

Natural Gas Market Update – May 2014



Key Points:

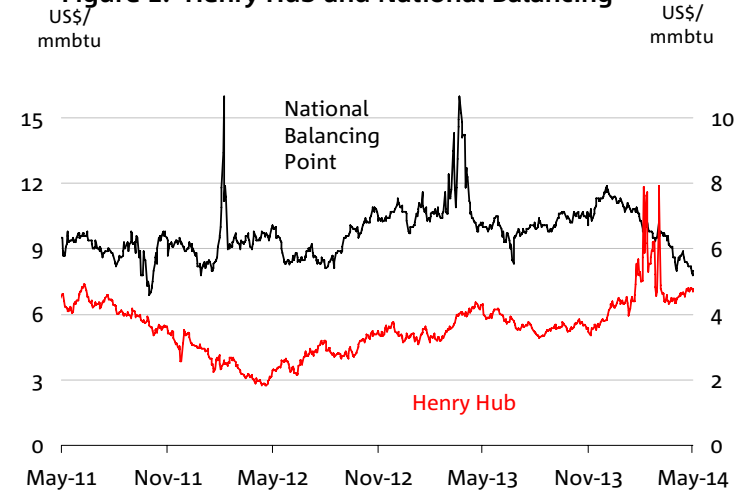
- *In the past month, US natural gas prices moderated slightly on milder weather, but remained around 13% more than the same time last year on extremely low inventories.*
- *In contrast, the slide in European gas prices continued in May on low heating demand on the back of a streak of warmer than usual temperatures, following the mildest winter in seven years which left the region's inventories more than half full.*
- *Russia's Gazprom has finally signed a landmark gas supply deal with China on 21 May, after a Memorandum of Understanding was struck in 2006. The deal would see the company supply 38 billion cubic metres of gas to China annually for 30 years, reported to be worth around US\$400 billion. This will lessen the pressure of US and EU sanctions on the energy-reliant nation.*
- *Ukraine and Russia continued to be locked in disputes over gas price negotiations. Ongoing geopolitical tensions between the two countries suggests that a cut in gas supplies by Russia is still a possibility, albeit minute, but a comfortable supply side should help to allay any fears of an immediate supply shock.*
- *US natural gas production continued to proceed at record pace, and traction is also building on the exports front as a legislation is passed to limit the length of review time by the Department of Energy for LNG export applications to 90 days.*



Recent Price Movements:

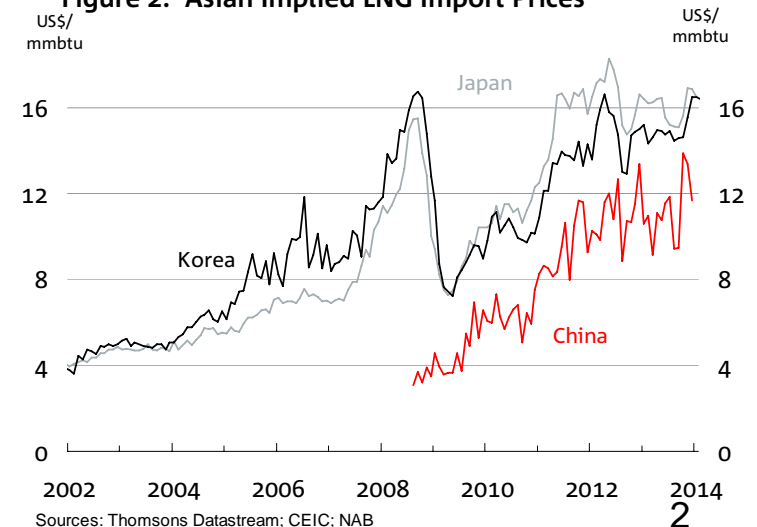
- In the past month, US natural gas prices moderated slightly on milder weather, but remained around 13% more than the same time last year on extremely low inventories. The Henry Hub Index fell marginally by around 2% in the month to average around US\$4.6/Mmbtu. US natural gas storage level is currently at about 1.2 trillion cubic feet, 46% below the five-year average and at 11-year low after a record frigid winter season. The injection season so far has been slow but is expected to pick up pace over summer and autumn.
- Most recent weather forecasts for the US suggest the first signs of sustained warmth for late May and early June, which threatens to exert further strain on the current low stock levels, thus fuelling short-term upward pressures on prices.
- In contrast, the slide in European gas prices continued in May on low heating demand on the back of a streak of warmer than usual temperatures, following the mildest winter in seven years which left the region's inventories more than half full.
- The natural gas index of National Balancing Point in the UK, Europe's largest gas market, fell to its lowest point since late 2011 in May and the downward trajectory is likely to persist until sufficiently warm summer temperatures turn the tide towards a pick-up in cooling demand.
- In Asia, liquefied natural gas (LNG) prices continued to moderate in the month amidst low seasonal demand and a greater switch to coal, while fresh supplies from Papua New Guinea also weighed on sentiment. Platts spot price in May was around US\$14/ MmBtu, compared to the record high of just above US\$20 in mid-February. However, global LNG supplies are expected to tighten over the rest of the year.

Figure 1: Henry Hub and National Balancing Point



Sources: NAB; Thomson Reuters

Figure 2: Asian Implied LNG Import Prices

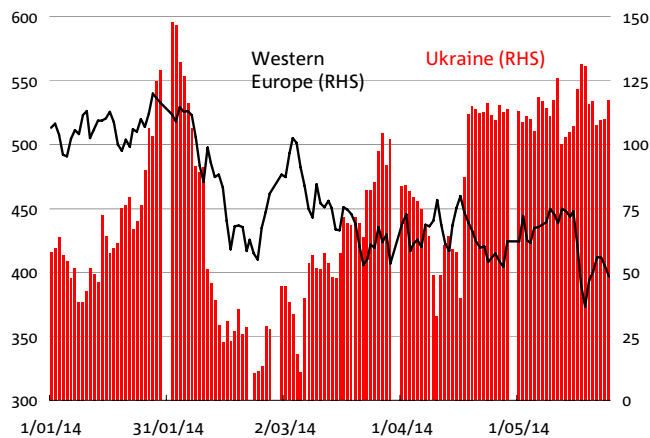


Sources: Thomsons Datastream; CEIC; NAB

Recent developments in the Ukrainian crisis:

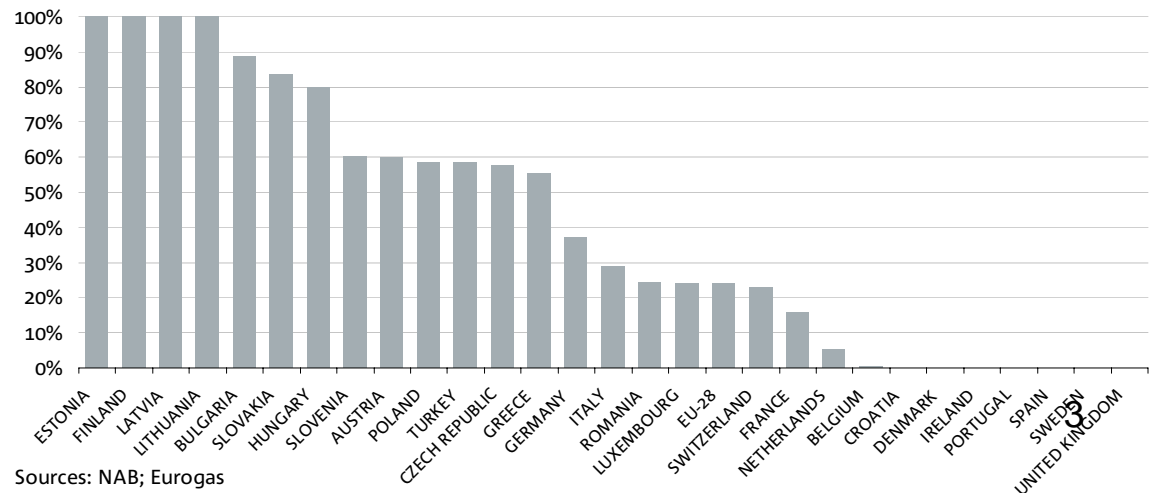
- So far, natural gas from Russia to Western Europe via Ukraine is flowing as normal, although there remain tensions as the two countries continued to be locked in disputes over gas price negotiations.
- Russia state-owned gas giant Gazprom rescinded its discounted gas price offer of \$268.50 per 1,000 cubic metres from the incoming Ukrainian government, and demands that the country pays the new price of \$485, the highest price charged to any European nation. However, Ukraine refused to honour its debt at this new price, citing that Russia is using gas as a political weapon against it.
- EU is acting as the intermediary to resolve the price dispute between the two countries, with Ukraine agreeing to pay Russia \$2 billion in unpaid bills soon, while Gazprom indicated that they may be willing to negotiate on over Ukraine's future gas price as well as the disputed price it has to pay for April and May.
- Meanwhile, Gazprom finally signed the landmark gas supply deal with China on 21st May, after a Memorandum of Understanding was struck in 2006. The deal would see the company supply 38 billion cubic meters of gas to China annually for 30 years commencing 2018, reported to be worth around US\$400 billion.
- The successful signing of the deal with China has lessened the pressure of US and EU sanctions on Russia. In the meantime, the attempt by EU to wean its reliance on Russian gas is not likely to be fruitful given the lack of feasible alternatives.
- Ongoing geopolitical tensions between the two countries suggests that the a cut in gas supplies by Russia is still a possibility, albeit minute, but a comfortable supply side should help to allay any fears of an immediate supply shock.

Figure 3: Daily Russian Exports to Ukraine and Western Europe (Index)



Sources: NAB; Bloomberg

Figure 4: European Countries' Dependence on Russian Gas



Sources: NAB; Eurogas

Market Conditions : the US

- According to the Energy Information Administration in **the US**, weekly working gas in storage continues to be rebuilt slowly after a winter season of excessive heating demand. For the week ending 9 May, level of stored gas rose to 1,160 Bcf, a net increase of 105 Bcf but remained 40.5% below year-ago levels and 45.3% below the 5-year average.
- Given the current large deficit, inventory levels are likely to stay low relative to historical averages throughout the injection season, which typically occurs from April 1 through to October 31. EIA's current forecast for the end of October inventory levels of 3,405 Bcf will be significantly below the 5-year (2009-13) minimum value of 3,792 Bcf.
- However, the pace of production remains strong. According to Bentek Energy data, dry natural gas production in the US breached 68.0 Bcf/d for the first time on record in the second week of May, driven by increases in the Gulf Coast, from offshore fields, and onshore fields in Texas, which include the Eagle Ford Shale.
- On the exports front, the US House energy committee recently approved legislation to limit the length of review time for LNG export applications, requiring that the Department of Energy issue a decision within 90 days after the conclusion of their public comment periods. After this stage, oil companies will still need approval from the Federal Energy Regulatory Commission before they could begin construction of a LNG project. So far, 31 facilities have applied for federal approval to build export facilities but only six of them have been granted conditional approvals. Cheniere Energy's Sabine Pass Liquefaction terminal is the only one which has received the green-light to proceed with the final construction, and is expected to start operation in 2015.
- At this rate, US LNG exports are unlikely to be the solution to EU's problem of over-reliance on Russian gas. The first US LNG exports in 2015 or early 2016 will most likely make their way to higher-priced Asia. Gas contracts between Russia and its European clients are predominantly long-term contracts at prices linked to oil, which provides very little flexibility to buyers in terms of price and volumes.

Figure 5: US Weekly Gas Storage

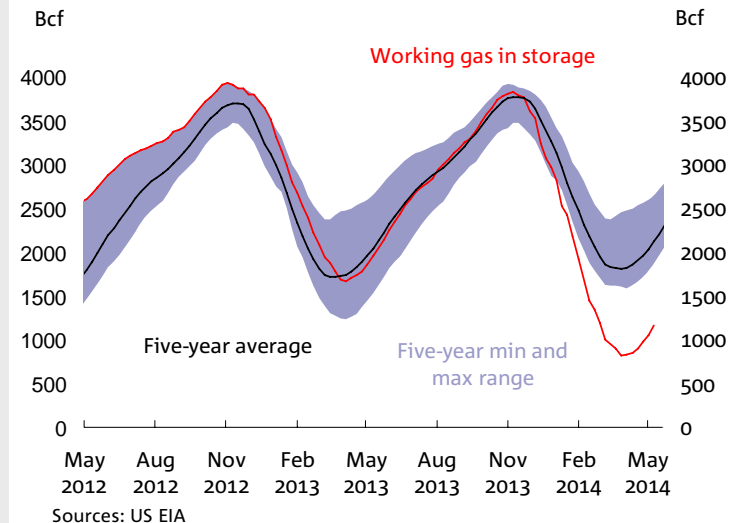
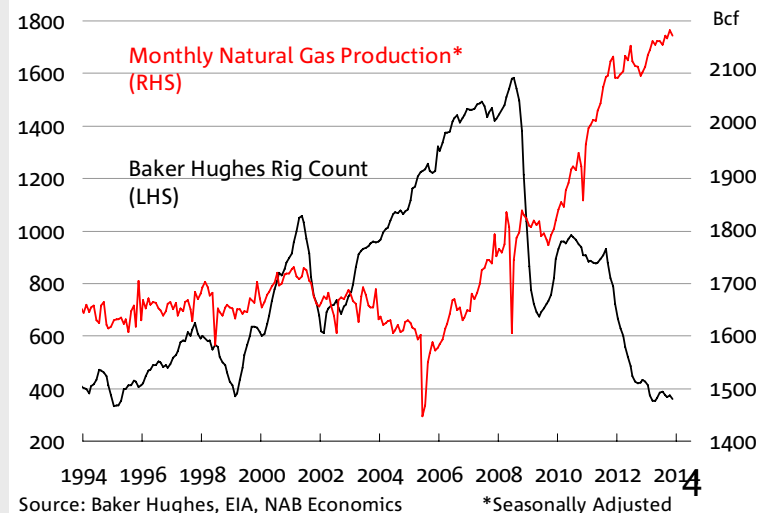


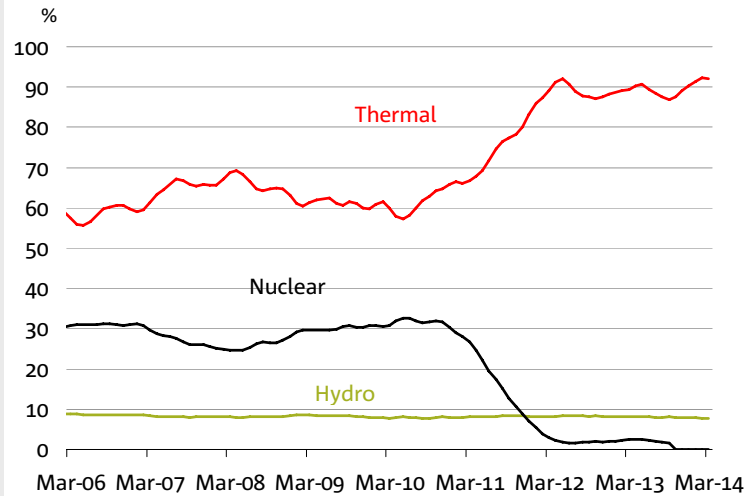
Figure 6: North American Rig Count and US Natural Gas Production



Market Conditions : Japan

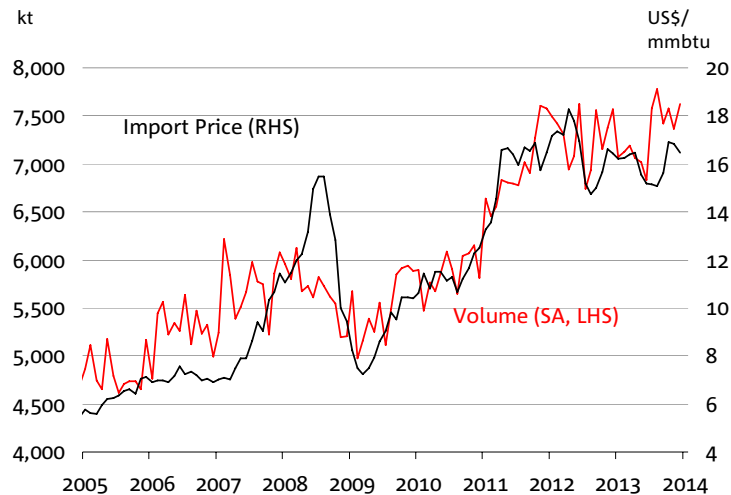
- Japanese** imports of LNG and coal have reached unprecedented levels for the fiscal year ended March. During the year, Japan's LNG imports rose by 1% to 87.73 million tonnes, but high LNG prices have prompted a significant switching to coal imports, which rose by 5% to 111.52 million tonnes.
- A colder than usual winter season and tightness in global supplies has witnessed a flurry of stockpiling activity by Japanese utility companies in the last few months of 2013, further exacerbated by the uncertainty around the restarting prospects of nuclear reactors. All but two of Japan's 50 reactors have remained idle since the 2011 Fukushima incident. Two Ohi reactors, No. 3 and No. 4, were temporarily restarted in 2012-2013 as an exception decided by the government to prevent a power outage due to excessive summer demand.
- As a result of elevated LNG prices, **Japan** recorded its 22nd consecutive trade deficit in April at close to 810 billion yen, but was 7.8% lower than the same time last year. A depreciated yen over the past year helped to boost the performance of Japanese exports which helped to narrow the deficit.

Figure 7: Japan's Electricity Generation by Source



Source: NAB; DX

Figure 8: Japanese LNG Imports and Implied Prices



Source: CEIC, NAB Economics



Market Conditions : China

- Meanwhile, **China's** LNG imports have picked up pace in the first quarter of this year, to be around 35% higher than the corresponding period last year. In January, Chinese LNG imports rose to a new record of 2.65 million tonnes, eclipsing the short-lived record of 2.43 million tonnes set only in December. The surge in imports reflects strong winter demand and the Chinese government's resolve to reduce smog pollution in major cities by switching to cleaner sources of fuel.
- **China's** LNG import capacity is expected to rise rapidly over the next few years, from the current 31mn tonnes per year at 9 terminals to over 80mn tonnes by 2018, when another 15 import terminals either approved or already under construction begin operations. This forms a part of China's strategy to develop a diversified portfolio of natural gas sources, with supplies coming from domestic sources, Central Asia, South Asia, Australia and now Russia.
- **Australia** will be the one of the main beneficiaries of rising Chinese LNG demand, with the Australian Bureau of Resources and Energy Economics (BREE) forecasting that Australia will account for around 18mt of the 51mt of Chinese imports by 2019, from 3mt out of 18mt in 2013.

Figure 9: Chinese PMI and LNG Imports

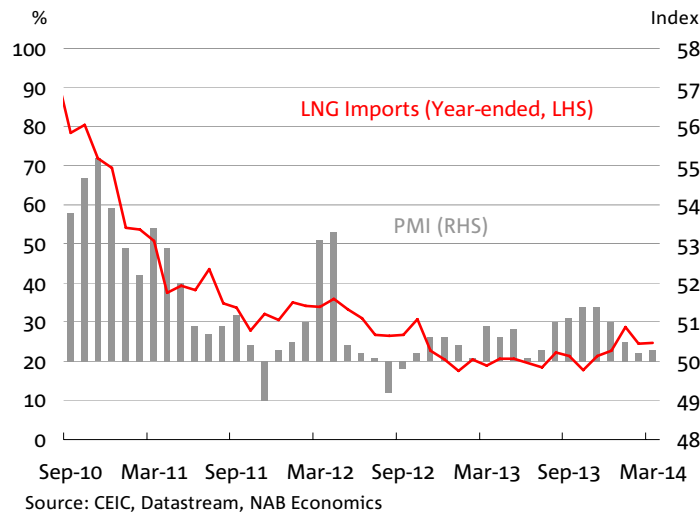
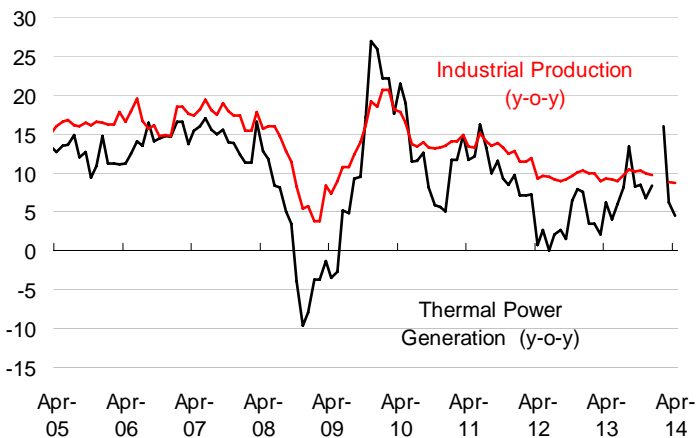


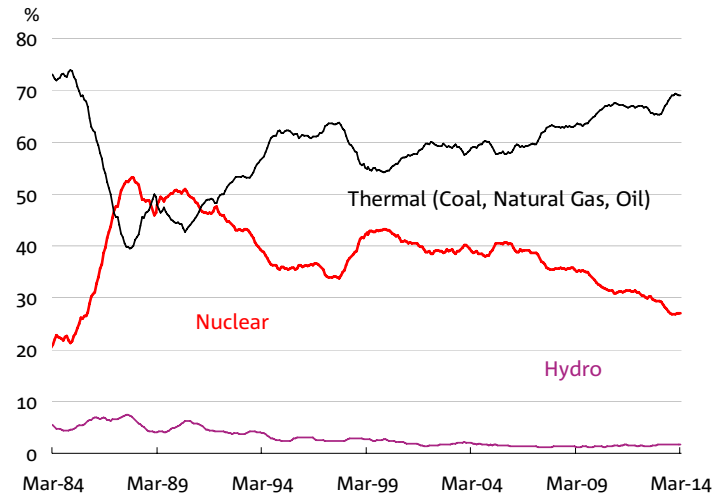
Figure 10: Chinese Industrial Production and Energy Generation



Market Conditions : South Korea

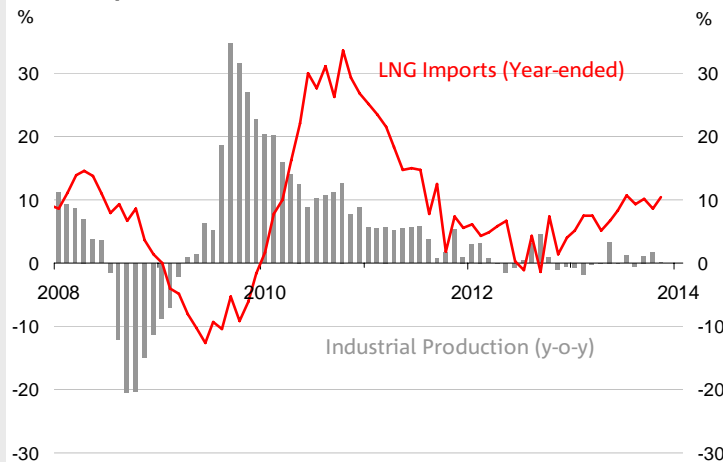
- In South Korea, the world's second largest LNG importer, the growth in LNG imports volume has maintained a resilient pace in excess of 9% y-o-y despite anaemic industrial growth, as four of the country's 23 nuclear reactors still remain idle. Natural gas currently accounts for less than a quarter of Korea's electricity generation, with the rest made up of coal (42%), nuclear (26 - 27%), oil (1-2%) and renewable sources (2-3%).
- While the country's LNG demand is expected to be robust in the short term, it is the Korean government's priority to lift the share of nuclear generation in its energy mix in the long-term.
- South Korea** currently relies on its 23 reactors for slightly more than a quarter of the country's power generation but aims to increase it to 29% by 2035. This new target, which was announced in December by the Korean Ministry of Energy, is significantly less ambitious than the 41% target announced in 2008, after accounting for mounting public opposition to nuclear power in the country and a domestic safety scandal. To achieve its target of adding 12 new reactor units by 2024, the government has approved the construction of two new reactors on the country's southeast coast. The construction of five other new units, including the third and fourth reactors at the Shin Kori plant, is currently underway.

Figure 11: Korean Electricity Generation by Source



Source: NAB; CEIC

Figure 12: Korean Industrial Production and LNG Imports



Source: CEIC, Datastream, Korean Customs Service, NAB Economics



Natural Gas Forecasts:

- In the near-term, natural gas prices in the northern hemisphere are likely to experience further slowdown from mild weather conditions. In the US, natural gas prices, while moderating in line with an acceleration in injection, are likely to remain elevated relative to the corresponding period last year. Meanwhile in the UK, ample inventories and mild conditions to-date are keeping a lid on prices but there is a high probability that the summer months will be warmer than usual, leading to more cooling demand.
- In Asia, the pace of LNG imports continues to be robust, as the pressure to steer away from nuclear (for Japan and Korea) and polluting sources of energy (China) lends support to LNG demand. The timeframes for the nuclear reactor restarts in Japan remain elusive, with the recent court ruling against the restart of a nuclear plant west of Japan possibly setting a precedent for future restart applications. Chinese LNG imports are likely to gain pace on the back of expanded import capacity, while the Korean government also resolved to reduce its reliance on nuclear.
- Overall, we have left our natural gas forecasts largely unchanged from last month's issue as the risks for the outlook remain broadly balanced.

US\$/mmbtu	Actual	Actual	Forecasts							
	3/06/2014	Mar-14	Jun 14	Sep 14	Dec 14	Mar 15	Jun 15	Sep 15	Dec 15	Mar 16
Henry Hub	4.59	5.10	4.50	4.20	4.20	3.90	4.10	3.90	3.90	3.90
Japan LNG	NA	16.75	16.00	15.50	15.50	15.30	15.00	14.50	14.35	14.35
Brent Oil	107.5	108	109	107	105	105	105	105	105	105

Source: Datastream, CEIC, NAB Economics

Need to know:

Bcf= Billion cubic feet = Million Mmbtu (approx.)

Mmbtu = Million British thermal units = 1.05 GJ (approx.)

GJ= Gigajoules

Group Economics

Alan Oster
Group Chief Economist
+61 3 8634 2927

Jacqui Brand
Personal Assistant
+61 3 8634 2181

Australian Economics and Commodities

Rob Brooker
Head of Australian Economics
+61 3 8634 1663

James Glenn
Senior Economist – Australia
+(61 3) 9208 8129

Vyanne Lai
Economist – Agribusiness
+(61 3) 8634 0198

Karla Bulauan
Economist – Australia
+(61 3) 86414028

Industry Analysis

Dean Pearson
Head of Industry Analysis
+(61 3) 8634 2331

Robert De lure
Senior Economist – Industry Analysis
+(61 3) 8634 4611

Brien McDonald
Economist – Industry Analysis
+(61 3) 8634 3837

Amy Li
Economist – Industry Analysis
+(61 3) 8634 1563

International Economics

Tom Taylor
Head of Economics, International
+61 3 8634 1883

Tony Kelly
Senior Economist – International
+(61 3) 9208 5049

Gerard Burg
Senior Economist – Asia
+(61 3) 8634 2788

John Sharma
Economist – Sovereign Risk
+(61 3) 8634 4514

Global Markets Research

Peter Jolly
Global Head of Research
+61 2 9237 1406

Australia Economics
Spiros Papadopoulos
Senior Economist
+61 3 8641 0978

David de Garis
Senior Economist
+61 3 8641 3045

FX Strategy

Ray Attrill
Global Co-Head of FX Strategy
+61 2 9237 1848

Emma Lawson
Senior Currency Strategist
+61 2 9237 8154

Interest Rate Strategy

Skye Masters
Head of Interest Rate Strategy
+61 2 9295 1196

Rodrigo Catril
Interest Rate Strategist
+61 2 9293 7109

Credit Research

Michael Bush
Head of Credit Research
+61 3 8641 0575

Simon Fletcher
Senior Credit Analyst – FI
+61 29237 1076

Equities

Peter Cashmore
Senior Real Estate Equity Analyst
+61 2 9237 8156

Distribution

Barbara Leong
Research Production Manager
+61 2 9237 8151

New Zealand

Stephen Toplis
Head of Research, NZ
+64 4 474 6905

Craig Ebert
Senior Economist
+64 4 474 6799

Doug Steel
Markets Economist
+64 4 474 6923

Kymerly Martin
Senior Market Strategist
+64 4 924 7654

Raiko Shareef
Currency Strategist
+64 4 924 7652

Yvonne Liew
Publications & Web Administrator
+64 4 474 9771

UK/Europe

Nick Parsons
Head of Research, UK/Europe,
and Global Co-Head of FX Strategy
+ 44207710 2993

Gavin Friend
Senior Markets Strategist
+44 207 710 2155

Tom Vosa
Head of Market Economics
+44 207710 1573

Simon Ballard
Senior Credit Strategist
+44 207 710 2917

Derek Allassani
Research Production Manager
+44 207 710 1532

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