



E N E R G Y Q U E S T

EnergyQuest

About EnergyQuest

EnergyQuest is an energy consulting company established by Dr Graeme Bethune in 2005 to provide strategic analysis on Australian oil, gas and unconventional energy sources. It produces regular multi-client reports and undertakes specific consulting assignments.

EnergyQuest's clients include most major Australian energy companies, most Australian governments, institutional investors and a number of international companies.

EnergyQuest is increasingly recognised as an authoritative source of data and analysis on Australian energy and its reports on energy trends are regularly quoted by the major international news services such as Bloomberg, Platts and Dow Jones, as well as by the Australian media. The Australian Energy Regulator has made extensive use of EnergyQuest data in their State of the Energy Market Reports since 2007.

EnergyQuest is a member of the Australian Petroleum Production and Exploration Association, the Australian upstream oil industry association, and the Australian Pipeline Industry Association.

Research and Analysis

EnergyQuest produces the ***EnergyQuarterly***, which provides comprehensive and timely statistical analysis of oil and gas production, reserves, development projects, gas contracts and prices in Australia.

EnergyQuest has also produced a major 193 page multi-client study, ***Australian Coal Seam Gas 2010: CSG Meets LNG***, to be updated in 2011, and a comprehensive review of Australian biofuels, ***Australian Biofuels 2010-11***.

Consulting

Energy Supply

EnergyQuest has undertaken assignments for major energy producers, buyers and government agencies on the future energy supply and cost outlook and strategic options.

LNG

EnergyQuest undertakes assignments on LNG marketing and shipping:

- Facilitation of large LNG projects (producers or receiving terminals) by connecting projects with potential suppliers /customers.
- Negotiation of contracts for sale or purchase of LNG.
- World LNG market supply/demand (with a particular focus on Asia/Pacific).
- World LNG market strategic direction (i.e. how and where to secure sales or purchase of LNG given the risk factors associated with various LNG suppliers or consumers).

Level 30 91 King William St Adelaide SA 5000
Telephone (08) 8431 7903 Mobile 0419 828 617 Email gbethune@energyquest.com.au
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- The interplay between pipeline and LNG supply in world markets (with a particular focus on Asia/Pacific).
- LNG spot trading.
- Facilitation of commercial activities relating to LNG shipping (ship charters, ship purchase).

Natural Gas

EnergyQuest has undertaken many assignments on Australian gas, including:

- Independent report on gas reserves for a proposed pipeline acquisition.
- Independent report on gas deliverability for a major gas user.
- Advice for a NSW power generator on gas supply options.
- Advice on gas supply options for the Mt Isa minerals province.
- Gas price forecasts by Australian state to 2030.
- Advice for an infrastructure provider on east coast gas storage options.
- Advice for a major oil and gas company on potential Australian LNG projects.
- Independent expert report for an east coast gas price arbitration in 2008.
- Projections of future Australian coal seam gas demand and supply for a major resources company.
- Report on coal seam gas for a potential major customer.
- Advice on east coast gas supply options for a major industrial customer.
- Advice on gas marketing and price options for a potential gas field development.
- Advice on the outlook for Australian gas (domestic and LNG) for a major resources company.
- Advice on gas transmission pipelines for an institutional investor.
- Advice on gas commercialization outlook and options for a proposed east coast gas development.

Liquid Fuels

EnergyQuest also undertakes consulting on liquid fuels:

- Major ongoing studies of Australian transport fuel vulnerability for a major Australian alternative liquid fuel project.
- Multi-client reports on Australian biofuels.
- Assessment of an ethanol project for a financier.

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- Comprehensive assessment of the Australian diesel fuel market and import opportunities.
- Oil price forecasts for a potential liquids project.
- Market studies for alternative liquids projects.
- A report for the Australian Government on transport fuel security.

EnergyQuest Team

- Dr Graeme Bethune, CEO, with 30 years experience in economic and financial analysis, 10 years in senior business development and finance roles with Santos and founder of EnergyQuest in 2005. Graeme ranks in the top 5% of experts in the Gerson Lehrman Energy and Industrials Council, a global network of over 30,000 experts in the energy, transport and industrials sectors, providing advice to investors, professional services firms and companies.
- Graeme Atwell, Senior Associate, with 40 years experience in power generation and gas contracting and trading with ETSA and Santos. Working with EnergyQuest since 2007. Gas supply and marketing specialist.
- Mike Cochran, Senior Associate, with 30 years experience in oil and petroleum marketing with Santos and mineral marketing with Rio Tinto. Working with EnergyQuest since 2005. Specialist in conventional and alternative liquid fuels.
- Greg Veitch, Senior Associate, 28 years with Shell, with senior roles in LNG marketing, commercial and shipping.
- Susan Bethune, Executive Manager and co-founder of EnergyQuest, specialist in economic, financial and statistical analysis.

Dr Graeme Bethune Chief Executive

Graeme Bethune is CEO of EnergyQuest. In a short period EnergyQuest has established itself as a leader in Australian energy analysis and strategy.

Graeme is the author of major EnergyQuest reports and has undertaken consulting assignments on oil, gas and alternative fuels for Australian and international clients.

He is regularly asked to speak at energy conferences in Australia and Asia and his comments are regularly sought by the domestic and international media (including the Wall Street Journal, the Financial Times and The Economist).

Graeme ranks in the top 5% of experts in the Gerson Lehrman Energy and Industrials Council, a global network of over 30,000 experts in the energy, transport and industrials sectors, providing advice to investors, professional services firms and companies.

He represents Australia on a number of international study groups of the International Gas Union.

Prior to establishing EnergyQuest in 2005, Graeme held a range of senior positions with the Australian energy group, Santos, responsible for finance, business development and investor relations.

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He has served on a number of government, commercial and charity boards and government reviews and is currently a Director of the Australian Gas Industry Trust. In this capacity he was a member of the Australian delegation to the World Gas Conference in 2009 and is a member of the National Organising Committee for the LNG18 Conference to be held in Perth in 2016..

Graeme has a first-class honours degree in economics from Monash University and a PhD from the Australian National University. He has undertaken the executive program at the Graduate School of Business at Stanford University, is a fellow of the Australian Institute of Company Directors and the Australian Society of Certified Practising Accountants and is a member of the US Society of Petroleum Engineers (SPE) and the Australian Institute of Energy. He is a technical editor of the SPE Journal of Economics and Management.

Graeme Atwell Senior Associate

Graeme is an engineer with over 40 years of experience in the energy industry in Australia, primarily in gas and power.

Since joining EnergyQuest in 2007, Graeme has advised both gas users and producers on strategic and commercial issues. He has also acted as an independent expert in gas price arbitrations.

For over 30 years, Graeme operated in a diverse range of roles in the electricity generation industry in South Australia. This included power station design, operation and maintenance, coal mining and purchasing and trading of gas for electricity generation.

Between 2001 and 2007, Graeme was employed by Santos in key commercial roles. This included marketing and commercialisation of gas from the Cooper Basin, including the sale of 500PJ of gas (over \$2 billion) to AGL in 2002, major ethane sales to Qenos in Sydney, and negotiation and establishment of Australia's first major gas swap agreement which enabled Queensland CSM to be contractually supplied to Sydney markets.

Within Santos, Graeme was also responsible for commercialisation of Santos' Timor Sea assets and played a key role in the project to bring PNG gas to Australia.

In his role with EnergyQuest Graeme has advised clients on gas commercialization opportunities and gas purchase options. He has also participated in numerous assessments of the demand and supply outlook for Australian domestic gas.

In support of Graeme's commercial and contractual responsibilities he also completed a Professional Certificate in Arbitration and Mediation.

Graeme is a member of the Australian Institute of Energy, and the Institute of Arbitrators and Mediators.

Mike Cochran Senior Associate

Mike Cochran has been working with EnergyQuest since 2005 and specialises in conventional and alternative liquid fuels.

With EnergyQuest Mike has led work on biofuels and participated in numerous assignments on transport fuel demand, supply and strategy.

Previously Mike held senior commercial and marketing positions with some of the world's largest resource and petroleum organisations, Santos Ltd, Rio Tinto and, BHP.

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During 22 years with Santos, Mike was responsible for marketing Santos' petroleum liquids, crude oil, LPG, condensate and naphtha, in international markets. He was also responsible for business improvement initiatives such as splitting condensate/naphtha for the Asian petrochemical and Hong Kong town gas markets and, inland production of diesel fuel.

Mike has a Bachelor's degree in Economics from Sydney University and post graduate Diploma of Oil Supply and Refining (University of Oxford). Over the past eight years, Mike has presented at national and international forums on condensate, naphtha, LPG and biofuels.

Greg Veitch Senior Associate

Greg Veitch is a leading expert in LNG marketing, commercial and shipping.

He worked in the Shell organization for 28 years and was a Director of four Shell or Shell joint venture companies and Chairman of the North West Shelf Shipping Services Company.

He has extensive experience in LNG marketing, leading negotiations for several long-term contracts in Asia and numerous spot contracts in Asia and the USA. He has purchased LNG from Asian and Middle East suppliers.

Greg was also involved in North West Shelf, Gorgon and Sunrise project developments.

Since January 2007 Greg has been an independent consultant. In this role he was Vice President LNG Supply at NorthernStar NG between February 2007 and April 2010, for whom developed LNG supply opportunities for the proposed Bradwood Landing LNG terminal in Oregon in the United States. Greg has also recently consulted to Silver Metals Pty Ltd., Credit Suisse and Goldman Sachs.

With EnergyQuest Greg has undertaken assignments on the interaction between Australian LNG projects and domestic gas markets.

Outside of the oil and gas industry Greg has had extensive experience in project development for Shell Metals (Worsley Alumina) and in business planning for Shell Coal. He has also been involved in Shell Corporate activities (human resources). Prior to Shell Greg worked with Nabalco Alumina Pty Ltd in a technical role.

Susan Bethune Executive Manager

Susan Bethune is a partner in EnergyQuest, responsible for market data and analysis. She is an expert on energy market data and modelling, including energy prices, production and reserves. Susan has created and maintains the data bases used in EnergyQuest's EnergyQuarterly reports and has undertaken numerous projects for clients wanting customised data series.

Susan has 35 years experience in economic and financial analysis with the Australian government (Australian Bureau of Statistics and Productivity Commission), the corporate and finance sectors and the tertiary education sector (University of Adelaide and University of South Australia).