

Woodside's Pluto leads strong oil and gas field

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THE oil and gas sector is set to make an increased contribution to Western Australia's strong economy with eight major expansion projects under way, including the state's single most expensive development, Woodside Petroleum's \$12 billion Pluto gas project.

Two even larger projects – the Gorgon and Browse Basin gas projects – received a boost last week, with new export deals and environmental approvals enhancing their prospects of proceeding.

The expected cost of the proposed gas projects is on a scale that far exceeds any developments in WA's history.

Industry analysts estimate the Gorgon and Browse projects, which involve the construction of offshore gas platforms and liquefied natural gas (LNG) plants, are each expected to cost about \$20 billion to develop.

This is roughly double estimates made two to three years ago.

The high costs partly reflect the general increase in construction expenses, but also reflect the challenging location of these projects.

The Browse gas fields, for instance, are in water 400 to 800 metres deep and about 250 kilometres offshore.

The good news is that LPG prices have also risen sharply, which means the projects may still be commercially viable.

The strong export prices were highlighted last week when Woodside signed Australia's biggest ever export contract with

PetroChina.

The deal to sell up to three million tonnes of LNG a year for 20 years from the Browse project will be worth between \$35 billion and \$45 billion.

It was seen as a major breakthrough because Chinese buyers had previously resisted attempts to sign contracts at market prices.

The Browse deal followed Shell's signing of an agreement with PetroChina to sell LNG from the Gorgon project.

The other good news for Gorgon was the state government's decision to grant environmental approval for the project, which involves construction of an LNG plant on Barrow Island, an A-class nature reserve.

Browse and Gorgon are among half a dozen giant gas projects that could proceed in coming years.

They are driven by the increasing global demand for gas as a competitively priced, environmentally clean fuel.

Other potential projects include Japanese group Inpex's Ichthys project off the Kimberley coast and BHP Billiton's Pilbara LNG project, which involves building an LNG plant near Onslow to process gas from the Scarborough field.

Woodside has a suite of development options, in addition to Browse.

It is considering development of its Sunrise LNG project in the Timor Sea, and may build additional gas processing trains on the Burrup peninsula, adjacent to its planned

Pluto LNG plant.

Woodside chief executive Don Voelte believes Pluto and its sister LNG plants could process gas from a range of fields in the state's north, and potentially from as far away as the Browse reserves off the Kimberley coast.

Apart from LNG projects, WA could also be home to a gas-to-liquids (GTL) plant in the Pilbara, following several failed attempts over the past decade to develop GTL plants.

Chevron has teamed up with Sasol Chevron to undertake a feasibility study for a GTL plant using gas from its wholly-owned Wheatstone gas field, located 85km north of Barrow Island.

Yet another potential project is development of the Reindeer gas field.

Project owners Apache and Santos have recently commenced a feasibility study of the project, which is likely to cost about \$750 million.

The prospective projects follow the commencement of three oil field developments over the past year.

BHP Billiton is developing its Pyrenees oil project, Coogee Resources is developing its Montara oil field in the Timor Sea and Santos is developing its Van Gogh oil project.

Other projects currently under way include the North West Shelf venture's \$2.6 billion Burrup LNG plant expansion and Angel gas field development, Woodside's Vincent oil field development, and BHP's Stybarrow development.

FUTURE OIL & GAS PROJECTS

MAIN OWNER	PROJECT	COST	OUTPUT
Chevron	Gorgon LNG	\$20bn	10mt
Woodside	Browse Basin LNG	\$21bn	15mt
Woodside	Sunrise LNG	\$9bn	5mt
Woodside	Pluto LNG 2nd train	n/a	3-4mt
Woodside	Pluto LNG 3rd train	n/a	3-4mt
Inpex	Ichthys LNG	\$8-10bn	7-11mt
BHP Billiton	Pilbara LNG	\$5-10bn	6mt
BHP/Exxon	Scarborough (gas)	n/a	n/a
Apache/Santos	Reindeer (gas)	\$750m	n/a
Chevron/Sasol	Wheatstone (GTL)	n/a	n/a

* Cost and output data are industry estimates

