LNG juniors follow the big boys

LNG has long been seen as a game for the majors, but some Australian juniors now have big plans for LNG projects. By **STEVE ROTHERHAM** and **SONYA NEUFELD**

Liquefied natural gas is a boom commodity. Leading producer Woodside Petroleum recently said it expected global LNG trade to grow from about 145 million tonnes per annum (MMtpa) in 2005 to 370MMtpa in 2015 – nearly trebling in 10 years – and many industry observers believe global demand could outstrip supply by up to 20MMtpa between 2008 and 2015.

Seeing an opportunity, several smaller Australian companies, including MEO Australia, Karoon Gas and Nexus Energy, are positioning themselves for LNG projects.

Little fish Browse LNG options

Sometimes being small is helpful, according to Karoon exploration manager Mark Smith, who tells how his company grabbed two Browse Basin permits, WA-314-P and WA-315-P, immediately on trend with the giant Scott Reef/Brecknock gas fields discovered in the 1970s.

At that time – just three years ago – there wasn't the widespread understanding of the emerging massive global LNG market that there is now. Woodside wasn't active in the Browse; it was concentrating on Sunrise and the North West Shelf. But Karoon saw an opportunity.

"I know about the acreage from when I worked with BHP [in senior geotechnical positions]," Smith said.

"I knew that [US junior] Liberty had the blocks and had been trying to farm them out for a few years.

"We had an inkling that the market was changing and we were small enough to move quickly."

Nexus tells a similar story of moving quickly on an underrated opportunity. According to Ernst & Young partner Russell Curtin, this is where juniors have an advantage over the majors but they still need big partners to help drive their ambitions.

"They've been nimble in getting access to ground [but] LNG projects are very expensive to get off the ground," Curtin said.

"Now they have the opportunity to sell down interest in these assets and retain an ownership interest and by various farm-in mechanisms, be carried in these projects."

Nexus and Karoon agree but also say there is another important strand to their business plans.

They argue that their prime Browse Basin acreage allows them to attract major farm-in partners at a time when that region is becoming the new hotspot for LNG – and for condensate.

"What differentiates the Browse reservoirs are their high liquids content," said Nexus managing director Ian Tchacos. "If a gas project also has a lot of condensate, that becomes much more exciting."

Recent seismic data has indicated the potential for over 20 trillion cubic feet of gas and associated liquids in Karoon's two permits. In addition, recent analysis of gas samples from a 1981 well drilled in Karoon's acreage predicts a potential condensate yield of 33 barrels per million cubic feet and a liquefied petroleum gas yield of 6.4 tonnes per million cubic feet. Estimates of liquids ratios are similar for Nexus' prospects.

"It's great basin for condensate-rich gas," Smith said. "That's a big advantage compared to fields such as Io/Jansz [in the Greater Gorgon Area], which have dry gas."

Stripping out the condensate during or before the LNG development can create an income stream that can help meet many of the heavy capital requirements associated with gas liquefaction projects.

But Nexus and Karoon concede that while condensate is helpful, the huge capital requirements of LNG projects still mean that relationships with big players, preferably ones with expertise in LNG, are important.

For Karoon, which has linked up with Darwin LNG operator ConocoPhillips, it was a case of opposites attracting.

"Conoco are an LNG major and a reliable operator, and they like us because we are small and unfettered," Smith said.

ConocoPhillips has approval to expand Darwin LNG threefold. Presumably, it could pipe the gas to Darwin, or sell into another project such as Ichthys (Inpex/Total) or Browse LNG (Woodside), or it could develop another facility in the Browse either on its own or in partnership with another company such as Shell.

Smith says he has no idea what ConocoPhillips might be planning.

"We're focusing on the exploration aspect now, but we will need to know the condensate ratio before we can properly design the options for development," Smith said.

Nexus also has a big brother, teaming up with Shell, which like ConocoPhillips has serious upstream and downstream operational and technological capabilities.

When Shell Development Australia farmed-in into the Echuca Shoals prospect, it already held a neighbouring block sandwiched between the Nexus lease and the giant Ichthys gas discovery held by Japanese major Inpex.

Then in March, Nexus and Shell won permit AC/P41 in the northern Browse Basin, a 1900 square kilometre permit adjacent to Nexus' Crux gas-condensate field. They hold 50% each and have a big work program that includes at least three wells and 3D seismic surveys over the next three years.

But Tchacos says farm-outs of this block and of the Echuca Shoals block, which Nexus holds 66% to Shell's 34%, are likely.

"There is no way Nexus is going to fund 50-60% of an LNG project," he said. "If drilling proves successful, we can farm down to 20-30%."

However, Ernst & Young's Curtin warns that small players have to be cautious in how they handle farm-outs.

"I think the real challenge for these smaller players over the next decade is for them to not sell down so much that they wind up with nothing left," he said.

"They have to look to ways to finance their interests in those projects because they are very capital-intensive and to make sure that they have enough ownership interest in the projects not to be irrelevant."

MEO Australia managing director Chris Hart says the problem can be even worse. Like Nexus and Karoon, MEO is a small Australian LNG hopeful with a big company as a partner, but Hart says MEO has been very careful in ensuring it, not its partner, retained control of the project.

"Major companies have a global agenda and any small Australian project which includes a smaller, weak partner will be well down the 'merit order' list," he said.

"The majors are happy to book equity gas and wait for the inevitable death of the weaker JV participant.

"It was our view that we had to totally control the development and timing. Any partner should be on the buying side to accelerate rather than retard the timing."

But Tchacos is confident that Nexus' Browse blocks fit in with Shell's aim of establishing Australia as the heart of its Asia-Pacific LNG operations. He points out that Shell has very aggressive exploration plans for the Browse.

"Shell is committed to drilling 12 wells in WA-371-P [adjacent to Echuca Shoals]," he said. "That's going to give us a lot of information and it's likely to accelerate exploration and development in the area as a whole."

Upstream, downstream

MEO Australia is taking a different approach. Unlike Nexus and Karoon, MEO is based in the Timor Sea, and while the two Browse Basin LNG hopefuls are relying on big partners to process their gas, MEO has always had a hands-on attitude towards the downstream component to its flagship Tassie Shoal project.

The original plan was for a methanol operation to be co-developed by MEO and 50:50 joint venture partner Air Products and Chemicals, a US multinational, with the plant to be fed by the carbon-dioxide rich gas from the Santos-operated Evans Shoal gas field.

But MEO later moved into the adjacent exploration permit, NT/P68, which has the potential for condensate-rich gas suitable for an LNG project as well as further methanol production possibilities.

The company's plan involves setting an LNG plant and a methanol plant, along with storage tanks and berthing facilities, on and around gravity-base concrete islands in about 14m of water, about 275km north of Darwin.

Tassie Shoal has already received full environmental approval for construction and operation of both plants, which is valid for 50 years. In January, the Federal Government granted the development Major Project Facilitation status.

Hart says MEO's plan involves an innovative but cautious approach to producing or manufacturing LNG offshore.

"Everybody's talking about floating LNG, but from our perspective, most banks' and companies' perspectives, floating LNG production is basically non-bankable," he said.

"There are a large number of technical risks that haven't been resolved and will only be resolved when a major bites the bullet and commits to building a floating LNG production facility."

MEO has taken an intermediate step whereby it floats its plant for only the short period required for a delivery vessel to actually deliver it to the site and then ground it on Tassie Shoal. The plants would be totally constructed and pre-commissioned at a highly experienced, low cost, South-East Asian construction site.

"Our concept is like an artificial island," he said.

"We're heartened by the fact that Woodside, who we've been chatting to for a number of years, is now proposing this approach for Scott Reef and very recently, they're proposing to sit an LNG facility on a shoal for Sunrise."

The gap in MEO's plans is the lack of a proven gas resource, but the company's 100%-held NT/P68 contains the 1972 Heron gas discovery.

MEO has reworked old data and run new 2D and 3D seismic surveys. It now plans to begin a three-well exploration/appraisal program in August/September that will focus on the broad, low-relief Epenarra anticline that encompasses the original Heron discovery as well as the underlying Heron North Plover structure.

Hart says these structures could hold 11Tcf of gas in-place.

The company also has a nearby exploration prospect called Blackwood where it had recently firmed up a drilling location by running a 600km 2D seismic survey.

MEO hopes to begin front-end engineering and design at the beginning of 2008 leading to a final investment decision by the end of the same year and first production by 2011-12.

Big opportunities for small players

Tchacos believes the next couple of decades will offer big possibilities for LNG producers.

"LNG is going to be the interim fuel while new energy sources are being developed," he said. "With greenhouse concerns, people are much happier to burn gas than they are using coal or fuel oil."

He recognises that while small companies are nimble, they have fewer development options that big players but this doesn't faze him.

"With a small company you have to look at the next three years, not the next 15," he said. "But if you position yourself early, you can also benefit in the longer term." P