interfax
Natural Gas Daily
Vol. 7 / No. 14 / 20 January 2017

Natural gas insight and analysis
Interfax Information Services Group
interfaxenergy.com

Masela spat delays Indonesian mega-project

A rig off the Indonesian coast. The country is facing delays in developing the offshore Masela Block. (SKKMigas)

Damon Evans / Denpasar

DEVELOPMENT OF THE gas-rich Masela Block off Indonesia remains stalled, despite a senior Indonesian minister telling the press that a deal had been made with Inpex, the block's operator.

The government and the Japanese company are understood to be negotiating mutually acceptable contract terms. Sources close to the project told *Interfax Natural Gas Daily* that Inpex and Shell, which are developing Masela as a joint venture, want approval for a 9.5 mtpa LNG plant – larger than Inpex's 8.9 mtpa Ichthys project in Australia, which cost $34 billion.

However, Inpex and Shell also want a 10-year extension to their contract as compensation for the delays caused by the Indonesian government's decision to cancel the plan for a floating LNG facility in favour of an onshore plant. Jakarta approved the original plan – which was for a 2.5 mtpa FLNG project – in 2010, but the discovery of much more gas led Inpex to submit a revised proposal in 2015 that increased the unit's capacity to 7.5 mtpa.

The government initially agreed Inpex's spending for FLNG studies in 2007, meaning that 10 years will have lapsed if the onshore route is approved in 2017.

Indonesian Energy and Mineral Resources Minister Ignasius Jonan said the government will not back down and would offer only a seven-year contract extension as compensation for the delays. But accelerating development of Masela, which would be Indonesia's largest deepwater project, will be crucial in helping to offset the projected decline in Indonesia's gas production.

The Inpex-led JV's production-sharing contract was signed in 1998 and is set to expire in 2028. The request to extend the contract follows a series of delays caused by the government's objections to the JV's proposed development plans. Luhut Pandjaitan, Indonesia's coordinating maritime affairs minister, told local media that gas from Masela would be sold locally under a domestic offtake agreement.

Verbal agreement

Inpex has verbally agreed to the proposed deal, said Pandjaitan, who was speaking before Japanese Prime Minister Shinzo Abe's visit to Indonesia on 15 January. However, no deal was announced while Abe was in the country. Despite this, Indonesian President Joko Widodo and Abe both affirmed the importance of accelerating and concluding negotiations on Masela as soon as possible in a mutually beneficial way, Indonesia's Foreign Ministry said.

Jakarta-based Inpex spokesman Usman Slamet told *Interfax Natural Gas Daily* the company is still negotiating with the government about the size of the proposed LNG plant and its location, as well as the contract extension. "We hope to soon find

CONTINUED ON PAGE 2

Contents

Gas on the agenda for Putin-Orbán meeting **5**

The upcoming summit between the Hungarian and Russian leaders may spark closer cooperation between the two countries on energy.

6 Monetisation tussle delaying Etinde's development

3 **Editorial** / Brexit: build bridges, not borders

4 **Infographic** / Gas investments worth $7 tln needed by 2040 – GECF

7 **In Brief** / Breaking news from around the world

9 **This Week** / Winners & Losers, Verbatim, People Moves

CONTINUED FROM PAGE 1

certainty, as we want to immediately start this project for the good of all," he added.

Masela's proven reserves are estimated at 169.9-339.8 billion cubic metres – two-to-four-times the size of Mahakam, Indonesia's largest producing block.

Jeffrey Feynman, an independent United States-based oil and gas consultant who has worked on various projects in the region, told *Interfax Natural Gas Daily* that the most logical site for an onshore development would be Selaru, an island southwest of Yamdena in the Tanimbar island group.

Feynman estimates the cost for an onshore plant could be as high as $19 billion and that production of 10 mtpa of LNG, as well as 35,000 barrels of condensate per day, will be needed to make the project economically feasible. He also believes Inpex and Shell are waiting for the government to agree to build the necessary infrastructure at Selaru.

"[Shell and Inpex] were not, and cannot, be forced on one or other option. The government can reject their offer, but [the JV can also] reject the government's demands and relinquish the lease. Besides, whatever the option, in the current market I don't think the project will ever go ahead," he told *Interfax Natural Gas Daily*.

The government estimates the maximum cost of Masela will be $16 billion compared with Inpex's previous projection of $22 billion. The Japanese company is re-evaluating the feasibility and costs of an onshore development, which the government hopes will provide a multiplier effect for the local economy in eastern Indonesia. But analysts agree Jakarta will need to give the JV serious incentives to make the project economically attractive.

The government hopes an agreement will be reached this year, with commercial production slated to start in 2022. But most analysts do not expect a final investment decision before that date.

Inpex and Shell have already spent $1.2 billion on the project, highlighting the risks for investors in Indonesia's oil and gas sector. Inpex has a 65% stake in Masela, which lies in the Arafura Sea, and operates it on behalf of Shell. ■

We welcome your comments. Email us at comments@interfax.co.uk.

Further reading

- Help is on the way for Indonesia – energy ministry
- Inpex may boost capacity of Masela LNG
- Jakarta puts pressure on Inpex-Shell Masela LNG

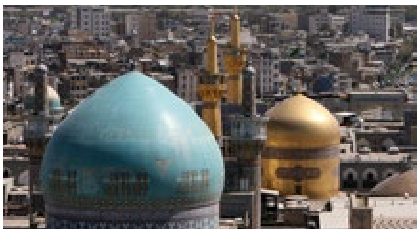
Energy front-month futures

	Closing date	Close	High	Low	% change
Brent Crude, $/bbl	19 Jan	54.16	54.77	53.90	0.45
WTI Crude, $/bbl	19 Jan	51.37	51.87	51.02	0.57
Henry Hub, $/MMBtu	19 Jan	3.37	3.40	3.26	2.00
NBP, p/th	19 Jan	53.61	55.00	53.45	0.73
TTF, €/MWh	19 Jan	19.84	19.84	19.84	0.69
Gaspool, €/MWh	19 Jan	19.43	–	–	1.51
NCG, €/MWh	19 Jan	19.80	–	–	0.66
CSX Coal, $/t	19 Jan	58.25	–	–	-1.10
Newcastle Coal, $/t	19 Jan	83.45	–	–	-0.48
South China Coal, $/t	19 Jan	72.20	–	–	-0.55

Prices provided by GlobalView.
GlobalView provides benchmark pricing, news and analytics for the commodities and energy sector. For more information, please contact sales.london@marketview.com.

On interfaxenergy.com

Editor's choice



Northern gas fields among Iran's priority projects

Iran wants to boost gas output in the northeast of the country to reduce its reliance on Turkmenistan.

A bossa nova in Brazilian LNG

Supermajors are flocking to Brazil even though the country's LNG imports are forecast to fall.

Trending

1. EU energy sector digests May's 'hard Brexit' pledge
2. Malaysia faces LNG oversupply problem
3. Northern gas fields among Iran's priority projects
4. EGAS bypassed in Egypt's market liberalisation plans
5. Indonesia's total gas exports fall 5% in 2016

Connect

twitter.com/interfaxenergy
facebook.com/interfaxenergy
interfaxenergy.com/rss/gasdaily

Brexit: build bridges, not borders

Andreas Walstad / Brussels

The energy industry should lead by example and help maintain strong bonds between the UK and the EU in spite of a hard Brexit.

UK Prime Minister Theresa May with European Council President Donald Tusk. (PA)

AT FIRST GLANCE, the UK's departure from the EU single market seems like a major setback for the European Commission's vision of an Energy Union, of which the two main pillars are "security, solidarity and trust" and "a fully-integrated internal energy market".

Many see Brexit as a lose-lose situation whereby Brussels loses a strong voice on market liberalisation and climate policy while the UK loses influence in its 'neighbourhood'. But although much is at stake, it is not all doom and gloom.

European Council President Donald Tusk noted that the "warm and balanced words" of UK Prime Minister Theresa May on European integration were "much closer to the narrative of Winston Churchill than that of [United States] President-elect [Donald] Trump." However, he also reiterated that the UK cannot cherry-pick the benefits in its future relations with the EU without giving enough in return.

"[The] speech by Prime Minister May proves that the unified position of 27 [EU] member states on the indivisibility of the single market was finally understood and accepted by London. It would be good if our partners also understood that there will be no place for pick-and-choose tactics in our future negotiations," Tusk said.

Liberalisation frontrunner

The UK was always a frontrunner in market liberalisation and opened up its power and gas markets to competition before most other European countries. The country's NBP hub was for many years an undisputed European benchmark for wholesale gas trading, and it still is – although it now has to share that place with the Dutch TTF.

On climate, the UK's national target to reduce carbon dioxide emissions by 50% from 1990 levels by 2025 is more ambitious than the EU's target of a 40% reduction by 2030. Moreover, London was always a strong supporter of carbon trading and it seems unlikely that it will turn its back on the EU Emissions Trading System (ETS) altogether. A national system linked to the ETS is one of several options. The carbon floor price introduced in the UK has worked efficiently in that it has led users to switch from coal to gas. The country has also announced that it plans to phase out coal from its power generation mix.

The UK is leaving the single market because it cannot commit to one of the four freedoms that comes with it – namely, free movement of people. A free-trade agreement (FTA), as outlined in May's speech, seems like the most sensible option. However, a comprehensive FTA would likely take several years to conclude, not least because it needs approval from the 27 EU member states as well as the European Parliament. The Comprehensive Economic and Trade Agreement – an FTA between the EU and Canada that was partly ratified last year – took around 10 years to finalise and was thrown into jeopardy when Belgium's Parliament of Wallonia tried to block it.

The energy industry can help to smooth relations between London and Brussels during the Brexit negotiations, which seem likely to be long and tough. To this end, the UK should continue to play an active role in key institutions such as the European Network of Transmission System Operators for Gas and the Council of European Energy Regulators.

A smooth and orderly Brexit is in everyone's interest. There is no need to push the panic button yet; indeed, the negotiations have not even started. ■

We welcome your comments. Email us at comments@interfax.co.uk.

Best of Blogs

Expect the unexpected

China's announcement that it will spend $360 million on renewables shows the country wants energy independence and proves sceptics wrong, Nick Butler writes for the *FT*.

Yeasty achievements

Engineers in the United States have genetically reprogrammed yeast in a way that could make high-energy renewable fuels a reality, according to *The Energy Collective*.

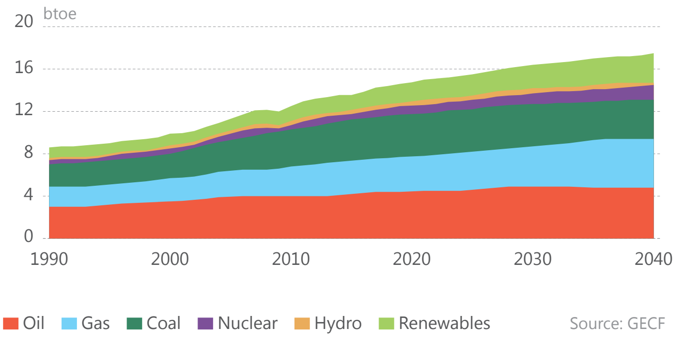
Inconceivable new world

No one at the Atlantic Council Global Energy Forum was able to say what a world based on renewables would look like, writes Karel Beckman for *Energy Post*.

Gas investments worth $7 tln needed by 2040 – GECF

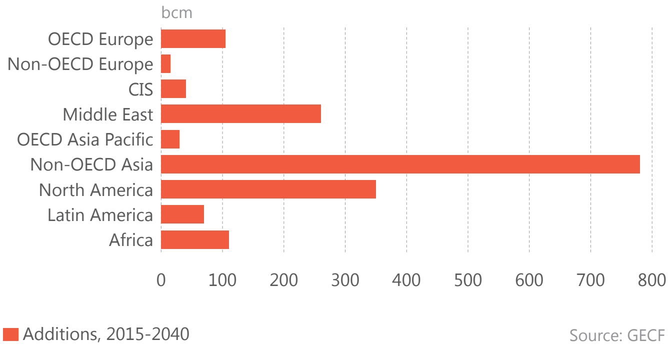
Verity Ratcliffe / London

WORLD ENERGY DEMAND, BY FUEL



Source: GECF

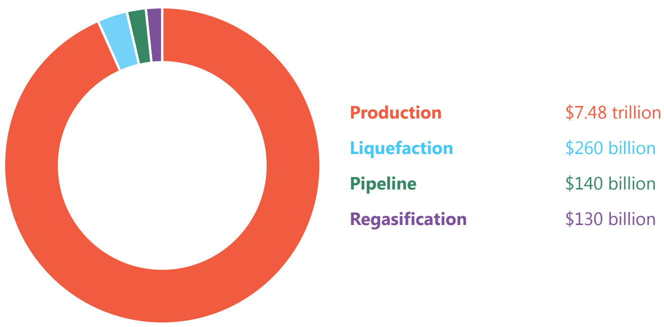
REGIONAL GAS DEMAND INCREMENT



Source: GECF

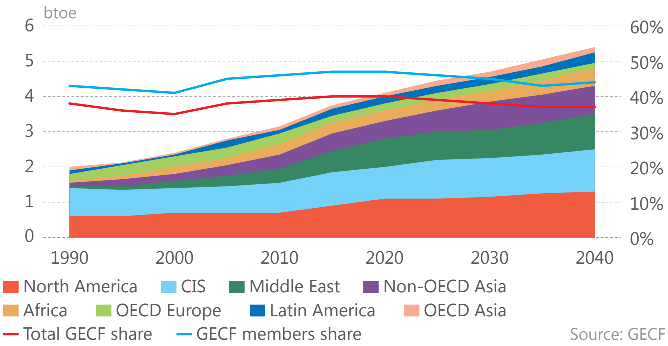
THE GAS EXPORTING Countries Forum (GECF) predicts that global demand for gas will reach 5.2 trillion cubic metres by 2040 compared with 3.5 tcm in 2015. This equates to a rise of about 50% in 25 years – similar to the growth seen over the past 16 years. Gas is expected to account for 25% of the global energy mix by 2040, rising from 21% in 2015, making it the only fossil fuel supplying a greater share of the energy mix in 2040 than in 2015.

INVESTMENT COST BY SECTOR OF THE GAS SUPPLY CHAIN



Source: GECF

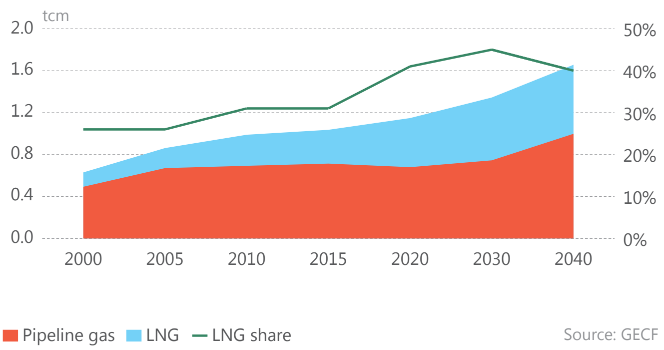
GLOBAL GAS PRODUCTION, BY REGION



Source: GECF

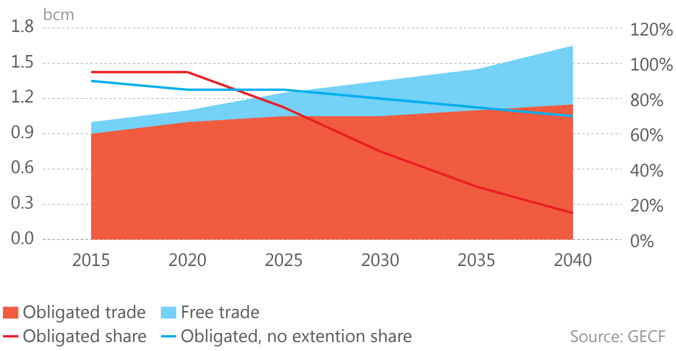
Around $8 trillion will need to be invested in upstream and gas transport infrastructure between 2015 and 2040 to meet rising demand for gas, according to the GECF. Upstream work will require by far the largest investment – perhaps as much as $7.5 trillion. The remainder will need to be spent on liquefaction, regasification and pipeline projects. Global gas production could hit 5.4 tcm by 2040, said the GECF.

GLOBAL GAS TRADE, BY PIPELINE AND LNG



Source: GECF

CONTRACTS VS SPOT TRADING



Source: GECF

The decline of gas production in many consuming countries and rising demand in Asia will drive the global gas trade, said the GECF. Around 30% of global gas production is traded. The GECF expects this share to be the same in 2040, although the global gas trade is expected to expand in absolute terms by 60% – growing by an average of 2.1% per year.

Gas on the agenda for Putin-Orbán meeting

Dariusz Kalan / Warsaw

The upcoming summit between the Hungarian and Russian leaders may spark closer cooperation between the two countries on energy.

Russian President Vladimir Putin, left, with Hungarian Prime Minister Viktor Orbán at their previous meeting. (PA)

RUSSIAN PRESIDENT VLADIMIR Putin's visit to Budapest on 2 February has fuelled speculation that Hungary and Russia will further strengthen their energy ties, especially regarding underground gas storage (UGS).

Alexander Medvedev, Gazprom's deputy chief executive, indicated in a December interview with Hungarian daily *Világgazdaság* that the Russian gas giant was interested in increasing the volumes it stores in Hungary's UGS facilities. Putin is expected to use the meeting with Hungarian Prime Minister Viktor Orbán to kick off discussions on the topic, according to Borbála Tóth, an analyst at the Regional Centre for Energy Policy Research.

Economic exploitation of Hungary's UGS capacity "is of key importance", the country's Ministry of National Development told *Interfax Natural Gas Daily*. "Gas storage for foreign operators, in addition to generating revenue for the storage company, would facilitate the economical operation of the infrastructure," the ministry added.

Hungary has had a surplus of storage capacity since state-owned MVM bought facilities able to store 4.2 billion cubic metres from Germany's E.On in 2013. Excess capacity has marred the economic viability of storage in Hungary, according to Tóth.

"We don't need so much capacity. The fee goes up if you don't use the full capacity because fewer consumers pay for the facility," she said.

Hungary has one of the largest UGS systems in Central Europe and possesses five commercial storage facilities with a combined capacity of 6.1 bcm. Renting or even selling storage seems to make economic sense for Budapest, but the reasons why Russia may be willing to store gas in Hungary are more obscure, according to András Deák, an energy expert at the Hungarian Academy of Sciences.

"Firstly, Russia wants to give up the Ukrainian transit route – so why invest in Hungary, which is in the middle of that route? And second, what to do with the stored gas?" Deák said.

According to Tóth, some sort of deal between Putin and Orbán is possible. "I can imagine that Russia [will offer] to store gas in Hungary, but in return expects Hungary to accept changes to its delivery points," she said. "Now, 80% of gas comes to Hungary through Ukrainian borders and 20% through Austrian. In other words, Putin may ask Orbán for help to bypass Ukraine."

Sketching an agenda

Russia's importance as a major partner for Hungary has grown since 2014 despite falling oil prices and Hungary's declining gas consumption. However, Orbán has political reasons to get closer to Moscow.

Orbán's Fidesz party won Hungary's general election in 2014 thanks partly to a massive cut in the rates charged by the country's utilities – which was made possible by a number of concessions from Gazprom. The Russians reportedly offered Hungary a price discount of at least 10% – a move unprecedented in Central Europe.

Orbán extended Hungary's long-term gas contract with Russia for another four years in 2016 with the omission of the take-or-pay clause, and he may push for further discounts. Hungary's next election, which will take place in 2018, is likely to be uppermost in Orbán's mind.

The project to expand Hungary's Paks nuclear power plant, which was awarded to Russia's Rosatom, is also on the table. But although the European Commission closed infringement proceedings over the award of the contract in November, the project still arouses controversy. The start date for the expansion, which was originally slated for 2015, has been regularly postponed by the Hungarian government.

According to some sources close to the situation this topic will be high on the agenda at the Putin-Orbán meeting because the Russians are demanding that the project should be prioritised.

All of these issues raise questions about the price Budapest may pay for its special relationship with Moscow. Orbán has rarely criticised Putin and has said Western sanctions against Russia are harmful. He has also said the country's achievements as an "illiberal democracy" are worth further study.

Orbán signed up to the Russia-backed Turkish Stream pipeline project in 2015. Although he joined other Central European states in objecting to the Nord Stream 2 pipeline in February 2016, he backtracked one month later, saying "it might be of importance to Europe".

Deák noted the nature of Hungary's reliance on Russia has changed in recent years. "It is hard to say whether Hungary is more dependent on Russia than it was before Orbán. Gas consumption has dropped, but there are other factors. There is good deal of governance and transparency issues that came into the picture. It is a structurally different dependence than 10 years ago," he said.

"Bilateral visits are a sort of 'black box'. We see what comes out of it, but don't know what is inside. How many sticks and carrots are there?" he added. ■

We welcome your comments. Email us at comments@interfax.co.uk.

Monetisation tussle delaying Etinde's development

Miriam Malek / Lisbon

A disagreement between Cameroon's government and the JV developing the offshore Etinde field is holding up production.

A rig in Cameroon's Etinde field. Its development is being delayed by protracted negotiations. (Bowleven)

THE GOVERNMENT OF Cameroon and the joint venture developing the Etinde field are at loggerheads over their differing plans for the field's output. While the state wants to use the gas to produce electricity and fertilisers, the JV is still considering exporting some of it as LNG.

Disagreements over the gas monetisation plan for Etinde, coupled with low global oil prices, have pushed back the development schedule. NewAge, which is the operator of the field and has a 30% share, previously said it intended to make an FID in 2016. The company is now aiming to make a decision this year, according to its website. Etinde is estimated to hold up to 56.6 billion cubic metres of gas.

"A number of development scenarios are under consideration; an FID will be taken [when one has been selected]," UK-based oil and gas company Bowleven, which has a 20% stake in Etinde, told *Interfax Natural Gas Daily*. NewAge had not responded to requests for comment by the time of publication.

The timeline for drilling has slipped as a result. Bowleven reported in November that progress on the project had been affected by low commodity prices.

"Etinde contains sufficient existing discovered resource to support one initial offtake solution – be it fertiliser, power generation or LNG – and the JV has been exploring all available development options," a spokesman from Bowleven told *Interfax Natural Gas Daily.*

Kribi facing setbacks

One project that Etinde could potentially supply is the Kribi gas-to-power plant, which its operator Globeleq plans to expand from a capacity of 216 MW to 330 MW. But this is also facing setbacks, which could strengthen the case for using Etinde's gas elsewhere.

Globeleq told *Interfax Natural Gas Daily* that discussions on the gas price are continuing with Cameroon's government and the plant's gas suppliers. The expansion was originally slated to be completed by the end of 2016; Finland-based Wärtsilä, which is carrying out the work, was not available for comment.

"[The gas price] is an amendment to the existing gas supply agreement (GSA), [which] is one of the main conditions to the financial close of the Kribi expansion project," a spokesman from Globeleq told *Interfax Natural Gas Daily*. "Financial close therefore will ensue once the gas price and the GSA amendment has been completed," he added. Globeleq declined to disclose an estimated timeframe for the FID.

Commentators on the Kribi expansion project have also said that the deal lacks sufficient financing. One power producer with a renewables project in Cameroon told *Interfax Natural Gas Daily* that negotiations in Cameroon can often be dragged out.

"In Ghana [the government] would give you in one month [terms to ensure you are] exempted from VAT, but in Cameroon it's a long battle – probably because the administration is very [complicated]," Jean François Guillon, managing director of Africa Renewables, told *Interfax Natural Gas Daily*. "If a company has a project in Cameroon, they have to develop a [company spokesperson to deal] with the government," he added.

However, Cameroon's government has been in power for more than 20 years, which means that international investors at least benefit from continuity, said Guillon.

This continuity means projects that reach the negotiation stage are less likely to be shelved than elsewhere in West Africa, where leadership and energy policy changes more frequently. However, some gas projects in the country have nevertheless been shelved. Engie decided to stop developing its 3.5 mpta Cameroon LNG project last year, citing weak market conditions. Engie told *Interfax Natural Gas Daily* it has no immediate plans to relaunch the project.

FLNG plans moving forward

Other projects in Cameroon are faring better. A spokesman from Perenco said its 1.2 mpta FLNG facility is on track to produce first gas by Q4 this year.

The project will use the Hilli vessel, provided by Golar LNG, which will be converted into an FLNG unit. Gazprom Marketing & Trading has signed an offtake agreement to purchase all of the project's gas for eight years. The converted vessel will be able to process up to 2.4 mpta of LNG.

Golar has said it is prioritising the Hilli development and has an "aggressive schedule". It is expected to be the world's next FLNG unit to start operations. ■

We welcome your comments. Email us at comments@interfax.co.uk.

Further reading

- Liquefaction projects suffer setbacks in Africa
- Engie shelves Cameroon as LNG moves offshore
- Cameroon's Kribi power plant needs more funding

Leakage incidents could have led to loss of life – Statoil

Gas and hydrogen leaks that occurred at Statoil's Troll gas field and its Mongstad processing plant in October last year were serious and could have resulted in loss of life, an internal investigation has concluded.
A well-control incident occurred on 15 October 2016 during well plugging by the Songa Endurance rig at the Troll field in the Norwegian sector of the North Sea. "Statoil's internal investigation defines the incident to have a high degree of seriousness, and concludes that at worst it could have led to loss of life if the safety equipment had failed to function as intended, or if the gas had been ignited," Statoil said in a statement on Friday. A separate incident occurred at the Mongstad refinery in western Norway on 25 October. A portable gas detector was triggered close to a valve during a pipe inspection. When an attempt was made to close the valve, the pipe socket broke and high-pressure hydrogen-rich gas was released, according to Statoil. "The report concludes that the incident was serious and at worst it could have led to loss of life," Statoil said.

Gazprom allocates RUB 159 bln to Power of Siberia in 2017

Gazprom will allocate RUB 159 billion ($2.66 billion) to finance construction of the Power of Siberia gas pipeline as part of its 2017 investment programme. The total includes RUB 153 billion for construction of the linear segment of the pipeline and RUB 5.57 billion to build compressor stations. Gazprom allocated RUB 76.16 billion to Power of Siberia in 2016 compared with its initial plan to spend RUB 92.1 billion.

Yamal LNG's third train could be online early – Mikhelson

The third train of Yamal LNG could come online a few months earlier than planned, Novatek Chief Executive Leonid Mikhelson has told *Interfax* in an interview. "I think that the third line could be commissioned a few months earlier, still in 2019 but at the start instead of the end of the year as originally planned," said Mikhelson. The first of Yamal's three 5.5 mtpa trains is scheduled to be launched at the end of 2017. Mikhelson added that the recoupment of funds by Yamal LNG shareholders will depend on the price of Brent crude, since most LNG sales contracts are oil-linked. "First of all, money will be directed to meeting all of Yamal LNG's credit obligations, to servicing external financing. Money from the operation of the first phase will also go toward investment in the second, partly into the third. And only then to repayment of loans from shareholders and dividends," Mikhelson said.

Early work on Yamal LNG. The project's third train could be ready earlier than planned. (Novatek)

Novatek Gas & Power to open an LNG division

Novatek Gas & Power, the Swiss-based trading arm of Russian gas producer Novatek, is opening an LNG division, company Chief Executive Leonid Mikhelson told *Interfax* in an interview. Novatek Gas & Power has bought 2.38 mt from Yamal LNG, of which 1 mt has been sold to France's Engie, 0.9 mt to Shell International Trading Middle East and 0.5 mt to trader Gunvor. Investment in the Yamal project to date stands at $21 billion, Mikhelson said. "What is very important [is that] the project is being implemented within the approved figure: $27 billion in capital investment. The budget for the current year is about $6 billion," he said. He added that construction on the first phase was 88% complete and the project overall was 75% finished. "We're beginning pre-commissioning work for various types of process equipment, and I think that we will get to comprehensive precommissioning at the start of the second half of the year," Mikhelson said, adding that ice trials for the first LNG tanker will start soon.

Sound Energy signs deal to acquire Moroccan assets

Sound Energy has signed a non-binding agreement to acquire all of Oil & Gas Investment Fund's oil and gas assets in eastern Morocco. Under the deal, Sound would acquire a further 20% interest in the Tendrara licence and a 75% stake in Meridja, as well as a possible 75% stake in the relinquished area near Tendrara. After the deal, Sound would own 75% of Tendrara and 75% of Meridja. The purchase would be funded by shares in Sound.

Gunvor wins Pakistan LNG tender

Commodity trader Gunvor has won a five-year deal to supply around 60 LNG cargoes to Pakistan, according to an energy official who spoke to *Reuters*. Pakistan had launched two tenders for LNG, one for five years and the second for 15 years – which was won by Eni. The tenders amounted to a combined 240 cargoes and drew strong interest from suppliers. The country is investing billions in new gas infrastructure – including pipelines and LNG terminals – to relieve shortages of the fuel. The contract winners will not be formally announced for another 10 days.

Japan's nuclear authority approves Genkai reactor restarts

Japan's Nuclear Regulation Authority (NRA) has confirmed that the Genkai 2 and 4 reactors are compatible with the country's new safety regulations, according to the Japan Atomic Industrial Forum. The reactors are owned by Kyushu Electric Power, and the company hopes to complete safety measures – including seismic reinforcements – by the end of March. All of the reactors Kyushu has submitted to the NRA have now been approved for restarts. However, the restarts require the consent of local people and some

CONTINUED ON PAGE 8

CONTINUED FROM PAGE 7

of the surrounding municipalities – including the city of Imari – are likely to object. The adequacy of emergency evacuation plans for residents of the small islands that lie within a 30 km radius of the site is another issue. The restart of Japan's nuclear reactors has taken longer than many anticipated, meaning the country has been more reliant on imported fossil fuels, including LNG, as a result.

Lundin takes non-cash impairment of $632 mln

Lundin Petroleum is to take a non-cash impairment charge of $632 million after deciding to move 170 million barrels of oil equivalent (MMboe) of contingent resources in Malaysia and the Caspian Sea off its books, according to *Offshore Engineer*. The company decided the discoveries are unlikely to enter commercial production with a reasonable timeframe. One of the Malaysian fields is offshore Sabah and the other is offshore Peninsular Malaysia. The Caspian discovery is the Russian Morskaya field. The net contingent resource writedown is 60.6 MMboe in Malaysia and 110.1 MMboe for Morskaya.

Thailand's LNG demand to grow by 7.2% over 2016-2025

Thailand's LNG demand is expected to see a compound annual growth rate of 7.2% between 2016 and 2025, according to research by *TechSci*. The expansion was the result of declining domestic gas production and falling pipeline imports from Myanmar combined with growing demand for gas-fired power and low prices for LNG. Thailand is expected to invest $1.5 billion by 2021 in the Mozambique LNG project, which will supply 3.6 mtpa to the country.

Woodside expects to start work on Scarborough in 2017

Australia's Woodside expects to begin FEED work on the Scarborough project in 2017 and is targeting an FID in 2020, according to *Offshore Engineer*. The company acquired a stake in the ExxonMobil-operated licence that contains the field from BHP Billiton in late 2016. It also acquired a 50% interest in and control of the WA-61-R and WA-63-R licences, which contain the Jupiter and Thebe gas fields.

Chinese gas output up by 2.2%

China's gas output grew by 2.2% year on year in 2016, to 136.8 billion cubic metres, according to data released by the National Bureau of Statistics on Friday. This was down on the previous year's growth of 2.9%. The country produced 13.3 bcm of gas in December, up by 1.7% year on year. Meanwhile, oil output fell by 6.9% on an annual basis, to 199.7 mt, with December's volume down by 7.7%, to 16.8 mt. China's latest five-year plan for energy forecasts a decline in oil production of 7% by 2020 compared with 2015. "We see continued strong growth in domestic gas production through to 2020 within China. But we don't see any large greenfield oil developments coming onstream by 2020. As such, given the maturity and age of the main oilfields within the country – such as Daqing and Shengli – we forecast an ongoing decline in output," said Angus Rodger, research director for upstream oil and gas at Wood Mackenzie.

Chile may import Argentine gas

Chile will continue to export gas and electricity to Argentina in 2017 but is also in talks to import Argentine gas, Chilean Energy Minister Andrés Rebolledo said on Thursday. Argentina could export gas from its Neuquén fields to southern Chile via the Gas del Pacifico pipeline because there is not enough pipeline capacity to transport the fuel to Buenos Aires, according to local press. Chile exported 101 GWh of electricity and 361 million cubic metres of gas to Argentina in 2016. Most of the gas was transported through the Gas Andes pipeline.

Defect on Texas-Mexico pipeline limiting supplies

A key pipeline supplying Texas-sourced gas to central Mexico is operating well below capacity because of a defect. Dust in the Los Ramones Phase 2 South gas pipeline has clogged filters, *Argus* reported on Thursday. It is not clear when the pipeline will reach its capacity.

FirstEnergy plans sale of four gas-fired power plants

Ohio-based FirstEnergy plans to sell its hydroelectric assets and four gas power plants in Pennsylvania for $925 million, the company said on Thursday. The buyer is New York-based developer LS Power Equity Partners, *Bloomberg* reported. The hydropower asset is the 713 MW Bath County pumped storage facility in Virginia. LS Power bought 11 hydroelectric power stations from FirstEnergy for $395 million in 2014. ■

interfax
Natural Gas Daily

Registered Office
Interfax Europe Ltd,
19-21 Great Tower Street, London EC3R 5AQ
Tel: +44 (0)20 3004 6200
Email: customer.service@interfax.co.uk
Web: interfaxenergy.com

Chief editor Therese Robinson
therese.robinson@interfax.co.uk

News editor Tom Hoskyns
tom.hoskyns@interfax.co.uk

Western Europe editor Annemarie Botzki
anne.botzki@interfax.co.uk

Africa editor Leigh Elston
leigh.elston@interfax.co.uk

Latin America editor Christopher Noon
chris.noon@interfax.co.uk

Middle East editor Verity Ratcliffe
verity.ratcliffe@interfax.co.uk

China editor Colin Shek
colin.shek@interfax.cn

Asia Pacific editor Andrew Walker
andrew.walker@interfax.co.uk

EU policy & regulation editor Andreas Walstad
andreas.walstad@interfax.co.uk

Energy markets reporter Silvia Favasuli
silvia.favasuli@interfax.co.uk

International correspondents
Baku Anar Azizov, Nigar Abbasova ▪ **Beijing** Li Xin ▪ **Beirut** Rachel Williamson ▪ **Delhi** Garima Chitkara ▪ **Dublin** Astrid Madsen ▪ **Kiev** Alexey Egorov, Roman Ivanchenko ▪ **Lisbon** Miriam Malek ▪ **Moscow** Alexey Novikov, Svetlana Savateeva, Yulia Yulina ▪ **Perth** Sally Bogle ▪ **Shanghai** Tang Tian ▪ **Singapore** Damon Evans

Production
Chief sub-editor Rhys Timson
Sub-editors Doug Kitson, Rob Loveday
Design & layout Joseph Williams

Sales
Senior sales manager Matt Shelton
matt.shelton@interfax.co.uk
+44 (0)20 3004 6203

Sales manager Frazer Donald
frazer.donald@interfax.co.uk
+44 (0)20 3004 6207

Sales manager Alex Akselberg
alexander.akselberg@interfax.co.uk
+44 (0)20 3004 6229

Natural Gas Daily is published daily by Interfax Ltd, a division of Interfax Information Services Group.

ISSN: 2048-4534

Winners & Losers

New measures to help develop small-scale LNG infrastructure in Italy are breathing new life into the country's underused LNG terminals. Rome is implementing an EU directive to simplify and speed up site authorisation procedures.

Turkey's first FSRU will help the country reduce its dependence on supplies of Russian gas from Gazprom, but private buyers are likely to be put off by the country's pricing and storage rules. The FSRU started up in December.

The focal point of Brazil's LNG business is shifting to the country's northeast, with industry sources predicting increased private sector interest in the energy-hungry region. Pecém's LNG terminal will be the only one to see activity, analysts say.

The latest draft of India's National Electricity Plan overestimates the country's future hydro generation capacity and underestimates demand from its gas-to-power sector, according to analysts. The report is bullish on future renewable capacity.

The Shanghai Petroleum and Gas Exchange, which Beijing has billed as China's Henry Hub, has struggled to become relevant since its launch last year after capturing only a single-digit share of domestic-consumption trading volumes.

Ghana's new president, Nana Akufo-Addo, is set to shake up the country's gas and power industry through legal and fiscal changes, and independent power producers are likely to feel the burn, industry sources have claimed.

Verbatim

[Shell and Inpex] were not, and cannot, be forced on one or other option. The government can reject their offer, but [the JV can also] reject the government's demands and relinquish the lease. Besides, whatever the option, in the current market I don't think the project will ever go ahead

Jeffrey Feynman, an independent US-based oil and gas consultant, on Indonesia's stalled Masela project.

The EU risks losing out on a strong voice on climate and energy market liberalisation

Marco Giuli, a Brussels-based analyst with the European Policy Centre, discusses the potential effects of Brexit on EU energy and climate policy.

Peninsular Malaysia is facing an oversupply situation through to 2020, considering both piped gas and LNG import contracts

Peter Lee, an oil and gas analyst at BMI Research, told *Interfax Natural Gas Daily*.

People Moves

UK MP Jesse Norman has confirmed via *Twitter* that he will be responsible for the full energy brief at the Department for Business, Energy & Industrial Strategy. The appointment follows Baroness Lucy Neville-Rolfe's move to the Treasury.

RMP Energy has announced that John Ferguson, the company's president and chief executive, will retire on 28 February 2017. Ferguson has been in both roles since May 2011, when the company was acquired by Orleans Energy. Ferguson is also retiring from RMP's board of directors.

James Faroppa has been appointed as chief geoscientist and senior vice president of services at C&C Reservoirs, the company said on 18 January.

Jason Cooper has been appointed as the new president and chief executive of Linde Engineering's North American branch. Cooper has been with Linde since 2008, when he joined to lead the hydrogen and synthesis gas business unit. He has since held a number of roles, including vice president of project management and construction, and was most recently managing director of the company's Southeast Asia branch.

Rick Perry has been confirmed as the new head of the US Department of Energy. He said during his Senate confirmation hearing on 19 January that he regrets saying he would eliminate the department during his failed bid for the Republican presidential nomination in 2012. "I regret recommending its elimination," the former Texas governor said.

Go Figure

24 GW
India's stranded gas-fired power capacity.

53 MMcm/d
Volume of gas needed to balance the grid.

4 GW
New gas-fired capacity to be added over the next five years.

India's power plans underestimate gas demand, 16 January 2017

20 MMcm/d
Send-out capacity of the GDF Suez Neptune FSRU.

145 Mcm
Storage capacity of the vessel, now in Turkey.

10 days
Length of time importers are allowed to store LNG for in Turkey because of its limited storage capacity.

Turkey boosts LNG capacity but problems remain, 17 January 2017