy so far has been to dismantle the country's capital controls. His predecessor Cristina Fernández de Kirchner introduced capital controls to prevent Argentina's United States dollar reserves from flowing out of the country. However, the move created a currency black market and discouraged dollar investment from flowing in.

Experts consider Macri's election to be a swing towards free markets. He vehemently opposes capital controls, supports the independence of the country's central bank, and wants to settle a debt dispute with Argentina's creditors. These policies will encourage foreign investment to flow back into the country.

Within days of assuming office, Macri allowed the Argentine peso to float in the market in mid-December, thereby ending capital controls. However, this also devalued the currency, making energy imports more expensive. The dollar had strengthened by 32% against the peso by the end of December, and by the same amount for the month as a whole compared with December 2014. The devalued peso will substantially negate the benefits Argentina has recently enjoyed as a result of low global LNG prices.

The foreign exchange reforms are harming Argentina's imports of LNG and pipeline gas. However, the country's Bolivian gas imports are still more competitive than LNG, a trend expected to continue in 2016. The price Argentina pays



for Bolivian gas is linked to fuel oil, and the low crude price is weighing on the fuel oil price. Argentina paid \$4.99/MMBtu for Bolivian gas in Q4 2015 – much less than the \$7.2/MMBtu it paid for imported spot LNG.

Bolivia and Argentina have started renegotiating their sales and purchase agreement, which is due to expire in 2019. Argentina can take 5.3-6.5 bcm/y of Bolivian gas under the current agreement, and GGA understands the contract will be extended without any substantial changes.

Argentine LNG imports are expected to slow down further in 2016. Like Brazil, Argentina buys cargoes on the spot market by issuing short-term import tenders. The country imported only 0.6 bcm of gas as LNG in Q4 2015, a decline of 40% on an annual basis. GGA expects Argentina's LNG demand to decline by 4.5% on an annual basis in 2016, to 5.1 bcm.

**LONG-TERM REFORMS DAMPEN LNG PROSPECTS**

The new government is adamant its structural reforms will have a long-term impact on Argentina's LNG demand, with rebuilding investor confidence one of its priorities. The government is keen to initiate talks with bondholders that will settle its sovereign debt dispute. It wants the dispute settled by mid-2016, which is an ambitious target.

The positive signals from Buenos Aires are building confidence among investors. Sovereign bond yield reflects the riskiness of debt issued by a government – the higher the yield, the riskier the debt. The average yield on Argentina's 10-year sovereign bond was down from 7.34% in October to 1.83% in December – making it the only Latin American country with a yield lower than the corresponding US bond of 2.23%.

Low bond yields will attract foreign investment to Argentina. And they will also help the government and local oil and gas companies to raise much-needed cash that can be invested in the hydrocarbon sector.

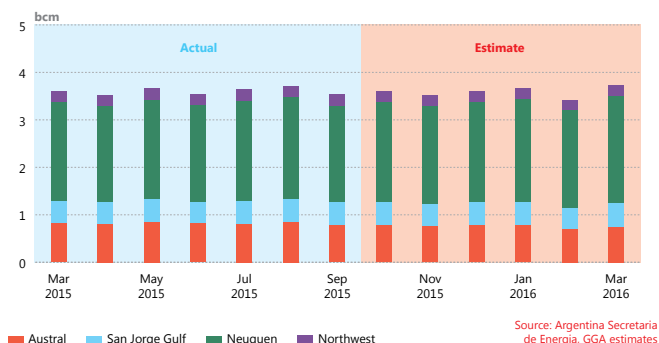
Argentina's government is also considering upstream reforms. The previous administration subsidised producers to maintain wellhead prices at up to \$80 per barrel for crude and \$7.50/MMBtu for new gas production. However, the new government wants to gradually lower wellhead prices in consultation with oil companies and oil-producing provinces.

In place of subsidies, the government is working on a bill to encourage the exploration and production of offshore and unconventional resources. It also plans to make changes to the hydrocarbon law by decentralising decision-making powers from Buenos Aires to the provinces. The government has ended its control over the transmission operator Transportadora de Gas de Norte, which transports gas across the centre and north of the country as well as to Brazil, Chile and Uruguay.

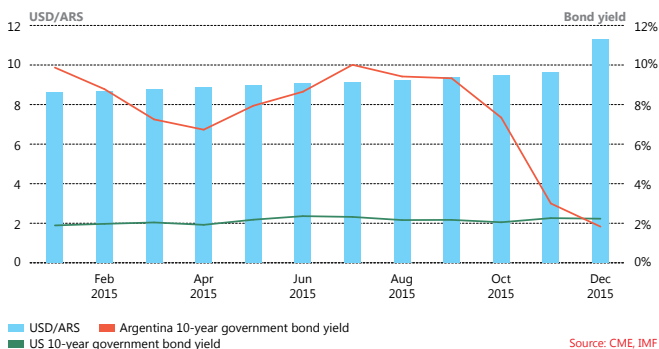
IOCs are already showing new interest in Argentina. In December, the government of Neuquén province approved ExxonMobil's investment plan to develop shale resources in the Bajo el Choique and La Invernada blocks. The project will involve drilling five horizontal wells in the Vaca Muerta play. In the same month, state-controlled YPF entered into a \$500 million joint venture with Dow Chemical to produce gas from Vaca Muerta's El Orejano field in 2016. Production from the field is expected to reach 2 million cubic metres per day by the end of this year. Meanwhile, Wintershall has increased its interest in Vaca Muerta's Aguada Federal block from 50% to 90%.

Production from the Neuquén Basin will boost Argentina's

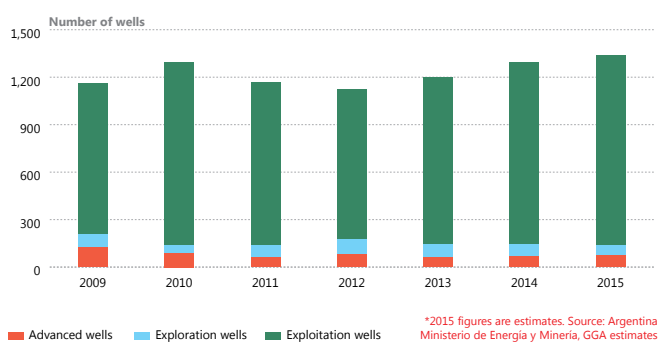
**Figure 1 Argentine gas production by basin**



**Figure 2 Argentina bond yield and currency**



**Figure 3 Completed oil and gas wells in Argentina**



overall gas output during 2016 and beyond. GGA estimates production from the basin increased by 5.6% on an annual basis in 2015, to 24.6 bcm, and will rise by 8.2% this year. The basin accounted for 57.6% of Argentina's gas production last year.

The increased activity in Argentine shale plays is driving up the number of completed wells. The number of completed advanced, exploration and exploitation wells in Argentina last year is expected to have topped 1,200 – the highest level since 2009. Upstream operators drilled an average of 29 non-conventional wells per month in the first nine months of 2015, compared with 24 per month during the same period in 2014.

This means the outlook for LNG demand in Argentina is bleak. The government's forex reforms will make imports of the fuel expensive in the short term. Meanwhile, the longer-term structural reforms will boost domestic gas production and further reduce the country's reliance on imported fuel. Also, electricity subsidy reforms will dampen gas-for-power demand, which will reduce the need to import LNG.



# In Focus: LNG trade flows

Gate LNG



The Middle East and Africa region's LNG imports are expected to see double-digit growth in 2016, resulting in the growing popularity of floating LNG import solutions and increased participation by portfolio players. **By Abhishek Kumar**

## MIDDLE EAST AND AFRICAN CONSUMERS DESIRE MORE LNG

- Demand for gas is growing faster than production in the Middle East and Africa. Combined with low oil and LNG prices, this will maintain the region's dependence on LNG imports in 2016 and beyond.
- LNG flows into the MEA from other regions are rising as portfolio players consolidate their positions, increasing competition for regional suppliers. Supplies from other regions accounted for 23.1% of the MEA's LNG imports in 2015, compared with 19.3% in 2014.
- Egypt and Jordan installed FSRUs in 2015 – joining the ranks of Turkey, Kuwait, the UAE, and Israel as LNG importers. The region imported 21.4 billion cubic metres of gas as LNG last year, which was an increase of 62.1% on an annual basis.
- Egypt and Ghana plan to install an FSRU each in H1 2016 and Q2 2016 respectively. Other countries in the region – such as Ivory Coast, Benin, Namibia, Lebanon, Bahrain, Senegal and Kenya – are also looking at importing LNG in the coming years, although not all such projects will go ahead. GGA expects the MEA's LNG imports to increase by 26.2% between 2015 and 2017, to 27 bcm.

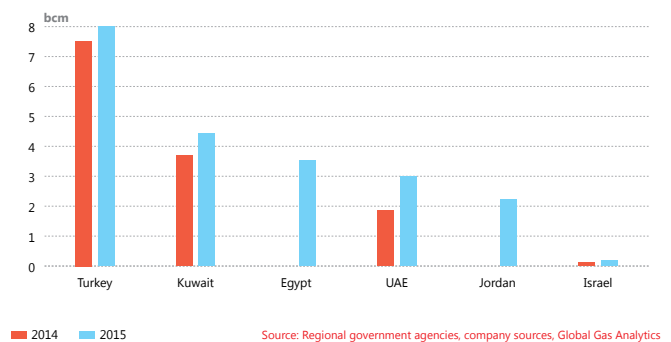
## TURKEY

- Turkey was the largest LNG consumer in the MEA last year despite weak weather-related gas demand. The country's LNG imports rose by 6.7% on an annual basis in 2015 – to 8 bcm. The competitive price of LNG compared with pipeline gas and supply disruptions from Iran and Azerbaijan contributed to the result.
- Algeria and Nigeria remained Turkey's main LNG suppliers in 2015 as they have long-term supply contracts. Qatar also sent volumes to Turkey last year under a one-year contract signed in 2014. Qatar sees Turkey as a potential market for further volumes in the coming years, and the two countries signed a memorandum of understanding for LNG trade in December 2015.
- While the MEA provided a greater share of Turkey's LNG in 2015 compared with 2014, the share of other regions declined.

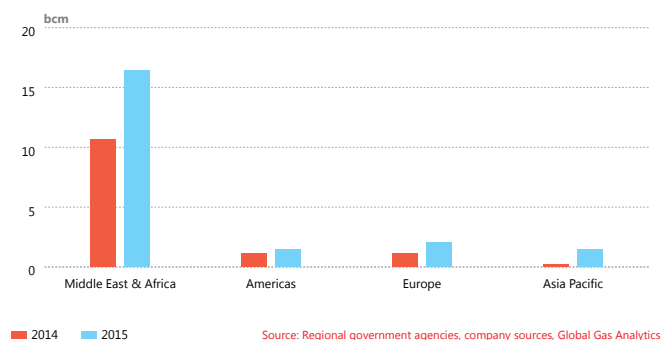
## KUWAIT

- Kuwait sees its reliance on imported LNG increasing in the

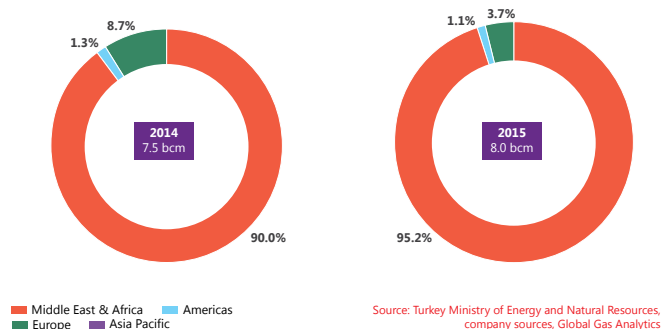
**Figure 1** Middle East and Africa LNG imports



**Figure 2** Middle East and Africa LNG imports by region



**Figure 3** Turkish LNG imports



coming years. The country imports LNG using an FSRU at Mina al-Ahmadi. The lease on the vessel expires in 2019, but Kuwait is working towards extending it.

- Kuwait has negotiated the lease on the FSRU to import LNG throughout the year. It previously only covered the period between March and November. In 2015, the Kuwait imported LNG in December for the first time. Kuwait's LNG imports increased by 18.9% on an annual basis in 2015 – to 4.4 bcm.
- Portfolio players such as BP and Shell dominate LNG supplies to Kuwait. The country signed five-year LNG supply contracts with the two companies in 2014, and it also has a short-term contract with Qatar.
- Kuwait's LNG volumes come mainly from the MEA. However, in 2015 portfolio players sourced some cargoes from Australia, and more Australian volumes are expected in 2016.

**EGYPT**

- Egypt is set to become the largest LNG importer in the MEA once it installs its third FSRU in 2016. Growing gas-for-power demand in Egypt, together with declining production, made the country an LNG importer in 2015.
- Egypt imported 3.5 bcm of gas as LNG last year, making it the third-largest LNG importer in the MEA after Turkey and Kuwait. Its reliance on LNG imports is set to continue until 2020, beyond which domestic output will make Egypt self-sufficient in gas.
- Egypt's LNG imports are dominated by portfolio players – BP, Shell, Trafigura, Vitol, and Noble Group – and they are expected to supply LNG to the third FSRU as well.

**UNITED ARAB EMIRATES**

- The UAE is an exporter and importer of LNG. Abu Dhabi exports LNG, while Dubai imports it. Dubai imported 3 bcm of gas as LNG in 2015 – an increase of 66.7% on an annual basis.
- Dubai has a 15-year LNG sales-and-purchase agreement with Shell, but the country also issues shorter-term LNG import tenders. Dubai Supply Authority issued tenders in October and November 2015 for incremental LNG volumes in 2016 and 2017. Portfolio players are expected to supply these volumes.
- The proportion of LNG entering Dubai from Asia Pacific, Europe and the Americas increased sharply in 2015. This was after Shell delivered LNG from its portfolios in Australia and Trinidad & Tobago as well as re-exports from Europe. The trend is expected to continue in 2016.

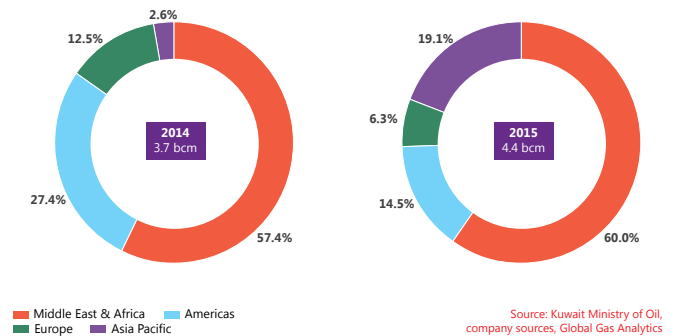
**JORDAN**

- Jordan started importing LNG in May 2015 using an FSRU at the port of Aqaba, and it is expected to be a key regional LNG importer in the coming years.
- Jordan signed a five-year LNG import contract with Shell last year. LNG intended for Egypt was also delivered to Aqaba, with the regasified gas sent to Egypt via the Arab Gas Pipeline.

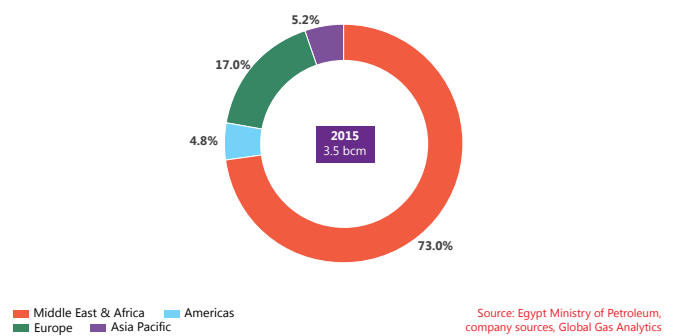
**ISRAEL**

- Israel imports LNG using the FSRU at Hadera during peak demand periods. Israeli LNG imports are not expected to increase substantially in the coming years.

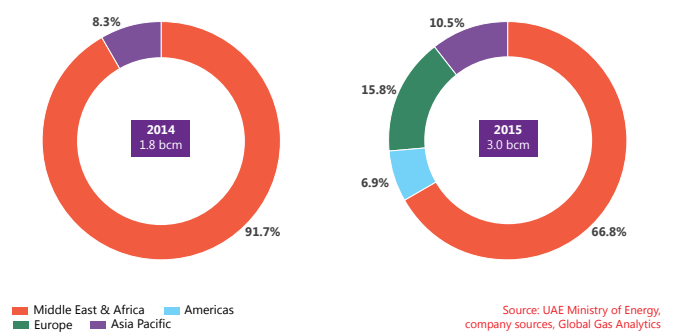
**Figure 4** Kuwaiti LNG imports



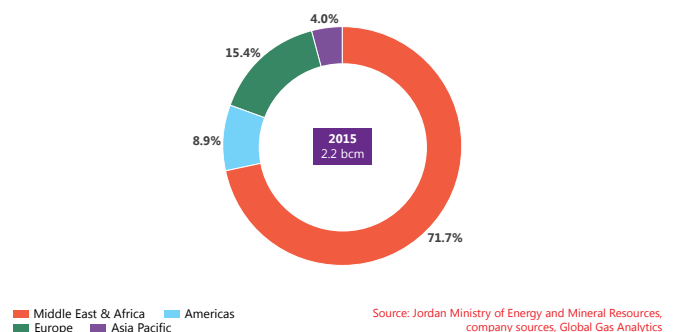
**Figure 5** Egyptian LNG imports



**Figure 6** UAE LNG imports



**Figure 7** Jordanian LNG imports



# Regulation

European Union



## Shale gets a boost in the UK

The UK's Oil & Gas Authority awarded new onshore licences at the end of last year, around three-quarters of which are for shale oil or gas. However, the licences do not allow exploration, meaning the winning companies will have to obtain environmental and planning approval before they start drilling. The government had previously approved fracking for shale gas 1,200 metres below national parks and other protected sites. This was seen as a U-turn in policy and criticised by environmental groups. Although the measure will support the shale industry, it is already facing opposition in the form of a potential legal challenge, and the public is strongly against fracking. Ineos, IGas, Southwestern Energy and Cuadrilla won the most licences, with Third Energy among the other winners.

## New York to end coal-fired generation

New York state is set to close its four coal-fired power plants by 2020, Governor Andrew Cuomo announced earlier this month. A new Clean Energy Fund worth \$5 billion will help New York move to cleaner energy, with the focus on renewables. Two of the coal-fired power plants will either be closed this year or converted to gas-fired generation. Environmentalists have been opposing planned gas pipelines that would cross the state and are keen to see promises followed through on increased renewables generation. Only two states in the United States – Vermont and Rhode Island – have phased out coal-fired generation so far. Many states rely heavily on coal, meaning similar moves will be unlikely in many parts of the US. However, emission reduction targets from the Clean Power Plan require all US states to move away from more polluting forms of power generation. So, although coal-fired generation will not be removed from the mix entirely, it will be reduced on a national basis.

## Canadian LNG projects move forward

LNG Canada, a proposed LNG plant in British Columbia (BC), has received its export licence from the National Energy Board and obtained its facility permit from the BC Oil and Gas Commission. Although the project has yet to take an FID and needs further approvals, these are important milestones. Shell holds a 50% stake in LNG Canada, with China National Petroleum Corp. and Mitsubishi owning 20% and 15% respectively. Kogas owns 15%, but is planning to sell its stake. Although export projects starting up in the next few years will enter a loose market, the supply/demand balance could be more attractive after 2020. Construction of the first phase of LNG Canada will take around five years to complete, meaning it will not start up before the end of the decade.

## Argentina's energy subsidies set for change

Expensive energy subsidies in Argentina are not benefiting the country's poorest citizens. According to new research, the subsidies are not working as intended, with the bottom income groups receiving just a fifth of the gas sector handouts. Energy sector subsidies account for roughly 72% of total government subsidies, and they cost around 3% of GDP in 2014. However, the government is wary of removing them in case this pushes the country back into recession. Nevertheless, energy subsidy reform now looks likely, although uncertainties remain around the pace of implementation. Some reports have claimed subsidies could be cut in Buenos Aires as soon as February, but this has not been confirmed. The global drop in oil prices helped keep down the cost of energy subsidies last year and will continue to do so this year.

## Gas price hike in Pakistan

The government of Pakistan has lifted gas prices in the country. The average price for gas from Sui Northern Gas Pipelines was increased at the start of the year from PKR 403.14/MMBtu to PKR 510.95/MMBtu. Pakistan relied on domestic gas supplies until the country started importing LNG last year. Power cuts caused by gas shortages are a frequent problem, and increasing supply will be key to expanding the country's price-sensitive gas market. Pakistan intends to increase LNG imports and has plans to potentially import piped gas from Turkmenistan and Iran. Domestic price increases could help the market balance the cost of imports.

## UK retailer drops gas price

E.On, one of the UK's big six energy suppliers, has announced a 5.1% drop in its standard residential price of gas. The typical annual savings for residential customers following the cut is estimated to be £32. E.On is the first of the big six to drop its gas price, and others may now follow suit as pressure grows to pass savings in gas prices on to customers. The government has criticised the lack of movement in retail gas prices following the drop in wholesale gas prices. Ofgem, the industry regulator, has also questioned why the decline in wholesale gas prices has not been matched by a drop in prices for consumers. Consumer groups are calling for further reductions in retail gas prices. They argue that the substantial drop in wholesale prices warrants a greater cut to retail prices. However, E.On has defended the level of the price cut. With NBP prices expected to stay low over the coming months, further savings for customers could be seen.



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