

## LNG

## Big gloom, small promise

New Asian LNG demand centres are emerging while the region's big consumers need less of the fuel

FOR YEARS, the world's biggest liquefied natural gas sellers boasted at industry gatherings about the endless potential for demand growth in Asia. Until recently, LNG's relatively high price and the commodity's inflexible trade have been its undoing. The world's biggest buyers, Japan and South Korea, have taken steps to cut their reliance on the super-cooled fuel, while new pockets of demand failed to materialise elsewhere. Now new demand is emerging – but not enough to offset the shrinking consumption in bigger markets.

Asia accounted for about 70% of the 245m tonnes of LNG shipped last year. But demand from the region's biggest buyers dropped off, including the first-ever decline in shipments to China, which fell by more than 1%, after years of double-digit expansion. South Korean imports of LNG fell by a massive 11% on the year and cargoes to Japan, the world's single-largest market, fell 4%.

The three countries make up about 60% of global LNG imports. But for different reasons, future LNG demand in Japan, South Korea and China, could be less than expected – making up less than 60% of future consumption, according to consulting firm Accenture.

The use of LNG in power generation, in particular, is not as competitive as coal. Nuclear power use is on the up, while the cost of renewables is falling. China is also planning to increase its pipeline gas imports.

Recent announcements by Japan's economy, trade and industry ministry signal that that country's natural gas consumption, virtually all of which is imported as LNG, will continue to fall past 2020 and settle at 84bn cubic metres (cm) by 2030, unless there is a breakthrough in transportation or other potential new demand

sources arise. That is 32% less than the 123bn cm imported by the country in 2014, and mostly the culmination of continued improvements in energy efficiency and the restarting of its nuclear power plants.

**Competition reboot** The return of Japan's nuclear generation could affect its LNG imports as early as this year. The Institute of Energy Economics in Japan's base-case scenario sees LNG imports falling to 83m tonnes (113bn cm) in 2016, down from a record 86m tonnes in 2014, after the first commercial operation resumed in late 2015. Three to five plants are now scheduled to restart every six months. As *Petroleum Economist* went to press, three facilities had been rebooted. In the most optimistic hypothetical scenario, where 24 nuclear plants come on stream, LNG imports

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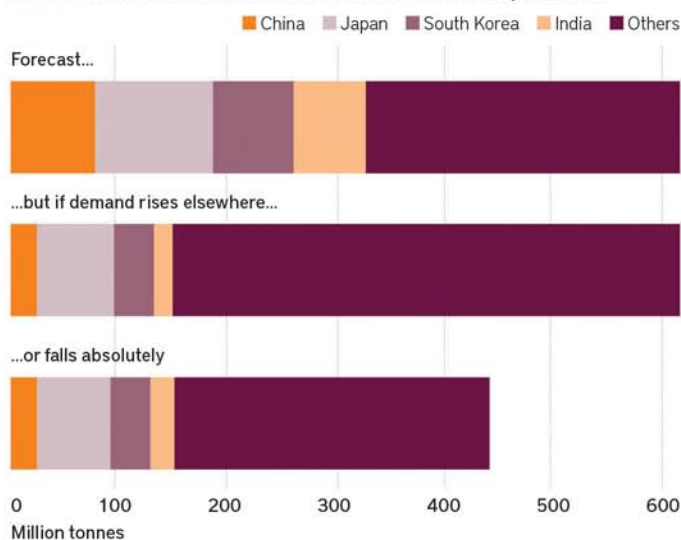
to Japan could fall to 76m tonnes this year (t/y). Renewables will play an increasingly important role in the medium to longer term too, suggest most analysts.

South Korean imports of LNG fell to just under 30m tonnes in 2015. Demand is unlikely to grow before 2030 thanks to more uptake of coal and nuclear for power generation. Spot prices of LNG in South Korea have fallen, but not as much as coal and diesel, while the cost of solar has been dropping steadily for the past five years.

If solar expands more quickly than expected in Asia, it is gas, not coal, that is threatened in the near-term. Coal and nuclear are safeguarded more by their base-load operation, while gas remains the fuel for mid-merit and peaking power generation, where renewables tend to fit. Aside from South Korea and Japan, China and India have aggressive solar targets, while South East Asia's solar sector in general remains undeveloped for now.

China is the highest growth market globally for natural gas – but not necessarily for LNG. The country's imports fell 1.1% to 19.5m tonnes in 2015, marking the first year-on-year decline since China began buying seaborne supplies in 2006. The situation is fluid though – last November, the government lifted some controls that had kept gas prices high, a move that should start to perk up demand.

FIG. 1: Much to mull: Asian LNG demand to 2030, by scenario



Source: Accenture





### Harbouring promise: LNG tanks at Shanghai port. China's LNG demand is weak, but still has potential

China has 13 LNG import terminals in operation, with combined capacity of 40m t/y. Several more terminals, whose combined capacity reportedly sits at 25m t/y, are being built for start up between now and 2019, if demand weakness doesn't delay the ramp-up. While natural gas consumption can be expected to rebound in the medium term, substantial import pipeline gas capacity is being built, which will rival LNG for incremental demand. If China's unconventional gas development and Russian pipeline projects are delayed then more LNG will be needed by the early 2020s.

Although demand for LNG is falling in Asia's biggest consumers, it is expanding elsewhere in the region. Longer-term lower LNG prices are prompting India, Pakistan, Bangladesh, Indonesia and Thailand to build import capacity.

India, the world's fourth-biggest buyer of LNG, could be the fastest-growing major market for LNG, as the fall in oil prices and flood of supplies suggest a much more favourable price environment for Indian buyers in the medium term.

The South Asian nation imported 14m tonnes of LNG in 2015, up 5% compared with 2014. But the government expects demand will almost triple to 38m t/y by 2020. That seems extremely ambitious. But Indian demand could surprise on the upside if infrastructure is successfully expanded, domestic market regulations improve, and the price of the fuel remains competitive.

India has only four existing LNG import terminals, giving it a total import capacity of 20m tonnes a year. But twelve regasification projects are planned over the next five years that would

add almost 60m t/y. It seems unlikely that all of the projects will go ahead.

Thailand is doubling its maiden 5m t/y LNG import terminal to handle 10m t/y by 2017, and has plans for a second 7.5m t/y plant too. The kingdom aims to cut domestic gas production next year to conserve waning reserves, so wants to make up for this with spot LNG. Its LNG demand is expected to hit 7m t/y by 2020, up from an estimated 2.7m t/y this year. Likewise, Indonesia, one of the world's biggest producers of LNG, is seeking to buy 5m-10m t/y of the frozen fuel by early 2020 as production fails to keep up with demand at home.

Energy-short Pakistan, another emerging market, is forecast to import 2.5m tonnes this year, up from 1.1m tonnes in 2015. Demand is expected to expand steadily, with Qatargas agreeing a deal to supply 3.75m t/y over the next 15 years, with initial volumes arriving in March.

Like Pakistan, neighboring Bangladesh faces an acute gas shortage. Several LNG import projects are on the table and state-backed Petrobangla has held talks with Qatar's RasGas for 4m t/y. Now is a good time to strike a deal for lower prices.

With consumption growth expected to disappoint in the big established markets, new sources of Asian LNG demand will not be able to suck up the impending global glut. While India could surprise as the market of last resort, producers will hope demand centres outside of Asia, particularly in Europe, which can take up the slack. LNG is cheap at the moment, but not yet as cheap as coal. **Damon Evans, Singapore**