Oz downstream in the doldrums

Australia's demand for refined products is increasing as its refined sector contracts. This could see the country overtake Indonesia as Asia-Pacific's major products importer, writes Damon Evans

Twilight: Australia's refining sector has seen better days

AUSTRALIA is becoming increasingly reliant on imported fuels and, as its ageing, high-cost, refining sector shrinks, could overtake Indonesia as the biggest importer of refined products in the Asia Pacific region.

The major shift raises fears about the island continent's liquid fuel security, but, more significantly, provides an export opportunity for Asian refiners and could benefit independent traders.

This year Shell will shutter its Clyde refinery, in New South Wales (NSW), and Caltex, which is 50%-owned by Chevron, plans to close its Kurnell plant, also in NSW, by 2014. The two closures will eliminate one-third of the country's refining capacity, currently 750,000 barrels a day (b/d). Australia lost almost 80,000 b/d of capacity in 2003, with the closure of ExxonMobil's Port Stanvac refinery, in South Australia. And once the latest plants are mothballed, Australia will have five operational refineries. However, more closures are expected.

Further cuts in refining capacity could trigger a supply bottleneck to fill the void. As a result, supplies could come at a higher cost as Australia has one of the most stringent fuel specifications in the region, Suresh Sivanandam, a senior analyst with consultancy Wood Mackenzie, told *Petroleum Economist*.

But for the time being there is ample surplus refining capacity in Asia, Sivanandam added.

Australia consumed just over 1 million b/d in 2011, up 5.7% year-on-year. Since 2001, the country's demand has increased by almost 20%, largely due to a boom, in the natural resources sector.

If Australia buys half of its fuel needs from overseas, as is now forecast, it could easily surpass Indonesia's fuel imports of around 400,000 b/d – the biggest in Asia and one of the largest worldwide.

In 2000, only 10% of Australian fuel demand – about 80,000 b/d – was imported. But, by 2011, fuel imports climbed to almost a quarter of total demand – 225,000 b/d – as refining capacity narrowed and demand increased, according to data from Wood Mackenzie.

And the consultancy forecasts that, as refineries close, refined product imports will hit 500,000 b/d by 2015. The bulk of this growth will stem from gasoil and gasoline purchases. Gasoil imports are expected to rise from 160,000 b/d this year to 230,000 b/d in 2015, while gasoline imports are forecast to jump from 35,000 b/d to 120,000 b/d over the same period.

New terminals

The projected increase in demand for overseas products could also offer independent traders, who are already scouting the Australian coast for potential sites to build import terminals, a rare opportunity for more business in a developed country with little risk, according to a report in the *Financial Times*.

However, most analysts agree traders will have a limited role to play, as Chevron and Shell plan to offload excess barrels from their swing refineries in Singapore.

Shell is converting its 90-year-old 79,000 b/d Clyde refinery, near Sydney, into an import terminal to help it maintain its position in the more profitable fuel distribution and marketing segment.

Chevron said it also plans to convert and expand the 57-year-old 125,000 b/d Kurnell plant, also outside Sydney, into an import terminal at a cost of A$250 million ($262 million).

But they are unlikely to be the last plants to shut their doors. Investment in Australia's refining sector is unattractive. Indeed, in September, Shell admitted the future of its 55-year-old 115,000 b/d refinery in Geelong, Victoria, was "borderline", while ExxonMobil has been seeking to divest its 80,000 b/d Altona plant, also in Victoria.

It's widely expected that once the majors have expanded their capacity in Asia, they will reassess the viability of their Australian refineries. ExxonMobil is building a diesel hydrotreater in Singapore that will increase production capacity of ultra-low sulfur diesel fuel at its refinery to around 160,000 b/d when it comes online by 2014.

Australian refiners are struggling to compete with Asia's bigger, more modern and more efficient plants. Some Asian refineries can individually produce the same amount of refined products as all of Australia's seven refineries combined.

Meanwhile, domestic crude output, which is largely exported as it is more suitable for use in high-value products outside Australia, is declining. On top of this, importing crude to use as a refinery feedstock is often more expensive than simply importing the refined products the country needs. And with a strong Australian dollar, imports continue to be more economically attractive.

On top of this, the country's high development and operating costs, coupled with the new carbon tax, make it more economic to convert Australia's small, ageing refineries into import terminals. The carbon tax, introduced in mid-2012, will push costs up by $0.80-$1.20 per barrel of crude processed, Sivanandam said.

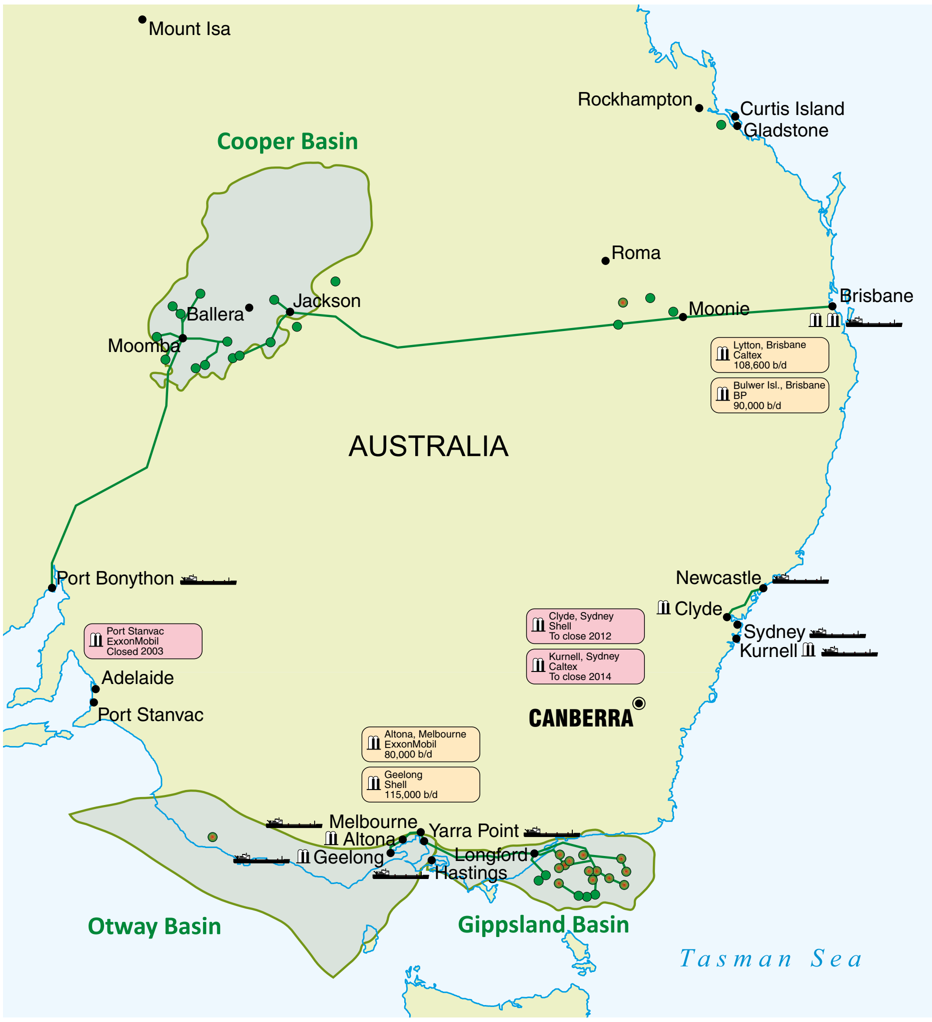
He added that the easiest solution is to import products rather than adapting operations to manage these difficulties, especially as future demand growth is not expected to be great. Overall product demand is expected to increase by just 1.4% per year to 1.04 million b/d by 2015, according to Wood Mackenzie data.

Steeper demand growth is only likely in Western Australia, where mining operations require diesel. Diesel demand is forecast to rise from 340,000 b/d in 2010 to 381,000 b/d in 2015. Meeting Western Australia's demand is difficult – almost all Australia's refineries are in the eastern states, where an estimated 75% of the country's 22.8 million citizens reside.

Rising import dependency also jeopardises Australia's liquid fuel energy security. Most of its refined products come from Singapore, which depends on the Middle East for more than 80% of its supplies. Political instability or conflict in the Middle East, or along transport routes such as the Strait of Hormuz, would have a detrimental effect on Australian energy security, says Vlado Vivoda, research fellow at Griffith University, in Brisbane.

As a result of its rising import dependence, Australia is now the only member of the International Energy Agency (IEA) that does not meet the group's minimum stock-holding obligation of 90 days of net oil imports, which are designed to cushion the blow from potential supply disruptions. Since the beginning of 2010, Australia's level of oil stocks has failed to meet the quota.

Map 1: Eastern Australia oil infrastructure



Source: Petroleum Economist

Australia is now the only member of the IEA that does not meet the group's minimum stock-holding obligation

In November, the IEA's executive director, Maria van der Hoeven, urged the federal government to build up its emergency stocks and stop relying on industry supplies, which would allow it to participate in international efforts to coordinate a release if needed.

Australia's *Energy White Paper 2012*, released in early November, warned that while liquid fuel energy security needs are being met, there could be a number of emerging issues that need to be addressed to maintain that level of security.

Aside from supply-side risk, a greater reliance on international supply chains means Australia will also bear the brunt of higher crude prices.

Still, liquid fuels will remain a major component of the Australian energy system, supplying almost half of the nation's energy needs over the next two decades. ●