

Oil and gas to drive north-west growth



Mark Beyer

IF Western Australia plays its cards right, the state will benefit from a succession of giant oil and gas projects over the next decade that will deliver big economic dividends for 30 or more years.

The oil and gas sector is already one of WA's major export industries and will be a much bigger contributor, particularly if proposed liquefied natural gas (LNG) projects come to fruition.

WA hosts abundant gas reserves, particularly off the north-west coast and the Kimberley coast, and strong gas prices have made it commercially viable to develop these reserves, which are often in deep water hundreds of kilometres offshore.

“We’ll move both projects forward without delay.”

- Roy Krzywosinski

The biggest hurdle standing in the way of the industry's growth is the environmental approval process, which has repeatedly delayed the Gorgon project and threatens to send the Ichthys project to Darwin.

By comparison, the industry's biggest player, the Woodside Petroleum-operated North West Shelf venture, has enjoyed a relatively smooth ride through the environmental approval process.

The NW Shelf venture recently started production from the fifth processing train at its giant LNG plant, located on the Burrup Peninsula.

The \$2.6 billion train 5 project took total investment in the NW Shelf venture to \$25 billion, making it Australia's largest resource project. The expansion also lifted output to 16.3 million tonnes per year.

The venture, which is jointly owned by Woodside and five international

partners, is also proceeding with several offshore projects, most notably the \$5 billion North Rankin B and \$1.4 billion Angel projects.

Both are designed to ensure the venture has an assured gas supply for its LNG plant.

Separately, Woodside is proceeding with development of its 100 per cent-owned Pluto LNG project, which is also located on the Burrup Peninsula near Karratha.

The Burrup is highly valued for its ancient rock art but that has not stood in the way of Woodside's growth plans.

At Woodside's annual results presentation last month, chief executive Don Voelte said the company was focused on three big growth opportunities.

At the head of the queue is a second LNG production train at Pluto.

Two engineering joint ventures – FosterWheeler with WorleyParsons and Technip with Chiyoda and Fluor – have been engaged to prepare project execution plans for Pluto train 2.

Before Woodside can proceed with train 2, it must lock in additional gas supplies for the expanded LNG plant.

Indeed analysts believe that Woodside, which has a poor exploration track record off the north-west coast, may also need to negotiate additional gas supplies to secure the long-term operation of Pluto train 1.

Hence, petroleum companies like Apache, with its Julimar and Brunello gas fields, BHP Billiton, with its Thebes gas field, and Chevron, with its Wheatstone field, will be able to evaluate the merits of a stand-alone LNG project versus the sale of their gas to Woodside.

Looking further ahead, the main options for Woodside are its Sunrise LNG project in the Timor Sea, its Browse Basin LNG project off the Kimberley coast, or a third Pluto production train.

Mr Voelte has warned that the federal government's proposed emissions trading scheme could have a major adverse impact on the viability of

future projects, particularly Browse.

He has also been highly critical of the Carpenter government's domestic gas reservation policy, but that has not stopped Pluto proceeding.

Japan's Inpex, which is looking to develop the Ichthys gas field off the Kimberley coast, has more immediate problems.

It has been caught up in a joint federal-state government review that is seeking to identify a single site on the Kimberley coast that could be used for all of the proposed LNG projects in the area.

Other potential projects in the area include Woodside's Browse plant and Shell's Prelude plant.

All of these projects are evaluating a range of development options.

Inpex, for instance, had wanted to build its LNG plant on the Maret Islands but may instead pipe its gas to Darwin.

Woodside is focused on two options for Browse – an LNG plant on the Kimberley coast or piping the gas to the existing LNG plants on the Burrup Peninsula.

A third possibility is the construction of a floating LNG plant, located on a tanker vessel.

Royal Dutch Shell is also investigating the possibility of a floating LNG plant, for its Prelude gas field.

In June, Shell invited three consortia comprising engineering and shipyard contractors to tender for the front-end engineering and design (FEED) and engineering, procurement and construction of a 3.5mtpa floating LNG facility.

Of the mega projects under evaluation, Gorgon is arguably the most advanced, after years of false starts.

The joint venture partners – Chevron, ExxonMobil and Shell – announced in August they had agreed to spend \$1 billion and hire up to 1,200 staff and contractors so they could advance to a final investment decision in the next 12 to 18 months.

Chevron's latest plan involves construction of three 5mtpa LNG trains on environmentally sensitive Barrow Island.

It has also decided to incorporate a domestic gas plant to supply the local market, complementing its LNG export sales.

Separately, the US company is

evaluating the development of its Wheatstone gas field, located 85 kilometres from its Gorgon reserves.

"We have enough gas resources in WA to underpin two Chevron-operated LNG plants," Chevron Australia managing director Roy Krzywosinski said recently.

"Wheatstone will not change our sense of urgency in moving the Gorgon project forward.

"We'll move both projects forward without delay."

The Wheatstone development will have initial capacity of one, 5mtpa LNG production train, located on the mainland.

FUTURE OIL & GAS PROJECTS

OPERATOR	PROJECT	COST	OUTPUT
Chevron	Gorgon LNG	\$20bn	15mt
Woodside	Browse LNG	\$20bn	15mt
Inpex	Ichthys LNG	\$12bn	7.6mt
BHP Billiton	Scarborough LNG	n/a	6mt
Woodside	Sunrise LNG	\$10bn	5.3mt
Chevron	Wheatstone LNG	n/a	5mt
Woodside	Pluto LNG 2nd train	n/a	4mt
Shell	Prelude LNG	\$2.3bn	3.5mt
Methanol Aust	Timor Sea LNG	\$1.2bn	3mt
Nexus Energy	Crux liquids	\$1.2bn	n/a
BHP Billiton	Macedon gas field	\$1bn-2bn	n/a

Cost = unofficial estimates



GO-AHEAD: Woodside is proceeding with development of its 100 per cent-owned Pluto LNG project located on the Burrup Peninsula near Karratha – the LNG storage tanks pictured above have a combined capacity of 240,000 cubic metres. **Photo: Courtesy Woodside**