



APAC **biofuel** consultants

A JOINT VENTURE OF ENERGY QUEST AND ECCO CONSULTING



Australian Biofuels 2008 Study Outline

July 2008

Dear Client,

APAC Biofuel Consultants are pleased to present our most recent Study on the Australian biofuel industry, **Australian Biofuels 2008**.

Over the past 12 months, the Australian biofuel industry has faced challenges and issues regarding its economics and sustainability.

The industry will continue to face similar and more difficult challenges in the next 12 months. These include the introduction of new emissions policies, the risks associated with changing price of feedstocks and price of crude oil, the effect of government mandates and, some producers trying to turn their positions into profitable operations.

Australian Biofuels 2008 is a review of all commercial developments and policies affecting the Australian biofuel industry over the past 12 months. It provides a summary of all Australian biofuel projects and companies, world trends, government policies, mandates, biofuel economics and feedstock trends, together with forecasts of industry capacity, updated to end June, 2008

The Study's **Table of Contents** together with the **List of Figures** and **List of Tables** are set out below.

This Study is a follow-up to our major multi-client study, *Biofuels in Australia - A Growing Sector (2006)* and *Australian Biofuel Projects – 2007*.

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

The Study is insightful and concise. It is a useful basis for shaping your future thinking, decision making and investment and procurement strategies, especially for those considering entering the industry.

APAC Biofuel Consultants, a joint venture of EnergyQuest and Ecco Consulting, remain committed to supporting clients and participants in the study and to provide ongoing support in biofuel trading, marketing, business development, strategy, government policy and risk management.

Yours sincerely,

APAC Biofuel Consultants

Graeme Bethune

CEO

EnergyQuest

Ph: (08) 8431 7903

Mob: 0419 828 617

Email: gbethune@energyquest.com.au

Mike Cochran

CEO

Ecco Consulting Pty Ltd

Ph: (08) 8274 1738

Mob: 0419 116 696

Email: mcochran@eccoaustralia.com

Table of Contents

AUSTRALIAN BIOFUEL 2008

Table of Contents

List of Tables

List of Figures

- 1 Executive Summary
 - 1.1 Key industry developments – 2007/2008
 - 1.2 Ethanol - emerging as a sustainable industry
 - 1.3 Biodiesel – volatile margins, rationalisation
 - 1.4 Meeting Government Targets
 - 1.5 Outside Influences – food versus fuel
 - 1.6 Challenges Facing the Australian Biofuels industry
- 2 Industry Overview
 - 2.1 Australia's Overall Fuel Balance
 - 2.2 Australian Gasoline/Diesel – Import dependent
 - 2.3 Overseas Production – Ethanol and Biodiesel
 - 2.4 Managing Perceptions – food versus fuel
 - 2.5 Strategies for the Future
- 3 Governments and Australian Biofuels
 - 3.1 Federal Government
 - 3.2 State Governments
- 4 Biofuel Projects
 - 4.1 Changes since 2007 Report
 - 4.2 Production vs. Capacity
- 5 Ethanol – Emerging Strongly in Australia
 - 5.1 Ethanol – the winners so far
 - 5.2 Ethanol Project Status in Australia
 - 5.3 Ethanol Feedstock Prices
 - 5.4 Ethanol Import Parity Price
- 6 Ethanol Projects and Companies (12 Companies*)
- 7 Biodiesel
 - 7.1 Biodiesel Project Status in Australia
 - 7.2 Biodiesel Feedstock Prices
- 8 Biodiesel Projects and Companies(15 Companies*)
- 9 Consumer Acceptance and Distribution Roll-out
 - 9.1 Pricing Ethanol Blends
 - 9.2 Branding
 - 9.3 Roll out at the retail level
- 10 Second Generation Feedstocks
 - 10.1 Second Generation Feedstocks for Ethanol
 - 10.2 Second Generation Feedstocks for Biodiesel
- 11 Other Industry Participants -Terminal and Suppliers (6 Companies)
- 12 Glossary

** Review of Australian biofuel plants - operating and planned - covering:
Capacity, feedstock requirements
Location, history and status
Preferred Feedstocks
Offtake arrangements, co-products;
Other relevant commercial information*

List of Tables

- TABLE 1 SUMMARY OF STATUS OF STATE BIOFUEL MANDATES – CURRENTLY AND 2011
- TABLE 2 ESTIMATED IMPACT OF ETHANOL MANDATES ON AUSTRALIAN PETROL IMPORTS
- TABLE 3 STATUS OF AUSTRALIAN ETHANOL PLANTS – JUNE 2008
- TABLE 4 AUSTRALIAN ETHANOL PLANTS – CO-SITEING AND OFFTAKE
- TABLE 5 APPARENT FEEDSTOCK SURPLUS/DEFICIT – ETHANOL
- TABLE 6 ETHANOL IMPORT PARITY PRICE AND MARGIN TO TGP – JULY 2008
- TABLE 7 AUSTRALIAN BIODIESEL PRODUCTION CAPACITY (ML/A)
- TABLE 8 AUSTRALIAN BIODIESEL- FEEDSTOCK, CO-SITEING AND OFFTAKE ARRANGEMENTS
- TABLE 9 APPARENT AUSTRALIAN FEEDSTOCK DEFICIT/SURPLUS FOR BIODIESEL TO 2012
- TABLE 10 INDICATIVE NUMBER OF RETAIL SITES OFFERING ETHANOL BLENDS, BY STATE AND SUPPLIER.
- TABLE 12 COMPARISON OF SOME SOURCES OF BIODIESEL

List of Figures

- FIGURE 1 AUSTRALIAN ETHANOL FEEDSTOCK PRICES RELATIVE TO GASOLINE
- FIGURE 2 BIODIESEL–COMPARATIVE COSTS 2005/6 V'S 1Q08
- FIGURE 3 AUSTRALIAN PRODUCT BALANCES 2006-2007
- FIGURE 4 AUSTRALIA FORECAST OIL CONSUMPTION AND PRODUCTION
- FIGURE 5 AUSTRALIAN PETROLEUM TRADE DEFICIT - JUNE 2002 TO MARCH 2008 (SOURCE: ABS)
- FIGURE 6 ETHANOL BLEND CONTRIBUTING TO OVERALL UNLEADED GASOLINE POOL (2007)
- FIGURE 7 AUSTRALIA'S CONSUMPTION OF DIESEL AND PETROL BY STATE 2007
- FIGURE 8 AUSTRALIA'S IMPORTS OF DIESEL AND PETROL 2007
- FIGURE 9 WORLD ETHANOL PRODUCTION, 2007
- FIGURE 10 WORLD BIODIESEL PRODUCTION, 2007
- FIGURE 11 ESTIMATED EU BIODIESEL CAPACITY VS. PRODUCTION – 2007 AND 2008
- FIGURE 12 ETHANOL - ESTIMATED POSSIBLE MANDATED VOLUME VS. PLANNED CAPACITY BY MARKET, 2011
- FIGURE 13 AUSTRALIAN TOTAL BIOFUEL CAPACITY
- FIGURE 14 AUSTRALIAN BIOFUEL PRODUCTION BY FUEL TYPE
- FIGURE 15 BIODIESEL– ESTIMATED AUSTRALIAN PRODUCTION VS. CAPACITY – 2006 AND 2007
- FIGURE 16 ETHANOL - AUSTRALIAN PRODUCTION VS. CAPACITY – 2006 AND 2007
- FIGURE 17 AUSTRALIA'S ETHANOL CAPACITY - 2005 TO 2012
- FIGURE 18 STATUS OF AUSTRALIAN ETHANOL CAPACITY TO 2012
- FIGURE 19 MAP OF AUSTRALIAN CURRENT AND PLANNED ETHANOL FACILITIES
- FIGURE 20 FEEDSTOCKS FOR CURRENT AND PLANNED ETHANOL PRODUCTION IN AUSTRALIA 2005 TO 2012
- FIGURE 21 HISTORICAL ETHANOL AUSTRALIAN FEEDSTOCK COSTS AND AUSTRALIAN GASOLINE PRICE
- FIGURE 22 AUSTRALIAN BIODIESEL PLANTS AND CAPACITY
- FIGURE 23 AUSTRALIAN BIODIESEL STATUS CAPACITY
- FIGURE 24 MAP - EXISTING AND PLANNED BIODIESEL PLANTS IN AUSTRALIA
- FIGURE 25 AUSTRALIAN BIODIESEL – FEEDSTOCK CONSUMPTION
- FIGURE 26 BIODIESEL FEEDSTOCK PRICE VS. DIESEL PRICE – 2003 TO PRESENT.

+++++