

## A Gas To Liquids Plant For the North West Shelf ?

Posted by [Big Gav](#) on March 13, 2008 - 8:47am in [The Oil Drum: Australia/New Zealand](#)

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Chevron Australia has been in the news this week after announcing plans to develop a new LNG plant on the WA mainland to process gas from its [Wheatstone discovery](#) on the north west shelf. Interestingly, as well as feeding gas into the domestic network, they are considering developing a [gas-to-liquids](#) facility as part of the plant - which may slightly reassure those who look at both our trade deficit (in which imported liquid fuels are a major factor) and the possible impacts implied by the [export land model](#).

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### Gas To Liquids

GTL projects have frequently been discussed over the years but there don't seem to be a lot of concrete examples, outside of some pioneering plants in South Africa and Malaysia and some [large projects](#) being developed by Shell and Sasol/Chevron in [Qatar](#) (which [Qantas](#) is apparently considering as a source of jet fuel). The Energy Blog has a good description of the [GTL process](#) and the players in the industry, for those interested in the technical details, and Robert Rapier has previously posted at TOD on the "[Promise and the peril of GTL](#)", quoting an estimate from Syntroleum that there is enough stranded natural gas to produce 300 billion barrels of fuel.

### Wheatstone

The Wheatstone gas field is about 85 kilometres southwest of the Goodwyn platform of the North West Shelf project (180km offshore), with the two permits it encompasses containing an estimated 4.5 trillion cubic feet of natural gas. Chevron is talking about a single LNG production train producing five million tonnes of LNG per year (around a third of the size of Woodside's production at the nearby North West Shelf project) but has not given any indication of the volumes under consideration for the GTL option.

Nigel Wilson at The Australian has the most [in-depth report](#) on the development (and a shorter [follow up article](#)) - noting that while there has been speculation since 2004 that Wheatstone would be used for a gas-to-liquids plant, helping to offset Australia's ever-increasing dependence on imports, "few in the oil and gas sector believe Chevron will actually build an LNG plant based on Wheatstone".

The article goes on to speculate that it might make more economic sense to process Wheatstone gas at the North West Shelf facility as part of the development of Woodside's Pluto project, which would make a GTL facility highly unlikely, but that Chevron could be more interested in developing a standalone GTL plant than a small new LNG plant or sending the gas to the new Pluto LNG trains.

Chevron's LNG interests in Australia were seen as being its 50 per cent stake in the Gorgon project, which for more than a decade has been trying to commercialise Australia's biggest gas fields on the North West Shelf. In presentations to both the federal and West Australian governments recently, Chevron has been short on detail on what it wants to do with Wheatstone even though it has resolutely argued the reservoir will not be part of the supply for Woodside's \$12 billion Pluto LNG development now under construction. ...

Chevron and its Gorgon partners, ExxonMobil and Shell, are in a bind. They want to commercialise some of Australia's best gas assets - ExxonMobil's contribution is the Jansz field, reputedly Australia's largest with an estimated 22 trillion cubic feet of gas - but the costs of the Gorgon LNG proposal are out of all scale to potential returns.

Gorgon is in the WA Government's books at \$11 billion but that's a figure from several years ago. Now substitute a figure three times that for a plant that has a production licence for 10 million tonnes a year and the economics look more than a little shaky. Admittedly, Chevron has said it wants to know what environmental approval hoops it will have to go through to lift Gorgon from two trains to three and output up to 15 million tonnes a year, yet there seems little urgency in presenting the formal request to the WA Government.

And that's probably part of the problem concerning Wheatstone. For several years Chevron has talked expansively of its plans and has yet to deliver. That's why few in the oil and gas sector believe Chevron will actually build an LNG plant based on Wheatstone, even though that's what it is telling government it plans to do.

Wheatstone is about 85km southwest of the Goodwyn platform of the NW Shelf project but more than double that distance from the coast. As such, it looks logical that it should be tied into the gas reserves for the Shelf project, of which Chevron is one of the six joint venture partners, or tied to Pluto, which is only slightly further to the west.

For some years it has been reported that the gas available to the Shelf partners has been exhausted by their success in rolling over contracts with foundation customers in Japan, the \$25 billion Guangdong deal in China and smaller commitments to Korea. This claim does not appear to take account of a number of small gas fields that are currently stranded on the Shelf. Having said that, any further expansion of the NW Shelf project would appear to be more commercially attractive than investing in a greenfield LNG operation virtually next door.

A similar argument evolves for Pluto where Wheatstone is regarded within the gas industry, if not within Chevron, as a possible supplier to the Pluto 2 plan, which Woodside's Don Voelte says is well into the planning stage. Pluto 2 would be located on the same site as Pluto 1 which Woodside is promoting as the Burrup LNG Park that Woodside says is being designed to process gas from Pluto as well as other regional fields.

There is also the view, not a million miles from Chevron's Perth headquarters, that that company does have to get some operational runs on the board. But why not gas to liquids or even domestic gas rather than the problematic returns from a small, stand-alone LNG plant?

At this point it is difficult to determine how much (if any) liquid fuel we could see flowing from Australia's offshore gas reserves, but the surge in LNG developments does raise the question, how long will Australia's gas reserves last and where will the gas go ? I hope to have a post up on

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this shortly.

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