

INVEST IN BRISBANE, AUSTRALIA FOR CSG TO LNG.

Brisbane's already established and world-leading resource hub is well placed to capitalise on the world's growing demand for energy and natural resources.

Australia's known gas reserves have grown rapidly over the past two decades, making it the largest reserve-holder in the Asia Pacific region and the fourth-largest exporter of liquefied natural gas (LNG) in the world. Given current and future projects in the pipeline, Australia could overtake Qatar as the **world's largest producer of LNG as early as 2017²**.

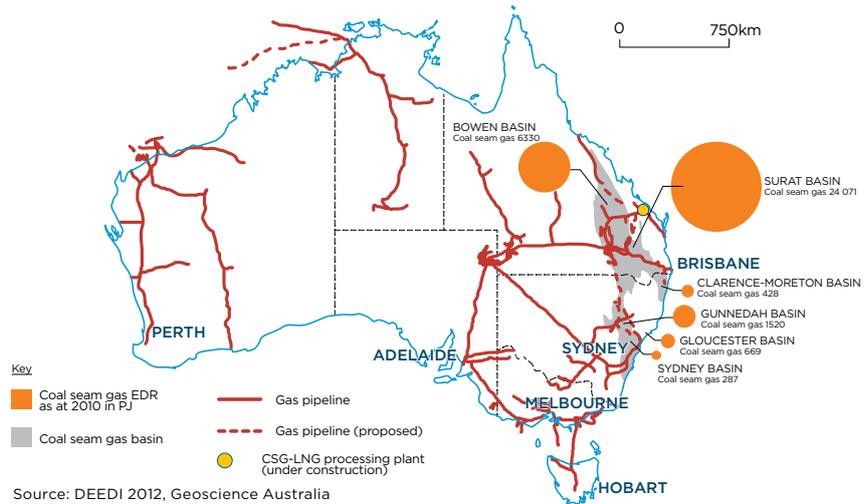
Coal seam gas (CSG) is set to be the focus of Australia's gas sector over coming years. With Queensland home to **92 per cent of Australia's CSG resources**, the state is well placed to benefit from booming investment in CSG to LNG projects.³ With over **\$50bn worth of projects** already committed in Queensland, and the potential for another \$20bn to \$30bn, there is a wealth of opportunity for companies to become involved in supplying both upstream and downstream products and services for these projects.⁴

Brisbane, as the business centre for Queensland's unfolding gas boom, has become a major hub for energy project developers and service providers alike in recent years. Given its proximity to the epicentre of this once-in-a-lifetime boom occurring in the Australian gas industry, there has never been a better time for gas service providers to invest in Brisbane.

Please contact our team for more information:

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Brisbane's Competitive Advantage

Demand for LNG

Queensland's first LNG exports are anticipated to occur in 2014, supported by sales agreements with customers in China, Malaysia, Korea, Japan and Singapore. Brisbane is the closest major Australian capital city to Asia, making the city an ideal position for trade in the Asia-Pacific region.

Proximity to major basins and proven reserves

Brisbane, as a major energy and resources hub, benefits from its proximity to Queensland's Bowen and Surat Basins, which together account for 92 per cent of Australia's total proven and probable coal seam gas reserves. CSG production in Queensland has increased significantly over the past decade and this trend is set to continue as major CSG to LNG export projects in Central Queensland come online over the next three to five years.

Knowledge, Labour and Talent

Brisbane is internationally recognised as a centre of excellence in the field of mining technology and services. Home to three world-class universities, multiple research institutes, an innovation-focused government and a highly skilled professional workforce, Brisbane has a strong propensity for innovative advancement at each stage of the CSG to LNG research and development supply chain.

"Brisbane cannot be underestimated as a city from which to conduct business globally, especially in the mining space."

Geoff Knox,
CEO- GE Mining Global

Major CSG to LNG Projects in Queensland - 2013 to 2017

Project	Company	Value	Expected Startup	Initial Capacity (Ultimate Capacity)
Queensland Curtis LNG	QGC (BG Group)	\$19.6bn	2014	8.5 mtpa (12 mtpa)
Australia Pacific LNG	Origin Energy, Conoco Phillips, Sinopec	\$35bn	mid- 2015	9 mtpa (18 mtpa)
Gladstone LNG	Santos, PETRONAS, Total, KOGAS	\$18bn	2015	7.8 mtpa (10 mtpa)

Opportunities

Shale: New Supply Sources

According to the US Energy Information Administration (EIA), in 2013 Australia held the seventh-largest shale gas resources and sixth-largest oil shale resources globally. EIA believes that the Cooper Basin, located in Queensland and South Australia, could be the first of the six Australian potential shale basins to produce commercial hydrocarbons. This is based on the fact that substantial gas infrastructure already exists, including a gas pipeline servicing Queensland and other markets. The presence of significant shale resources, in conjunction with an attractive foreign investment climate and low political risk, is attracting significant shale investments from global energy giants including Chevron, BG Group and Mitsubishi.

Supply chain partnerships

There is currently in excess of **\$142 Billion (AUD) worth of resource sector investment** that is either under construction, committed or under study in Queensland⁵. As these projects continue to proceed through the planning stages to commencement, opportunities will emerge for

companies with the capacity to integrate their offerings into project supply chains and/or contracts with local companies.

Drilling and Gathering

With over **18,000 new gas wells** to be drilled for the three major projects that are currently under construction in Queensland - Gladstone LNG, APLNG and QCLNG - there will be significant opportunities in drilling and gas and water gathering services for companies with expertise in this field.

Gas and Water Facilities

As gas production ramps up over the next two to three years, there will be significant gas field development in both the Bowen and Surat Basins, and a number of gas and water processing facilities will need to be constructed.

Pipelines

Across the five major projects, around **2,000km of gas transmission pipeline** will be required to transport the CSG from the gas fields to processing plants on Curtis Island. In addition there will be several hundred kilometres of pipe required at the gas fields to transport gas and water from well head to processing facilities.

Electricity

Each of the major CSG to LNG projects will require significant power supply at both the gas field sites and at the processing facilities.

Water

With an estimated **300 gegalitres of waste water** being produced each year by these major projects, waste water treatment and management is a sizeable operation⁶.

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Major players in the Brisbane market include:

- Santos
- Queensland Gas Company (British Gas Group)
- Origin Energy
- Bechtel
- General Electric

¹ Economist Intelligence Unit, 2012

² GBI Research, 2012

³ Australian Gas Resource Assessment, 2012

⁴ BREE mining Industry Projects Listing, October 2012, BCI Australia

⁵ Queensland resources council, Queensland Economy, November 2012

⁶ National Water Commission Estimate (from ABC News: Coal Seam Gas By The Numbers, 2012)

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