



# Biofuels Projects Legal, Commercial and Risk Issues

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**Presenter:**

**Josh Carmody, Partner, Baker & McKenzie**

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## Introduction

- Regulatory support for Biofuels – Regional
- Design and Revenue opportunities
- Legal & Commercial risk issues
- Sources of capital and financing

# Supporting Regulatory Frameworks

Country	Policy/Law
New Zealand	<ul style="list-style-type: none"><li>➤ Energy &amp; Efficiency Convention Act 2000</li><li>➤ Petroleum Products Specification Regulation</li><li>➤ New Transport Fuels Regulation</li><li>➤ Favourable Excise treatment</li><li>➤ Sales obligation under consideration</li><li>➤ MTBE phase out by 2006</li><li>➤ Benzene and aromatics to be reduced</li></ul>

# Supporting Regulatory Frameworks

<b>Country</b>	<b>Policy/Law</b>
<b>Australia</b>	<ul style="list-style-type: none"><li>➤ 350 million litre BioFuels Policy Target</li><li>➤ Favourable Excise Regime to 2011</li><li>➤ Cleaner Fuel Grants Scheme – offsets fuel excise to 2011 and phased out to 2015</li><li>➤ BioFuels Capital Grant Subsidy.</li><li>➤ Road User Charge for Diesel from 2006.</li></ul>

# Supporting Regulatory Frameworks

<b>Country</b>	<b>Policy/Law</b>
Thailand	<b>Strategic Plan for Renewable Energy Development</b> <ul style="list-style-type: none"><li>• General energy policy</li></ul> <b>Other</b> <ul style="list-style-type: none"><li>• Investment incentives and tax waiver</li><li>• E10 mandate – RON91 ('07); RON95 ('12)</li><li>• B10 target by 2012</li></ul>

# Supporting Regulatory Frameworks

<b>Country</b>	<b>Policy/Law</b>
<b>China</b>	<b>Renewable Energy Law – 1 Jan '06</b> <ul style="list-style-type: none"><li>• General energy policy</li><li>• Encourages use of biological fuels</li><li>• Obligations for gas-selling enterprises</li><li>• Detail to follow in regulation</li></ul> <b>Other</b> <ul style="list-style-type: none"><li>• US\$200 million R&amp;D</li><li>• Subsidies and tax exemptions for producers</li><li>• E10 mandated in some provinces</li></ul>
<b>India</b>	<ul style="list-style-type: none"><li>• E5 mandatory in nine states</li><li>• Financial incentives for producers/consumers</li><li>• Indicates B20 may become mandatory by 2011</li></ul>

# Supporting Regulatory Frameworks

<b>Country</b>	<b>Policy/Law</b>
<b>Indonesia</b>	<ul style="list-style-type: none"><li>• Exploring biodiesel market</li><li>• Considering mandatory biofuel blends</li></ul>
<b>Malaysia</b>	<ul style="list-style-type: none"><li>• Laws being drafted to mandate biofuel additive to diesel by 2008</li></ul>
<b>Singapore</b>	<b>Innovation for Environmental Sustainability</b> <ul style="list-style-type: none"><li>• Financial grants encouraging companies to undertake innovative environmental projects</li></ul>

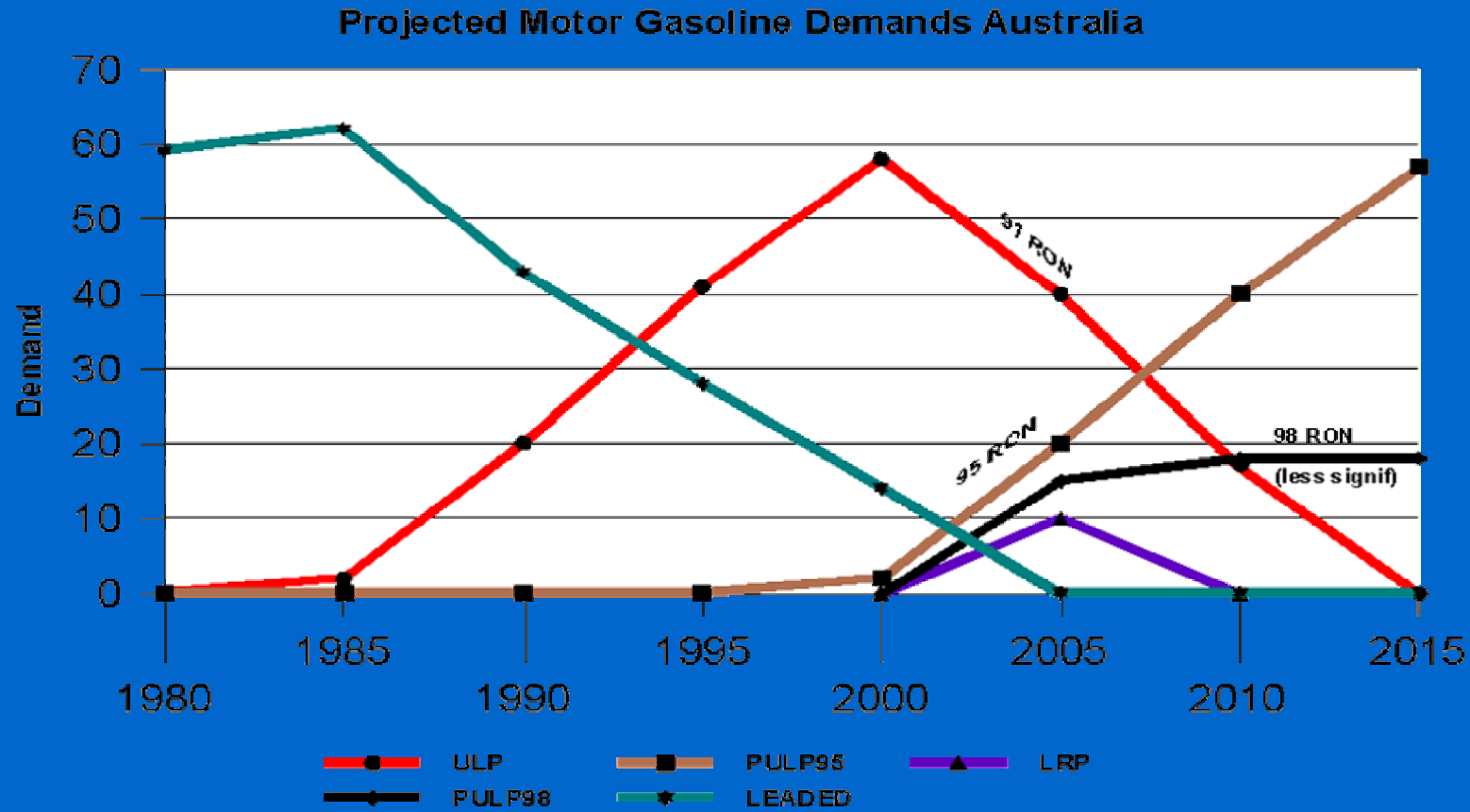
# Supporting Regulatory Frameworks

<b>Country</b>	<b>Policy/Law</b>
<b>The Philippines</b>	Biofuels Act (2005) <ul style="list-style-type: none"><li>• Minimum of 5% ethanol blend mandatory within 2 years of effectivity</li><li>• Biofuels Board to recommend increases</li><li>• Fiscal and non-fiscal incentives</li></ul> Energy Plan (2005) <ul style="list-style-type: none"><li>• Goal of 60% self-sufficiency by 2010</li><li>• Promotion of ethanol and coco-biodiesel</li></ul>

# Demand Side Regulation.

<b>Country</b>	<b>Policy/Law</b>
<b>European Union</b>	<b>EU Directive on promotion of biofuels (2003)</b> <ul style="list-style-type: none"><li>• Minimum proportion of biofuels on markets: 2% by 31 December 2005 and 5.75% by 31 December 2010</li><li>• EU Emissions Trading Directive</li><li>• Linking Directive</li></ul>

# Octane Projections (Aust)

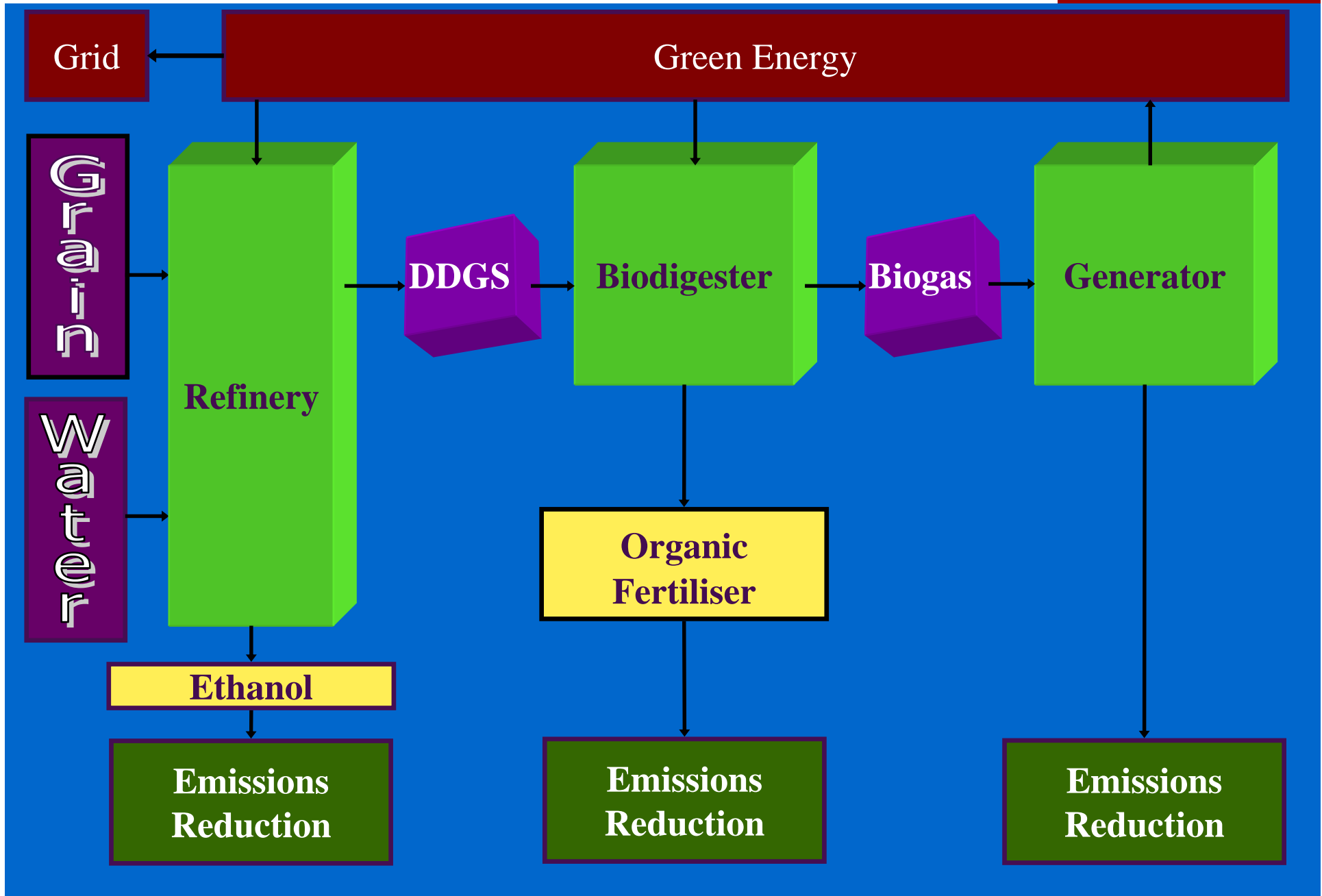


# Other factors

- Oil \$70 Barrel!
- Broader externalities being priced (ie CO<sub>2</sub>)
- Octane alternatives
- Other revenues
- Be ready for New Technologies
- Regulatory certainty:
  - *“Loud, long & legal”*

## Biofuels and GHG Emission Reductions

- UNFCCC Kyoto Protocol, Marrakech Accords.
- Emission Reductions creating revenue opportunities
- Projects must deliver GHG positive outcomes relative to “without project” baseline.
- Baseline methodologies for Ethanol and Biodiesel.
- GHG abatement dependent on energy source



# Biofuels Revenue Opportunities.

- Bio Fuel Supply
- DDGS
- Biogas
- Electricity and green certificates (if applicable)
- Gluten, starch, CO<sub>2</sub>
- Carbon Credits
- Organic Fertilizer

# Challenges Developing Projects.

- Lead time from “concept” to “commissioning”
- Financing
- Project Risk
- Regulatory Uncertainty
- Costs

*Investors & financiers prefer projects with short development timeframes, low transaction costs, low technology risk and low revenue volatility.*

# Key Project Characteristics

- Higher hurdles to jump in terms of credit approvals for financiers first foray into renewable investment
- High up front costs
- Perceived reliance on regulatory support
- Perception of technology risk
- High transaction costs given scale of projects
- Limits on availability on transaction risk instruments
- Sponsors often underfinanced/limited track record
- Inertia of major players in sector - first changing

# Developing Biofuels Projects.

- Limited Financier experience
- Limited long term resource data and studies – can require “leap of faith”
- Comprehensive planning phase
  - i. Prefeasibility planning
  - ii. Technical & financial studies
  - iii. Regulatory, development, environ permits & approvals

# Key Project Risks.

- i. Technological Risk – proven technology and equipment?
- ii. Completion Risk – on time and on budget?
- iii. Revenue Risk – will cash flows meet modelled assumptions?
- iv. Counterparty Risk – will buyer perform over term?
- v. Feedstock Supply Risks – quantity, quality, continuity of supply?
- vi. Operational Risk – experience of O&M contractor?
- vii. Market Risk – feedstock inputs & off take price structures?

# Core Project Contracts.

Most significant risk mitigation tool are key project documents:-

- i. O&M contract
- ii. Feedstock & product “off take”
- iii. Construction
- iv. Finance & security

Terms of these agreements will be interrelated

# Feedstock/Off take Contracts.

- Crucial need for continuous access to suitable feedstock within specification
- Price and market risk at both ends of project.
- Price fluctuation pass through to off taker
- Manage and mitigate feedstock supply risks with off take supply obligations
- Issues similar for multiple revenue streams

# Sources of Capital.

- Sponsor equity finance
- Contractor/off taker equity finance
- Commercial third party financing
- Private equity/risk capital
- Development funding and grants
- Institutional equity

# Financing Structures.

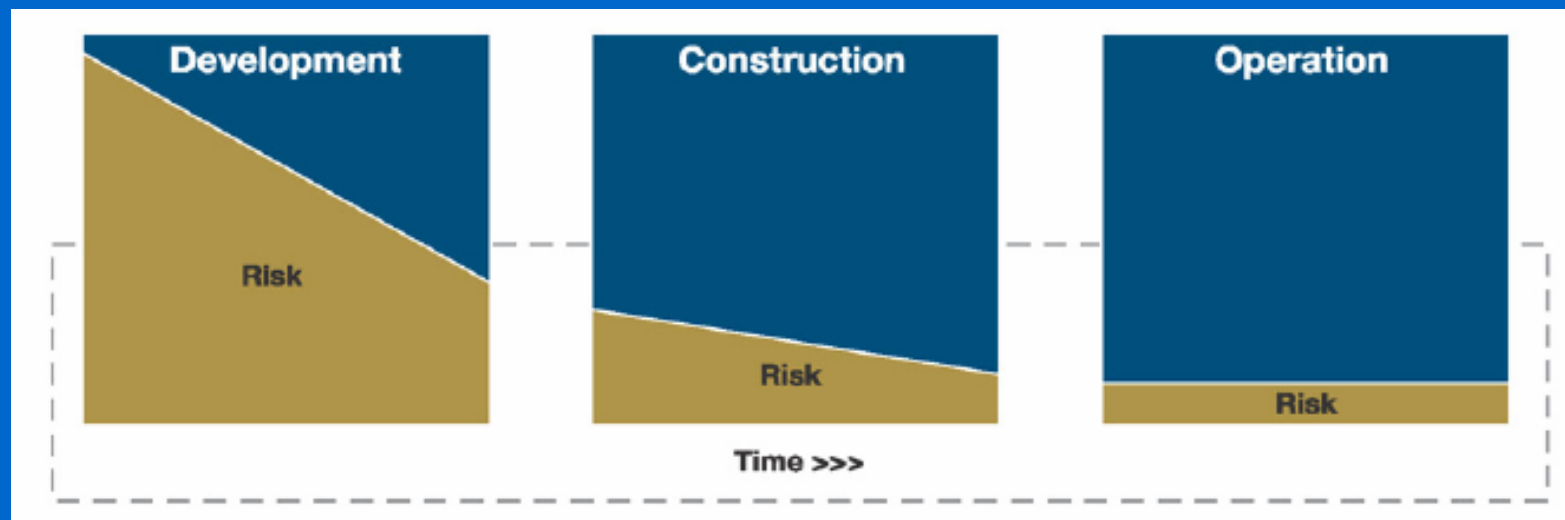
- Investor confidence critical
- Type of finance available dependant on:-
  - i. risk assessment
  - ii. Risk apportionment
  - iii. Risk mitigation opportunities
- Project finance (non recourse & limited recourse)

*Requirement of financiers will dictate form and terms.*

- But sponsors can anticipate.

# Sources of Capital

- Funding opportunities may differ during project development:
  - development & construction
  - post commissioning & operation
- Risk is substantially decreased following development, and again following commissioning – cost of finance should decrease



# Concluding Remarks

- Regulation is creating supply and demand support
- Design to capture all revenue streams
- Identify risks early and apportion, mitigate efficiently
- Some capacity building required
- Clean production is good business – Marco issues are not going away.

# Thank You

Josh Carmody

[Josh.carmody@bakernet.com](mailto:Josh.carmody@bakernet.com)

+ 61 2 9225 0331