

Tanami Gas Pipeline – Benefits of Gas

Australian Case Study

Project Introduction

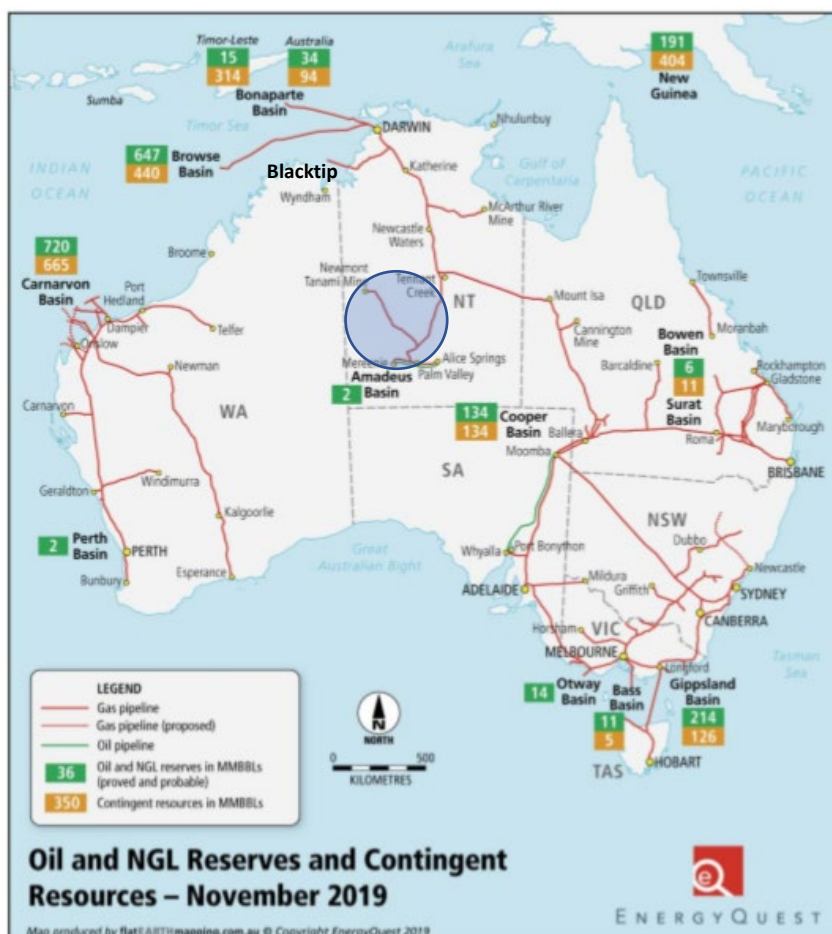
Newmont has fully owned and operated the Tanami mine since 2002. The mine is located in the remote Tanami Desert in the Northern Territory, Australia. The mine and plant are located on Aboriginal freehold land that is owned by the Warlpiri people and managed on their behalf by the Central Desert Aboriginal Lands Trust.

Annual production is 496,000 attributable ounces of Gold.

Power and Water's specialist Gas Services team proposed the change from diesel to natural gas and proved the commercial, reliability and reduced emissions of changing to natural gas through a joint feasibility study.

In 2017, a decision was made to construct a gas fired power project to reduce costs, and improve reliability and environmental impacts

- Switching to natural gas from diesel was expected to lower CO2 emissions by up to 20%
- Included construction and operation of 450km natural gas pipeline and 2 power stations
- Expected to reduce power costs by >20%



The pipeline was to be constructed and be maintained by Australian Gas Infrastructure Group under Build-Own-Operate agreement, while the power stations were to be constructed and operated by Zenith Energy. Capital costs were estimated at approximately US\$ 245 million with annual cash lease payments over a 10-year term beginning in 2019.



Detailed engineering and design

This was conducted by the Australian Infrastructure Group (AGIG) in-house engineering and pipeline design team from late 2017. The project scope included pipeline design calculations and five associated facilities including the inlet meter station adjacent to the Amadeus Gas Pipeline, the two scraper stations and two custody transfer meter stations at Granites and Dead Bullock Soak power stations.

Heritage, environmental and land management approvals

AGIG's land management team negotiated primary agreements with the Central Land Council (CLC) representing three separate native title groups, with three Indigenous Land Use Agreements (ILUAs) and five Section 19 deeds of the Aboriginal Land Rights (Northern Territory) Act 1976 (Cth). In conjunction with the CLC, representing five separate Aboriginal Land Trusts and owners of Aboriginal freehold land. Extensive cultural heritage surveys were undertaken across the pipeline route to ensure sensitive areas were protected and avoided during construction and operation.

AGIG's in-house lawyers and land access professionals negotiated land access and compensation agreements, covering pastoral properties traversed by the pipeline. Management worked with stakeholders to minimise disruption, while providing income generating opportunities as a value-add component of the construction process.

Both State and Federal environmental approvals were managed in-house, utilising industry expert resources and professionals to provide a sustainable environmental statement in relation to the impacts of the project. All environmental approvals were achieved within 10 months, allowing the construction to proceed in a timely manner.

Indigenous Employment:

The mine has about 950 employees of whom 118 are Aborigines and Torres Strait Islanders. There were also more aboriginals employed during the construction period.



Results:

In March 2019, Newmont announced that the Tanami Power Project in Australia was completed safely and on schedule. The project included the installation of two power stations, a 66kV interconnected power line, and a 460-kilometre 8-inch diameter natural gas pipeline.

The power station comprises 52 MW of gas-fired and circa 10 MW of diesel (back-up) power generation.

NT Power and Water Corporation was awarded a contract to supply the 13 TJ/d of natural gas to the pipeline from the Blacktip gas field.

The project has been a success with Newmont now also committing to expand the mine.

AGIG Speech in May 2019

AGIG's CEO Ben Wilson used his speech to highlight the importance of natural gas to both a low carbon future and an Australian hydrogen economy.

"Gas is an indispensable fuel in Australia - both directly and for power generation - and today it is very low emissions compared to electricity generated from diesel or coal," he said.

"Significantly, construction of the AGIG owned and operated Tanami natural gas pipeline is contributing not only to the continuing strong performance of this longstanding, major Australian underground gold mine, but also to growth in the Territory."

"The decarbonisation challenge is huge and many solutions are needed for Australia to meet its emission reduction targets, including gas stepping up to play its part."

"Developing the hydrogen economy will also play a key role and momentum around hydrogen is building with burgeoning research and development underway.

"Commercial hydrogen production is achievable and can decarbonise Australia's energy mix while at the same time accessing export markets."