

APAC Biofuel Consultants

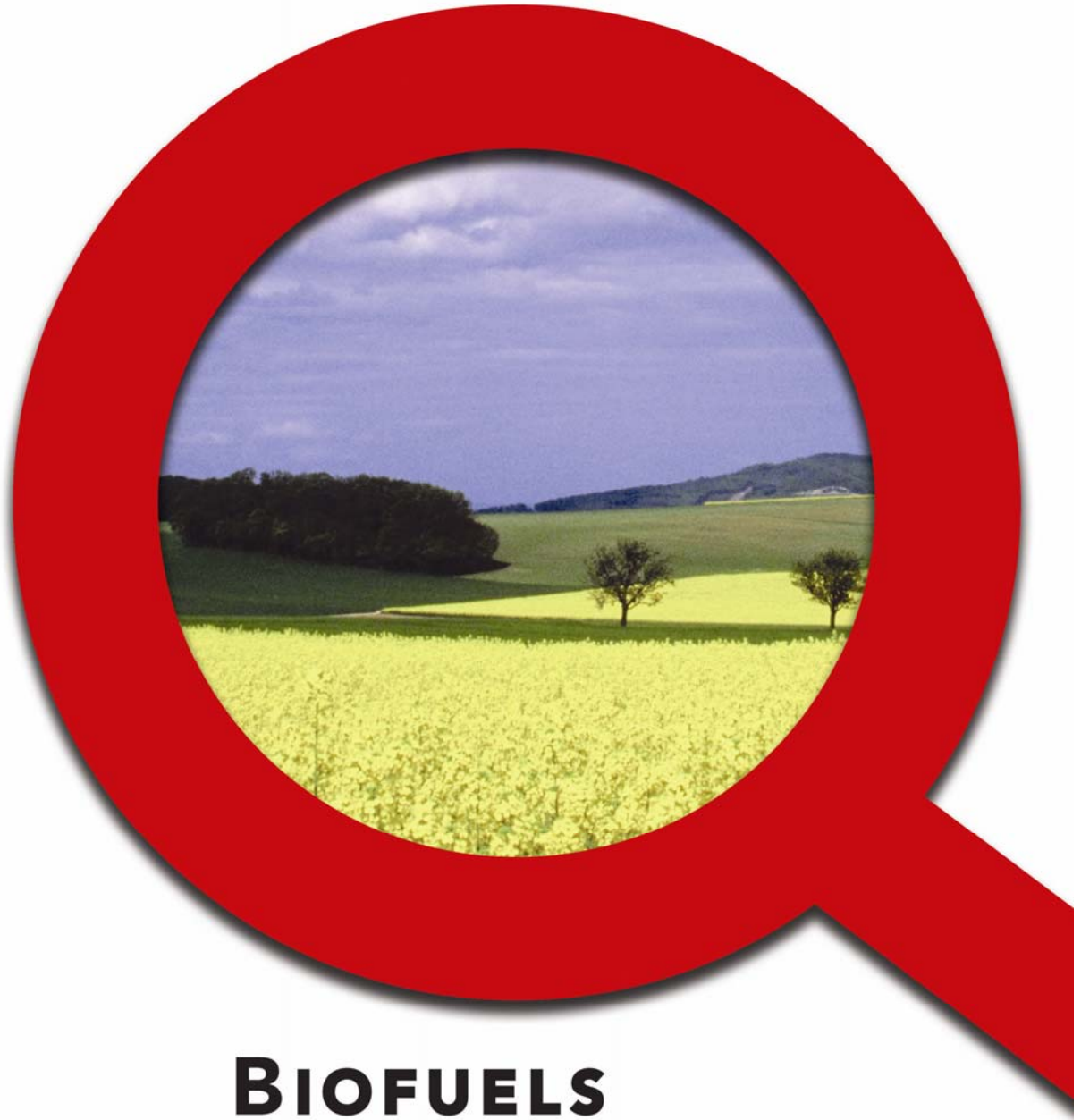
A JOINT VENTURE OF ENERGYQUEST AND ECCO CONSULTING



ENERGYQUEST



ecco
CONSULTING



BIOFUELS IN AUSTRALIA

A Growing Sector

November 2006

APAC Biofuel Consulting is pleased to announce the release of a major multi-client study into the Australian biofuels industry - ***Biofuels in Australia: A Growing Sector***.

This is the first comprehensive review of the industry since the Biofuels Taskforce in 2005 and the first independent, commercial study.

The Study is made up of three parts:

Part 1 reviews the current state of the biofuel industry in Australia: the processes, the economics, the market, government policy and the oil price context.

Part 2 provides detailed profiles of all Australian biofuel projects and companies, together with forecasts of industry capacity.

Part 3 reviews feedstock availability and costs, capital costs, finance and risk management.

In undertaking this study we have reviewed the Australian companies and projects and spoken with the major feedstock providers, oil companies and government policy-makers to provide a fresh perspective on the potential of the biofuel sector, its key challenges and its competitive threats.

The following pages provide further details of this important study.

We have also established a joint venture - APAC Biofuel Consultants - to provide ongoing support in biofuel trading, marketing, business development, strategy, government policy and risk management.

We look forward to discussing the study and our ongoing services with you in the near future.

Yours sincerely,

Graeme Bethune

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Biofuels in Australia - A Growing Sector

The study addresses 12 important questions:-

1. **Where is biofuel growth in the world and does Australia have an advantage over other world producers/consumers?**
2. **How reliant on government assistance and incentives is the biofuel industry for growth in Australia?**
3. **Can producers meet the stringent fuel quality standards required by the industry? What are the preferred feedstocks?**
4. **Who are the players in Australia? What is the status of new plants - location, capacity, feedstocks, offtake, location advantage, capital costs, financing, and market performance?**
5. **What is the history of producer margins ... and are they sustainable?**
6. **What are the implications of the growing biofuel industry for the agriculture sector in Australia? Will there be sufficient feedstock? What alternative feedstocks are being researched?**
7. **Is there a connection between feedstock price and oil price - in Australia or world wide?**
8. **What commercial, trading and financial risks require special focus by feedstock suppliers, producers, traders and distributors?**
9. **How acceptable are biofuels to consumers? What market penetration strategies are required by producers, distributors, refiners and retailers? What are the strategies of the majors?**
10. **What alternative transport fuels pose a competitive threat to biofuel consumption in Australia?**
11. **What would be the implications of mandating in Australia?**
12. **What is the financing/investor community view of the biofuel sector in Australia? Is the Australian biofuel sector an investment-grade industry for investors and financiers?**

Biofuels in Australia - A Growing Sector

Study Outline

CURRENT INDUSTRY STRUCTURE

PART 1

1	EXECUTIVE SUMMARY - KEY CONCLUSIONS.....	
2	INTRODUCTION - SETTING THE BIOFUEL SCENE.....	
	▪ Record oil prices.....	
	▪ Oil demand to continue.....	
	▪ Diminishing world oil discoveries.....	
	▪ Long-term oil prices.....	
	▪ Growing interest in non-conventional sources.....	
	▪ Australian need for transport fuel alternatives.....	
3	BIOFUELS - A GROWING INDUSTRY SECTOR.....	
	▪ What are biofuels?.....	
	▪ Biofuels in a world context.....	
	▪ Biofuels growth.....	
	▪ World ethanol growth.....	
	▪ World biodiesel growth.....	
	▪ Global biofuel forecast.....	
	▪ Biofuels in Australia.....	
	▪ Energy content of biofuels.....	
4	FEEDSTOCKS, PROCESSES, AND FUEL STANDARDS.....	
	▪ Biodiesel.....	
	▪ What is biodiesel.....	
	▪ Key feedstocks for biodiesel.....	
	▪ Biodiesel production.....	
	▪ Biodiesel feedstock quality and suitability.....	
	▪ Biodiesel and engine operability.....	
	▪ Ethanol.....	
	▪ What is ethanol.....	
	▪ Ethanol production - fermentation process.....	
	▪ Feedstocks for ethanol production.....	
	▪ Feedstock for ethanol in australia.....	
	▪ Ethanol as a transport fuel.....	
	▪ Ethanol blending with petrol and engine operability.....	
5	SUPPLY CHAIN AND PLANTS.....	
	▪ Biodiesel supply chain.....	
	▪ Supply chain - value chain 'pinch point' considerations.....	
	▪ Biodiesel feedstock logistics.....	
	▪ Ethanol supply chain concept.....	
	▪ Grain based ethanol supply chain.....	
	▪ Molasses-based ethanol supply chain.....	
	▪ Factors affecting feedstock price.....	
	▪ Grain ethanol feedstock logistics.....	
6	BIOFUELS AND GOVERNMENT POLICY.....	

- Energy policy context
- Current Australian government policies
- Federal government-policy and involvement to date
- Taxes, excises and tariffs.....
- Ethanol distribution program

7 BIOFUEL COSTS AND MARKET IMPACTS.....

- Assumptions and price references.....
- Indicative biodiesel economics.....
- Biodiesel feedstock prices and oil price
- Biodiesel margins.....
- Biodiesel - adding back the excise in 2015.....
- Indicative ethanol economics
- Ethanol feedstocks and oil price
- Ethanol margins
- Ethanol - adding back the excise in 2015

8 MARKETS

- Biofuels in Australian markets.....
- Imports and substitution
- Consumer issues: ethanol.....
- Consumer issues: biodiesel
- Refiner/distributor issues.....
- Branding
- Competitive fuel - LPG
- Other competitive fuels.....

APPENDICES.....

- The key physical properties of ethanol
- Proposed Australian ethanol standard.....
- Biodiesel - Australian standard
- Comparative international biodiesel fuel standards.....
- Economic assumptions.....

PROJECT & COMPANY PROFILES AND ECONOMICS PART 2

1	STRATEGIC OVERVIEW	(Summary of challenges facing biofuel producers, suppliers and buyers)
2	BIOFUEL PROJECTS	(Summary of biofuel projects in Australia and meeting Government targets)
3	ETHANOL PROJECTS AND COMPANIES*	
	▪ Rocky Point	
	▪ Lemon Tree	
	▪ Primary Energy Pty Ltd	
	▪ Australian Ethanol (Listed: AAE.AX)	
	▪ (Plus details on nine+ other plants in Australia).....	
4	BIODIESEL PROJECTS AND COMPANIES*	
	▪ Biodiesel Industries	
	▪ Australian Biodiesel Group (Listed: ABJ.AX)	
	▪ Biodiesel Producers Australia	
	▪ Australian Renewable Fuels (Listed ARW.AX)	(plus details on ten+ other plants in Australia).....

REFERENCES

- * *Outline, by company, of discussions and research covering:*
Summary Tables showing by year - capacity, feedstock requirements
Location, history and status
Capacity
Preferred Feedstocks/buying arrangements
Technology
Offtake arrangements
Co-products
Plant economics (where assessable)
Financials and financing (where available)
Government assistance

FEEDSTOCK, COSTS, FINANCE AND RISKS

PART 3

- 1 RISK MANAGEMENT: OIL PRICES AND FEEDSTOCKS.....
 - Biofuel producers.....
 - Biofuel offtakers.....
 - Feedstock industries.....
 - Oil and gas risks.....
 - Risk management strategies.....

- 2 FEEDSTOCK AVAILABILITY - IMPACT ON AGRICULTURE
 - Key issues - agriculture and biofuel interaction
 - Grain logistics in Australia
 - Eastern and western grain markets.....
 - Ethanol plant location - east and west.....
 - Regional grain deficit - eastern grain belt.....
 - Ethanol feedstock balance in Australia
 - Ethanol - summary forecast production by feedstock
 - Ethanol feedstock requirements
 - Australian ethanol feedstock availability.....
 - Ethanol feedstock overall balance - surplus or deficit
 - Biodiesel feedstock balance in Australia.....
 - Biodiesel - summary forecast production by feedstock
 - Biodiesel feedstock requirements.....
 - Incremental biodiesel feedstock requirements
 - Australian feedstock availability.....
 - Biodiesel feedstock overall balance - surplus or deficit.....
 - Ethanol feedstock supply in Australia
 - Wheat.....
 - Sorghum
 - Barley.....
 - Sugar/molasses
 - Biodiesel feedstock supply in Australia
 - Tallow.....
 - Canola.....
 - Palm oil
 - Waste oil

- 3 FEEDSTOCK PRICING - IMPACT OF BIOFUEL GROWTH
 - Ethanol
 - Wheat and sorghum
 - Sugar and molasses.....
 - Biodiesel.....
 - Tallow.....
 - Canola.....
 - Palm Oil.....
 - Waste Oil.....
 - Methanol
 - By-product generation - supply and value.....
 - Grain ethanol by-product - distillers grains
 - Biodiesel by-product - glycerol.....

- 4 MANDATING ETHANOL - IMPACT ON FEEDSTOCK PRICE
 - Ethanol.....
 - Biodiesel

- Mandating: other issues.....
- Conclusion
- 5 ALTERNATIVE FEEDSTOCK DEVELOPMENT
- A summary of alternative feedstocks currently under research eg mustard seed, jatropha etc
- 6 CAPITAL COSTS
- 7 MARKET PENETRATION STRATEGIES.....
- Potential industry size for ethanol and biodiesel in Australia
- Market penetration strategies.....
- 8 FINANCING GROWTH
- View point of up to seven lenders, equity analysts, investors with financing conclusions
- Financing conclusions
- REFERENCES

Biofuels in Australia - A Growing Sector

Study Order Form

Report Options	Fee (inclusive of GST)
Report Part One	\$7,500
Report Parts One and Two	\$15,000
Full Report (Parts One, Two and Three)	\$22,500

Detailed industry models and feedstock data sets are also available. Price on application.

Last Name	
First Name	
Position	
Organisation	
Office Telephone	
Mobile Phone	
Office Address	
Email Address	
Report Option (Circle)	Part One: \$7,500 Parts One and Two: \$15,000 Parts One, Two and Three: \$22,500

Send order form with payment to:

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Biofuels in Australia - A Growing Sector

About **APAC Biofuel Consultants**

I would like to learn more about how **APAC Biofuel Consultants** can assist improve the commercial outcomes of our biofuel and related business processes.

Please contact me in relation to:

- Energy market analysis
- Biofuel business development
- Business strategy review and development
- Retainer services
- Trading and commodity marketing
- Value adding strategies
- Preparation for commercial negotiation
- Project financing and risk management
- Government policy analysis
- Other _____

Please complete and email to:

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I may be contacted:

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Organisation:	
Job Title:	
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Biofuels in Australia - A Growing Sector

Study Team

Dr Graeme Bethune

Graeme Bethune is CEO of EnergyQuest, which he established in 2005 to provide strategic research on Australian oil, gas and other energy sources. EnergyQuest's clients include major Australian companies, most Australian governments, institutional investors and a number of international companies.

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

The company has also undertaken major multi-client studies of coal seam methane and biofuels and provided strategic advice on acquisitions and major energy contracts.

Prior to establishing EnergyQuest, Graeme had 30 years in senior finance and corporate affairs roles. For 10 years he held a range of senior positions with the Australian energy group, Santos, reporting to the CEO, responsible for finance, business development, investor relations and media. This included over \$2 billion of major financing and asset acquisitions and divestments.

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 and is a member of the Society of Petroleum Engineers and the Petroleum Exploration Society of Australia.

Mike Cochran

Mike Cochran brings to the study experience in commercialisation processes, business development and commodity marketing in the oil, gas petroleum, mining and metals industry sectors. He has held various commercial and marketing positions, at senior level, with some of the world's largest resource and petroleum organisations - BHP, Rio Tinto (CRA, Mary Kathleen Uranium, Bougainville Copper Ltd) and 22 years with Santos Ltd.

Mike is familiar with the Australian and Asian petroleum markets and refining industry. He has an understanding of the commercial and trading environment and requirements to establish green field projects, especially relating to energy, commodities, exports and overseas markets.

In 2004 Mike established Ecco Consulting Pty Ltd, providing marketing, negotiation and commercial services to the gas, petroleum, and resource industries in Australia and overseas. In its short history, Ecco Consulting has successfully established excellent working relationships with several large Australian and overseas organisations

Mike has a degree in Economics from Sydney University and post graduate Diploma of Oil Supply and Refining - validated by the University of Oxford. He is also a member of the Australian Institute of Energy.

Susan Bethune

Susan Bethune is a partner in EnergyQuest, responsible for market analysis. Susan has 30 years experience in economic and financial analysis with the Commonwealth government, the finance sector and the tertiary education sector. She has an honours degree in economics from Macquarie University and a Masters degree in economics from the Australian National University.