

in production, of which five have associated recoverable oil or condensate volumes.

Several analysts *Petroleum Economist* spoke to said that the block is a quality asset and would have no problem attracting buyers.

A spokesman for ConocoPhillips, which produces almost a fifth of Indonesia's total gas output, said the decision did not mean the company was seeking to exit the country.

ConocoPhillips was recently awarded the Kualakurun Block in Kalimantan and is continuing operations in the Corridor Block in South Sumatra – which is expected to produce 956mn ft<sup>3</sup>/d of gas this year.

It also has stakes in the South Jambi B Block in South Sumatra, the Warim Block in Papua and the frontier Palangkaraya Block in Kalimantan.

Wood Mackenzie estimates Indonesia's remaining reserves at 27.8bn boe, of which 10.4bn boe are either already onstream, under development or likely to be sanctioned for development in the next few years.

A further 2.7bn boe could be potentially developed, based on the energy research company's estimates. ●

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## Nuclear restart hangs over Japan

Japan has brought back the first of its nuclear plants which were closed in the wake of the Fukushima disaster. However, analysts doubt if this will affect LNG imports

**J**APAN will start producing nuclear energy for the first time in almost two years as Kyushu Electric Power prepares to restart its number one reactor at its Sendai plant in September.

But this will only have a marginal effect on the liquefied natural gas (LNG) trade in the short term.

Japan, the world's biggest buyer of LNG, imported a record 89mn metric tons (mt) in the fiscal year ending March 31, up 1.5% over the year before. The country paid a record \$65bn for the imports, as the effects of lower crude prices, which are tied to LNG deals, had yet to trickle through.

Still, restarting one of the Sendai nuclear plant's two 30-year old reactors marks a victory for the prime minister, Shinzo Abe, who insists that without nuclear energy the Japanese economy will crumble under the weight of expensive fossil fuel imports. Japanese utilities have incurred tens of billions of dollars in losses.

Kyushu Electric Power, which received a yen 100bn (\$800mn) bailout from a state-owned bank last August to survive, estimates that putting one reactor back online would help it cut the cost of burning fossil fuels by around yen 7.4bn/month.

LNG is at the top of the list of fuel imports. Before the Fukushima accident the super-cooled fuel made up a little less than 30% of Japan's electricity mix. Nuclear shutdowns propelled LNG use to nearly 50% by end 2011.

Abe plans to push ahead with the restart of nuclear

reactors, which have all been closed since the disaster, despite strong public opposition.

A total of 25 plants have applied to be restarted but all are facing legal challenges from concerned locals. Japan's Nuclear Regulation Authority approved two reactors at the Sendai plant last September under stricter safety rules. The second reactor is due to be restarted in October.

In the longer run, under the government's 2030 plan, nuclear energy will make up 20-22% of the nation's electricity mix, down from around 30% before the Fukushima crisis. LNG is targeted at 27%, coal at 26% and renewables at 22-24%.

The return of nuclear power would appear mainly at the expense of burning fuel oil and crude for power generation. The 2030 plan, announced in June, leaves little room for any generation from oil.

According to the 2030 plan, generation from oil will fall to nearly zero, while the share of gas will fall by 12% from its 2013 level, and coal will drop 6%.

Wood Mackenzie's Michael Jones points out that Kyushu Electric has relied heavily on oil-fired power generation to make up for lost nuclear, so the restart of Sendai unit 1 should first back out crude and diesel burn in power.

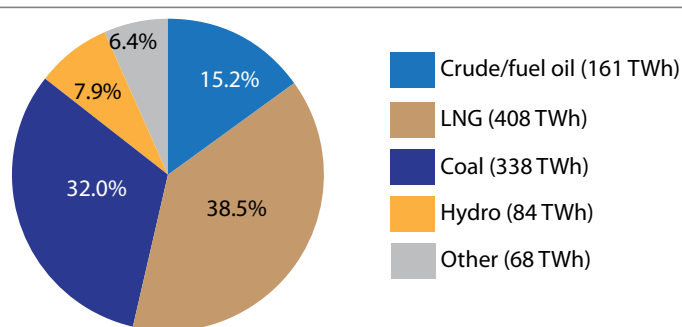
"Second, while Kyushu Electric initially increased LNG use right after Fukushima, the dramatic increase in solar generation and declining end-use demand in the Kyushu area has steadily backed out some of this LNG starting in 2013. In May 2015, for example, Kyushu Electric's solar purchases from Independent pPower Producers amounted to over 7% of the company's total power supply. So, in isolation, we actually do not think this will have a significant impact on total LNG demand," he said.

WoodMac's view is that in the long term, Japan will struggle to ramp up nuclear capacity and it only sees about 30% of Japan's pre-Fukushima capacity coming back online, the rest struggling to meet new, stricter safety standards or facing legal challenge.

But power savings and solar generation have already backed out LNG over the past two years. So the impact on LNG will much more muted than might otherwise be the case. ●

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**Japan's power mix**



Source: Japanese government