2008 liquefied natural gas

Steve Rotherham
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QUEENSLAND looking to liquefy; Chevron pushes Gorgon and Wheatstone; Pluto or Mickey Mouse?; taking time to Browse LNG; Ichthys gets away; floating plans for LNG.

Queensland: prospective one day, liquid the next

In 2008, Queensland became a magnet for planned LNG projects which aim to use the state’s coal seam gas resources to feed major export operations.

By the end of 2007, three LNG export projects – Santos’ Gladstone LNG, Arrow Energy and LNG Limited’s Fishermans Landing LNG and the Sunshine Gas-Sojitz Sun LNG – had been slated for the deepwater port of Gladstone in central Queensland.

During the course of 2008, Queensland Gas Company and BG Group announced their own Queensland Curtis LNG scheme and Origin Energy also launched its own project in partnership with ConocoPhillips.

In addition, Santos and the Arrow-LNG Limited venture firmed up their plans by announcing partnership with major international players (Petronas and Shell respectively).

However, Sun LNG now seems doubtful as Sunshine Gas has been taken over by QGC, which is itself in the process of being acquired by BG Group. Sojitz is rumoured to be seeking new gas supplies for the small (0.5 million tonnes per annum) project, but there has been no news on this front.

Chevron pushes Gorgon and Wheatstone

The Gorgon saga continues. It is easy to be cynical about this long-awaited, much-delayed project, but in August the development finally secured about $A1 billion to start preliminary work leading up to the final investment decision.

Chevron said the partners hoped to get all approvals next year and a final investment decision would be likely to follow soon afterwards.

In May, Chevron announced it would be subletting part of Mermaid Marine’s Dampier Supply Base for five years as a supply base during Gorgon’s preliminary and construction phases.

But big questions remain, particularly over just how expensive Chevron’s carbon dioxide sequestration plans will prove to be. How much trouble will it have securing a construction workforce in today’s overheated market?

The good news for Western Australia is that Chevron is determined to go ahead with an Australian LNG project. If Gorgon suffers further postponements, the company is likely to fast-track its Wheatstone project.

Announced in March, Wheatstone will be a multi-billion dollar, multi-train complex.

The initial phase of the development will tap an estimated 4.5 trillion cubic feet of natural gas resources located within the two Chevron-operated permits that include Wheatstone.

In documents submitted to the federal Environment Department in September, Chevron said the project was expected to start producing 10 million tonnes of LNG per annum through two trains from 2015 using gas from Wheatstone.

This may be expanded to a five-train operation capable of producing 25MMtpa if it can source enough of its own and third-party gas.

Chevron holds a number of fields in its own right outside the Greater Gorgon Area. An appraisal well drilled this year at the Iago field proved successful.

The liquefaction facility would be on the WA mainland about 100km south of the Burrup Peninsula.

Both Gorgon and Wheatstone are intended to also supply gas to the WA domestic market.

Pluto 2 or Mickey Mouse?

The planned Queensland LNG projects are exciting. However, while many LNG schemes are being planned around the world, few final investment decisions are being made.

This is why Woodside's Pluto development is so important.

Pluto has been in the news for the last few years. In August 2005, only five months after the field's discovery, Woodside chief executive Don Voelte announced plans for an LNG project based on Pluto.

In December 2005 and March 2006, Woodside unveiled foundation customers – Tokyo Gas and Kansai Electric Power. In July 2007, the company made its final investment decision for Pluto and in November that year it began construction work on the Burrup Peninsula project site.

By the standards of the LNG industry, this is a breakneck pace and very much unprecedented in Australian liquefied natural gas.

But Woodside's plan to roll-out a second train at Pluto so quickly now seems under threat.

The company's Pluto Area exploration program has produced only a series of dry holes, and its back-up plan of using third-party gas also looks unlikely.

The major gas discoveries near Pluto are held by United States companies Chevron and Apache Energy. Chevron aims to develop its Wheatstone and Iago fields for its own LNG project and Apache is planning to sell gas from fields on the Julimar trend into the lucrative WA domestic market.

Woodside's Pluto Area acreage covers nine permits and almost 35,000 square kilometres. The company is processing new seismic (3166sq.km 3D and 6484km 2D) and will drill 6-9 more exploration wells in this area next year.

But Woodside has also made contingency plans.

In a November investor briefing, Pluto project leader Lucio Della Martina acknowledged that supply from future Woodside discoveries and available third-party gas might not be available in time to feed a second train at Pluto in the next few years.

Della Martina said if that was the case, the company would accelerate production from Pluto and the nearby Xena field to fill the gap until new gas finds and third-party gas could be brought online.

It's a bold move, in keeping with the history of Pluto so far, but investors would probably prefer more certainty in the gas supply.

Sunrise in Timor?

Pluto Train 2 has assumed added importance in the last year as problems have become apparent at Woodside's Greater Sunrise and Browse LNG projects.

The company had been planning to roll out a production line of LNG trains with work on each train beginning immediately after completion of the previous train. Under this scenario, Pluto Train 1 could have been followed by Pluto 2, Browse LNG 1 or Sunrise 1.

But slow progress at the Browse and Sunrise projects means that Pluto 2 is now the only real option for starting work on a new train once Pluto 1 has been finished.

Sunrise has had a long history of political problems but it was believed that, when Jose Ramos-Horta replaced Mari Alkatiri as East Timor's Prime Minister, relations would become easier between the East Timorese government and the Sunrise joint venture (which is led by Woodside but also includes ConocoPhillips, Shell and Osaka Gas).

But the two sides are not even close to resolving disagreements over where the Sunrise liquefaction plant should be located. In a recent briefing, Woodside said there were two options – Darwin or floating LNG.

Ramos-Horta also says there are two options – putting the plant on East Timorese soil or not developing the field.

East Timor's petroleum fund is believed to be worth about $4 billion and the government has said it is willing to defer development of Greater Sunrise until terms have been reached that it finds acceptable.

The government and a consortium of South Korean companies have commissioned a survey of the seabed between Greater Sunrise and the Timorese mainland designed to show that building a pipeline to East Timor would be feasible.

Time to Browse difficult options

Woodside says there are two options for developing its Browse Basin gas fields – a Kimberley LNG plant or piping the gas south to the Pluto plant on the Burrup Peninsula.

So why isn't Browse gas being cited as a possible option for Pluto 2?

Two reasons: Woodside still has to work out what it will do with the carbon dioxide that is found in high levels in Browse Basin gas, and it wants to explore all options in the Kimberley before committing itself to such a long pipeline.

So far, the company hasn't been welcomed with open arms in the Kimberley. The Broome Shire Council has said it doesn't want any LNG operations within its boundaries, citing fears about damage to local tourism, pearling and fishing industries, and Aboriginal traditional owners have rejected a $500 million offer from Woodside that would have required them to sign away their cultural heritage rights for the development site before the specific location was even known.

Woodside is aiming for a Browse LNG FID in late 2011.

Meanwhile, the state and federal governments are still working to finalise the site for a common-user Kimberley LNG hub.

The WA Environment Protection Authority has said James Price Point and Gourdon Bay are the two best sites and has ruled out North Head and the Anjo Peninsula.

WA Premier Colin Barnett has said he wants to announce a site before Christmas But federal Environment Minister Peter Garrett has warned that WA must follow "cooperative procedures" in selecting the site.

This would involve "significant engagement of all the stakeholders". Garrett said the assessment should be concluded by April 2010.

It is easy to see why another Browse Basin LNG developer, Japan's Inpex, lost patience with WA's drawn-out processes.

The big fish that got away

In September, Ichthys operator Inpex and partner Total SA announced they had decided to pipe gas from the giant field more than 800km to Darwin for liquefaction. WA's notorious red tape and bureaucracy had simply proved to be too much for them. In contrast the Northern Territory Government and bureaucracy couldn't do enough to please Inpex and Total.

A major find – announced in August – will only make WA feel even more pain from losing the liquefaction plant.

Inpex and Total found a 72m gas column in the Mimia-1 exploration well about 20km from the northern edge of Ichthys. A production test confirmed the well had found both gas and condensate but neither partner provided any further details.

Ichthys (ancient Greek for fish) is currently assessed as holding 12.8 trillion cubic feet of gas and 527 million barrels of condensate.

Floating plans for LNG

While Inpex looks to Darwin and Woodside assesses onshore Kimberley sites, another Browse LNG player, Shell, is thinking very seriously about floating LNG.

In July, Shell issued three shipbuilders with a formal invitation to tender for the front-end engineering and design, as well as engineering, procurement and construction, of a 3.5 million tonne per annum floating LNG facility.

Shell says a floating LNG plant can sidestep pipeline costs and environmental approval problems and FLNG is the leading development option for Prelude, a 1-2Tcf Browse basin gas field 400km off the Kimberley coast.

But Shell will not be the first company to use FLNG.

Norway’s Flex LNG already has ships incorporating liquefaction units under construction in South Korea.

It has signed heads of agreement for two FLNG projects. The first of these projects is expected to be operating in Nigeria in 2011, the second in Papua New Guinea in 2012.