


Renewable Opportunities in Australia

Thai - Queensland Dialogue
March 2010

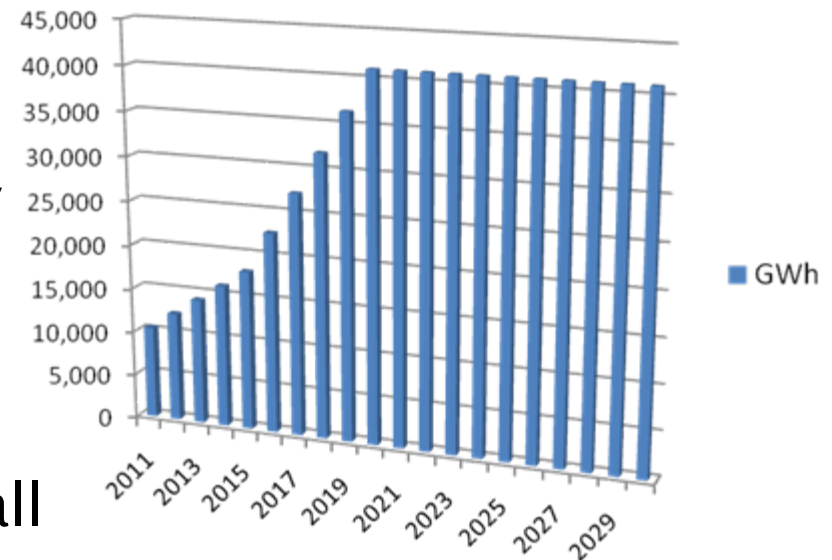
Renewable Energy

- ▶ Significant renewable energy opportunities – renewable electricity and ethanol
 - ▶ Markets are more likely to be local or state based
 - ▶ Opportunities highly dependant on Federal and State Government policy environments
 - ▶ Industry likely to focus on renewable electricity in the short term, unless there is significant policy shift for ethanol
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Renewable Energy Target

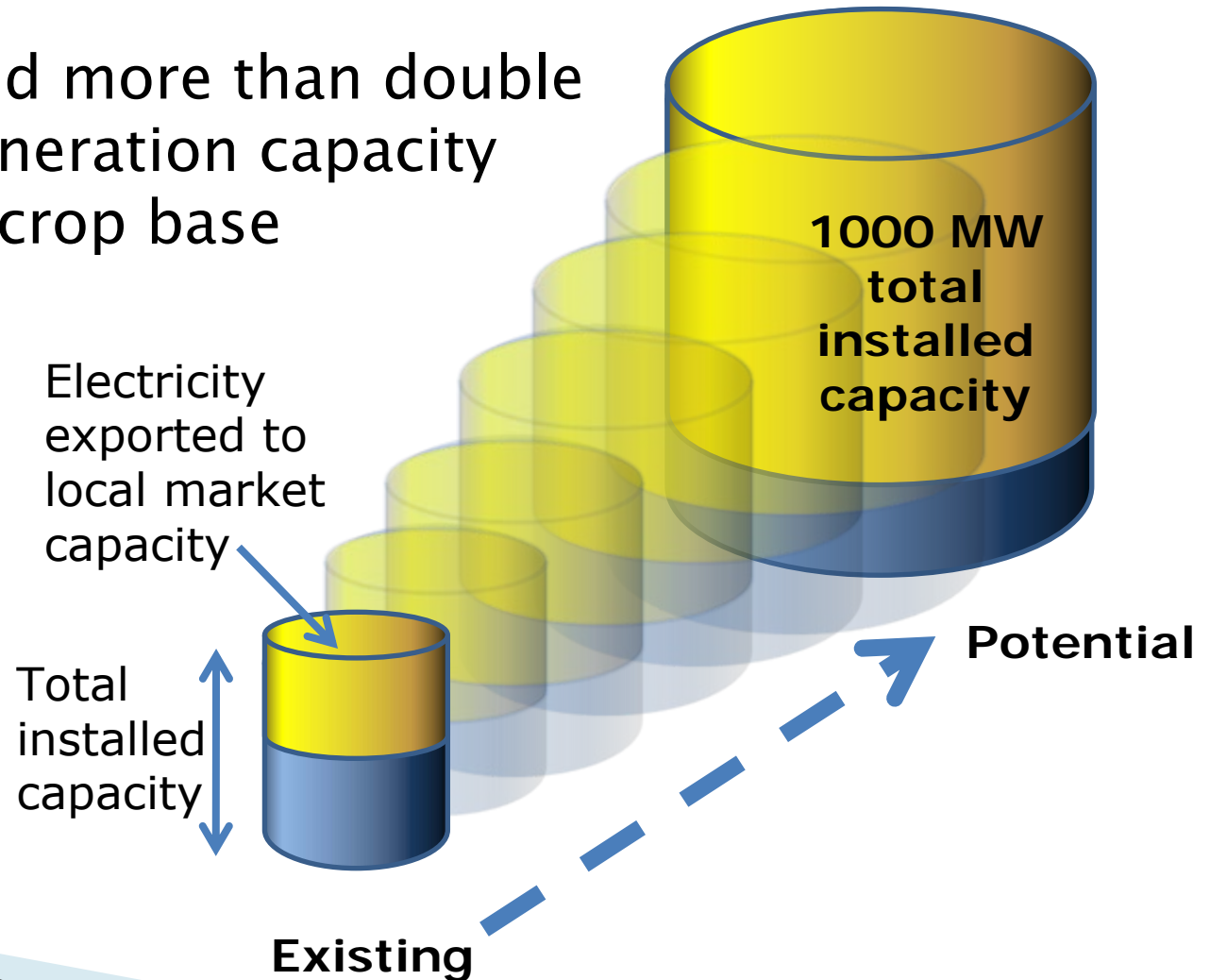
- ▶ Currently
 - 430MW installed generation capacity,
 - 240MW exported to local electricity grid
- ▶ Not Brazilian scale, but highly relevant to local markets
 - 50% Qld's renewable energy
- ▶ Federal Government target ramping up to 41,000GWh – all large scale generation
- ▶ Cogen expansion highly likely – driven by demand for reliable renewables

Renewable electricity target 2011 - 2030



Renewable electricity potential

- ▶ Industry could more than double electricity generation capacity with current crop base
- ▶ <15% of National renewable target.



Potential Sugar Industry Cogeneration Expansion



FAR NORTH QLD
5 Mill Upgrades + 1 minor project
 Potential project capacity **146MW**
84,000 / 70 % Households

HERBERT / BURDEKIN:
3 MILL UPGRADES
 Potential Projects Capacity – **172MW**
140,000 households/ more than total region

CENTRAL REGION
 1 Regional project + 2 mill upgrades
 Potential Projects Capacity **107 MW**
60,000 / 80% Households

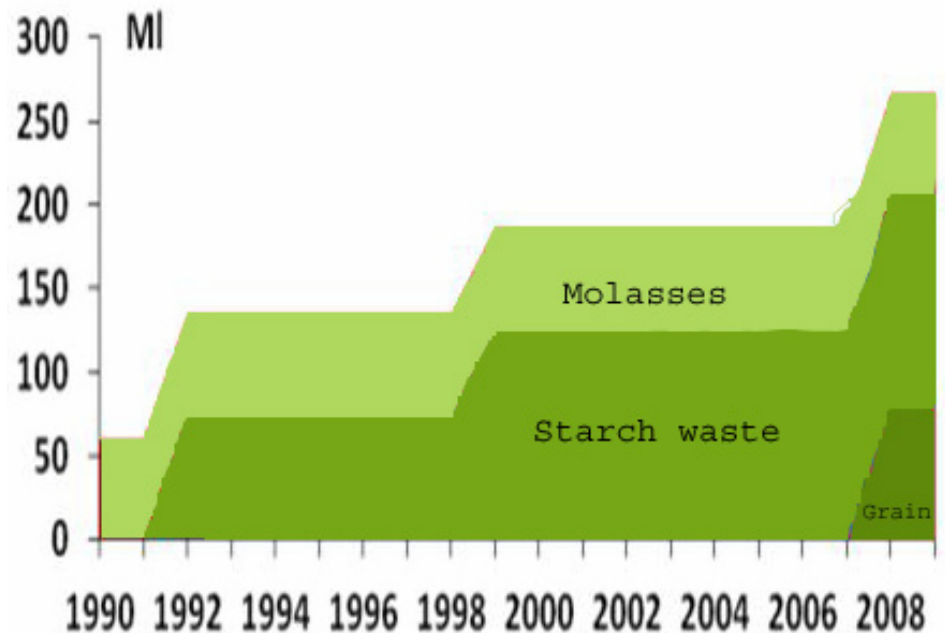
SOUTHERN REGION:
4 Significant Mill Upgrades
 Potential Projects Capacity – **125MW**
67,000 / almost 50% Households

NORTHERN NSW:
1 Further Mill Upgrade
 Potential Project Capacity – **26MW**
40,000 / 50% Tweed Valley and
25% Richmond Valley Power
Requirements

Ethanol Supply in Australia

- ▶ 2006/07: 83 ML fuel ethanol
- ▶ 2009: capacity 240 ML / annum
- ▶ End of 2010: potential 440 ML
- ▶ Ethanol supply has doubled over the last decade as the fuel ethanol market has developed

Australian Ethanol Supply Growth



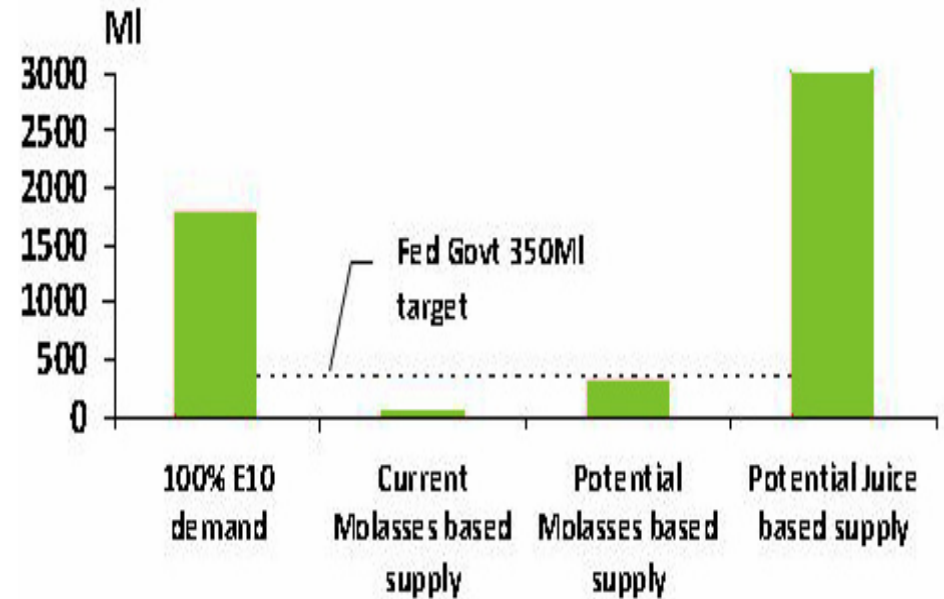
Source: Biofuels Association of Australia, CSR Analysis

Ethanol Supply from Sugar

- ▶ Sugar industry has potential to supply large amounts of ethanol. Requires:
 - Further market development
 - Supportive government policy
 - Attractive price relativities

- ▶ CSR currently supplies all sugar industry ethanol – 60ML/yr.

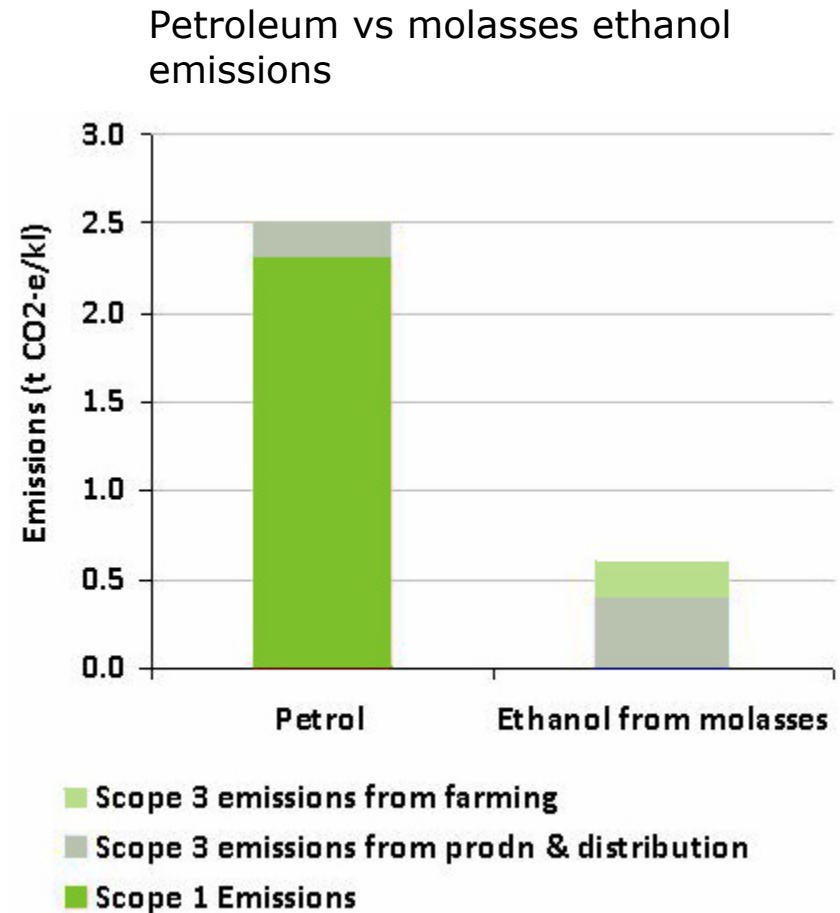
Potential of Sugar Industry Supply



Source: CSR Analysis

Ethanol Policy Framework

- ▶ Currently no incentive to build additional ethanol capacity
 - Federal excise treatment will progressively erode producer subsidy from 2011 onwards
 - Queensland Government mandate met with existing Qld ethanol capacity
 - No real recognition of the emissions benefits from molasses ethanol



Sources: Energetics 2007 (Peer reviewed by CSIRO)

Thank you