



E N E R G Y Q U E S T

## About EnergyQuest

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

EnergyQuest is recognised as an authoritative source of data and analysis on Australian energy and its reports on energy trends are regularly quoted by the major Australian and international news services.

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

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

## Research and Analysis

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

It also produces a *Monthly LNG Report*, with up to date data on LNG exports from Australia by project and destination, Asian LNG imports from Australia and other countries and LNG and domestic gas prices.

EnergyQuest has produced a major multi-client study, *Australian Coal Seam Gas*, which provides a comprehensive review of east coast Australian CSG and LNG. It also produces an annual report *Australian Biofuels*.

## 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.

### **Natural Gas**

EnergyQuest has undertaken many assignments on Australian and international natural 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 a major oil and gas company on potential Australian LNG projects.
- Independent expert report for an east coast gas price arbitration.



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- Projections of future Australian coal seam gas demand and supply for a major resources company.
- 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.
- Numerous studies on east coast gas production costs and the outlook for demand, supply and prices.
- Studies of gas demand and supply in Indonesia and Vietnam.

Recent assignments include:

- Assessment of domestic gas market interventions in major world gas producing countries.
- Assessment of global LNG opportunities for US E&P company.
- Quantification of trends in Australian finding and development costs.
- Review of domestic gas contracting opportunities in Western Australia.
- Review of east coast gas market report for the Productivity Commission.
- Provision of east coast gas reserves estimates for the ACCC.
- Review of gas supply and market opportunities for a major Australian gas pipeline project.
- Advice on Cooper Basin drilling outlook.
- Advice on Cooper Basin unconventional gas project.
- Outlook for east coast gas demand, supply and costs.
- Various studies of the viability of east coast LNG imports.

### ***Liquid Fuels***

EnergyQuest also undertakes consulting on liquid fuels:

- 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.
- 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.



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- A report for the Australian Government on transport fuel security.
- Study on the outlook for Australian refineries.

### EnergyQuest Team

- Dr Graeme Bethune, CEO, with 40 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 is also Chair of the Australian Gas Industry Trust and a member of the Executive Committee of the International Gas Union.
- Susan Bethune, Head of Data and Finance, co-founder of EnergyQuest, specialist in economic, financial and statistical analysis.
- Rick Wilkinson, Head of Consulting, more than 30 years of experience in the oil and gas industry including senior positions in project management, commercial negotiation, LNG contracting, gas wholesaling and retailing and technical field engineering.
- Denis Dare, Senior Associate, a petroleum engineer with over 40 years domestic and international experience. Denis has undertaken technical evaluation of onshore and offshore oil and gas projects in Australia, New Zealand, Indonesia, PNG and Brazil.
- Leslie Atkinson, Principal Analyst, a geophysicist and data analyst with over 27 years' experience in the oil and gas industry.
- Mike Cochran, Senior Associate, an economist with over 35 years' experience in the energy and resources industries. Mike specialises in marketing, business strategy, research, logistics, infrastructure and operations focusing on conventional and unconventional liquid fuels. Working with EnergyQuest since 2005.

#### **Graeme Bethune, Chief Executive**

Graeme Bethune is CEO of EnergyQuest, a company he established in 2005 to provide energy analysis and strategic advice to companies and governments on Australian oil and gas.

Between 1995 and 2005 Graeme held senior executive positions with Santos, one of Australia's leading energy companies, with responsibilities for finance, business development and investor relations.

Graeme is the lead author of EnergyQuest flagship report: *EnergyQuarterly*. Graeme also undertakes regular consulting assignments on Australian and international oil and gas.

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.

He is Chairman of the Australian Gas Industry Trust and a member of the Executive Committee of the International Gas Union.

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 Institute of Energy, a past Fellow of the Australian Society of Certified Practising Accountants and is a member of the US Society of Petroleum Engineers (SPE) and the Petroleum Exploration Society of Australia.



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### ***Susan Bethune, Head of Data and Finance***

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 databases 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, the corporate and finance sectors, and the tertiary education sector (University of Adelaide and University of South Australia).

Susan has an honours degree in Economics from Macquarie University and a Master of Economics from the Australian National University.

### ***Rick Wilkinson, Head of Consulting***

Rick Wilkinson has more than 30 years of experience in the oil and gas industry. He has held senior positions in the areas of project management, commercial negotiation, LNG contracting, gas wholesaling and retailing, as well as technical field engineering.

He joined APPEA, the peak upstream petroleum industry association in 2010 where he has held positions as Chief Technical Officer and Chief Operating Officer – Eastern Region. His expertise covers policy strategy, regulatory development and technical liaison.

Prior to these roles, he held various positions with Santos over 16 years, including Vice-President Commercial, and President GLNG and Queensland where he oversaw the initiation, and definition for final investment of the \$16+ Billion CSG to LNG project.

He was appointed a Gas Fields Commissioner by the Queensland Government in 2012. The Commission is an independent statutory body formed to manage and improve sustainable coexistence among rural landholders, regional communities and the onshore gas industry. This gives Rick insights into managing the interfaces between communities, industry and government.

Rick was also Group Manager Energy Retail for Australasia's largest gas retailer. He was accountable for managing 1.4 million gas customers, sales and marketing.

He has been an Associate with management consultants, McKinsey & Co., and held various managerial and engineering positions with Schlumberger in Iran, Iraq, Egypt, Sudan and the USA.

Rick is a Fellow of the Australian Institute of Company Directors.

He has a first-class honours science degree majoring in nuclear physics at Melbourne University, and studied geology and petroleum engineering at post-graduate levels.

### ***Denis Dare, Senior Associate***

Denis is a petroleum engineer with over 40 years domestic and international experience. For the past three years he has worked as a private industry consultant as the principal of DL Dare & Associates. He has provided input to numerous EnergyQuest's reports.

In his current role and in concert with Gaffney, Cline & Associates (GCA), Denis has undertaken technical evaluation of onshore and offshore oil and gas projects in Australia, New Zealand, Indonesia, PNG and Brazil. He continues to hold the position of a "Technical Director" with GCA. Denis also acts as the local representative for a Canadian company with ongoing oil production and development interests in the Qld sector of the Cooper Basin.



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For the seven years prior to forming DL Dare & Associates, Denis worked for GCA initially in Singapore, as one of GCA's ten person Global Management Executive and then in Sydney as General Manager Australasia. In these roles he prepared independent technical expert reports for governments, financiers and LNG customers in the areas of Onshore & Offshore Oil & Gas, CSG, Conventional LNG, CSG to LNG, LNG hub selection and Underground Coal Gasification. Geographical coverage included India, China, Vietnam, Malaysia, Thailand, PNG, East Timor, West Africa, Kazakhstan, New Zealand & Australia.

For the twenty years prior to GCA, Denis worked for Santos where he was successively the Santos General Manager responsible for Petroleum Development, Production Operations and Engineering & Facilities. These roles included significant Cooper Basin responsibilities.

Denis is a fellow and former director of the UK based institute of Chemical Engineers (IChemE) and is former chairman of the Australian branch of IChemE. Denis is a former Board Member of the Australian Petroleum Production and Exploration Association (APPEA) and former chair of the APPEA Operations, Occupational Health and Safety Committee.

### ***Leslie Atkinson, Principal Analyst***

Leslie has 27+ years of experience in the oil and gas industry, primarily as a geophysicist with Santos, Stuart Petroleum and the South Australian Government. A proven oil and gas finder, she has an in-depth understanding of the geology of the Gippsland, Cooper, Surat and Bowen basins.

Leslie is also actively applying her data skills to tracking LNG shipping, with responsibility for EnergyQuest's LNG data base.

She has an honours degree majoring in geophysics, mathematics and genetics from the University of Adelaide.

### ***Mike Cochran, Senior Associate***

Mike Cochran is an economist with over 35 years' experience in the energy and resources industries. Mike specialises in marketing, business strategy, research, logistics, infrastructure and operations focusing on conventional and unconventional liquid fuels. Conventional fuels include crude oils, natural gas liquids (condensates, LPG's, naphthas) and petroleum products.

Mike also specialises in biofuels and alternative transport fuels, having led and participated in numerous assignments on alternative fuels demand, supply and strategy

Mike has been a Senior Associate with EnergyQuest since 2005.

Mike has a degree in Economics from Sydney University and post graduate Diploma of Oil Supply and Refining (University of Oxford). He is also a Board member and National Director of the Australian Institute of Energy, a member of Bioenergy Australia, and a member of Gas Energy Australia. In addition, Mike has presented at national and international forums and symposiums on midstream products, LPG, biofuels and alternative transport fuels. Mike has a Bachelor of Economics from Sydney University and a postgraduate Diploma of Oil Supply and Refining from the University of Oxford. During the past eight years, Mike has presented at national and international forums on condensate, naphtha, LPG and biofuels.



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