Centre for Energy and Environmental Markets

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Some lessons learnt from environmental markets in Australia

COP/MOP 1 Side Event

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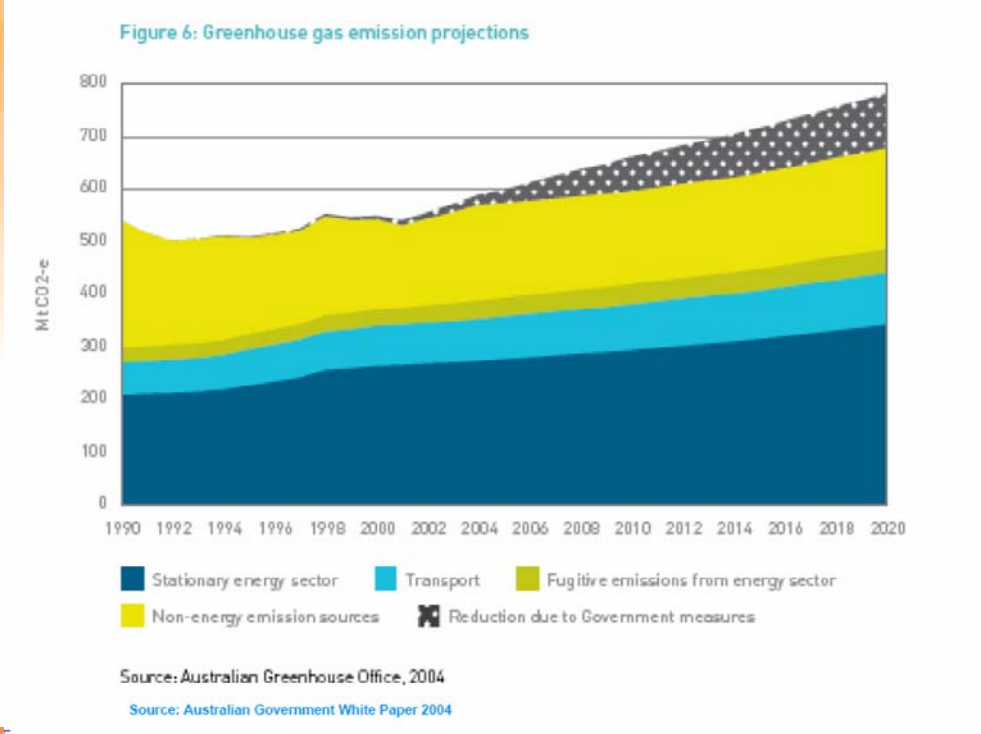
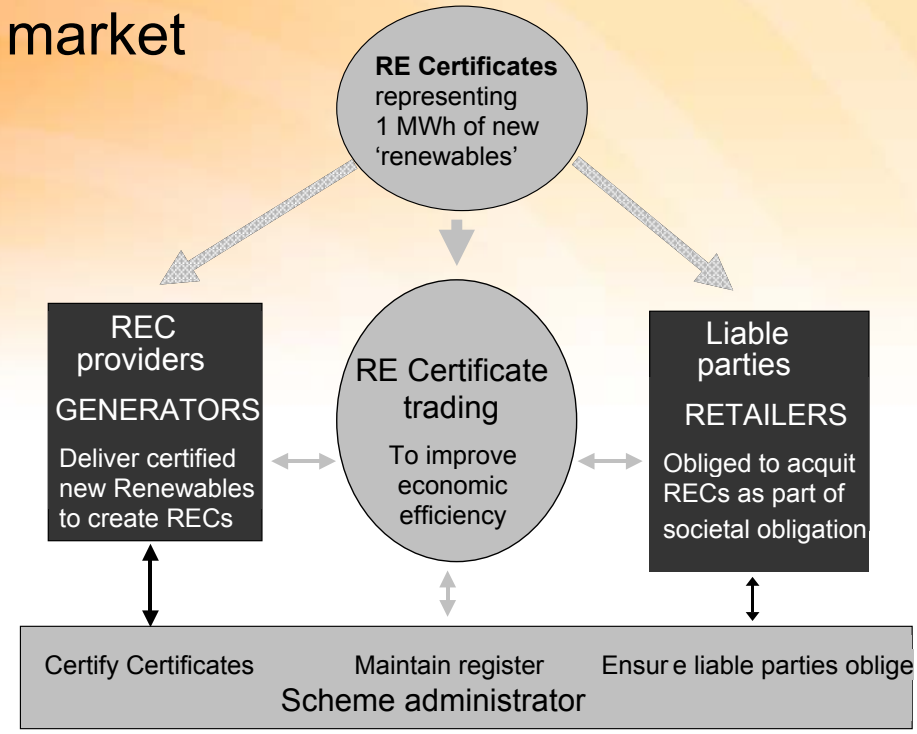
Content

- **Australia‘s situation**
- **Federal level:** Australia‘s Mandatory Renewable Energy Target (MRET)
- **State level:** New South Wales‘ Greenhouse Gas Abatement Scheme (NSW GAS)
- **Australia wide:** Proposed multi-state national emissions trading scheme
- Potential **linking** issues between EU ETS and a potential Australian scheme

Australia's GHG emissions

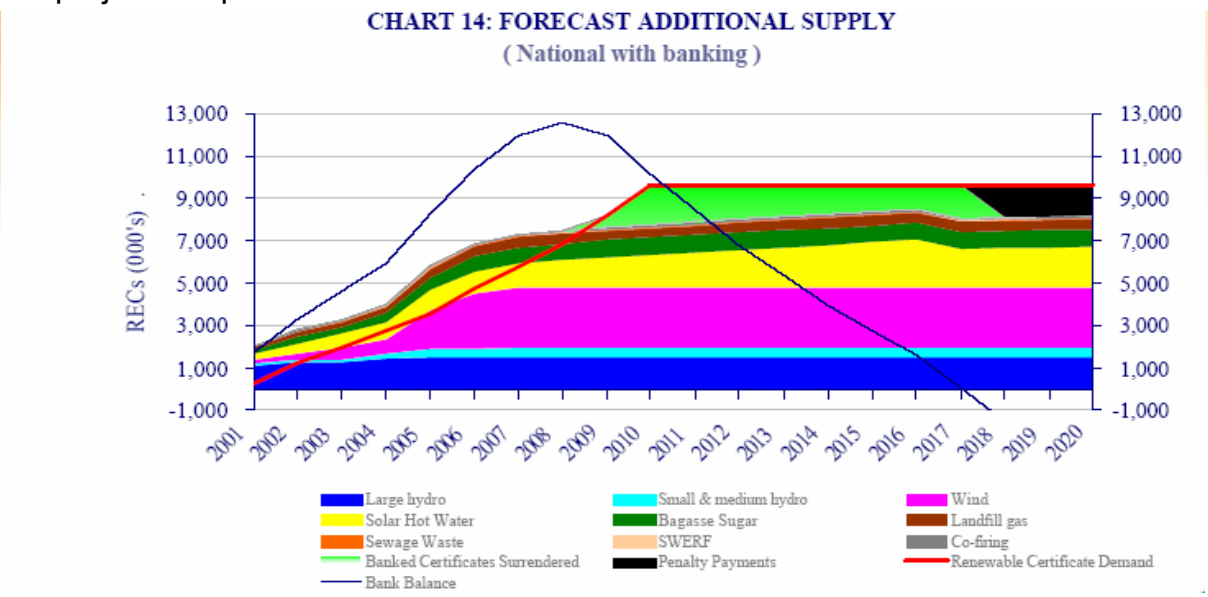


Renewable market (MRET) – a 'designer' env. market



RECs Demand

The Federal Govt. has rejected key review finding of a higher target to 2020
BCSE estimates only approx. 700-800MW of new (post Jan04) projects required to meet existing target, and…project commitments > 500MW in 2004 leaves < 300MW new projects required

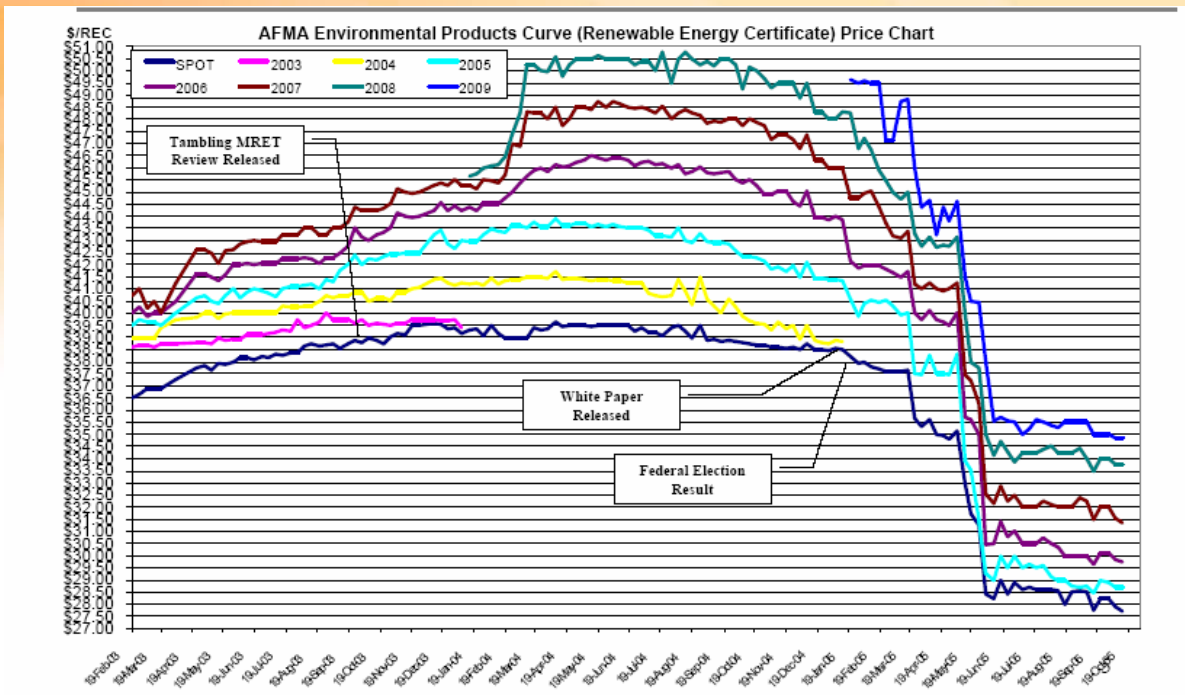


Source: Ergon Energy out of Ric Bazzale presentation

MRET review findings

- Nearly all of total investment will have been made prior to 2007 (only further 5.9 million RECs on a cumulative basis needed up to 2020)
- Current target (2% in 2010):
  - Modest target compared with international efforts
  - Insufficient to develop a domestic industry
- Independent govt review recommended 20,000GWh by 2020, extend scheme to 2035
- Price development: crash in 2005 (next slide)
- Timing of RECs creation is making supply uncertain
- Possible special arrangements required for PV, biomass
- Biomass generation from native forests are called “dead koala” RECs and are traded at a discount rate

Market price development



Source: Ric Bazzale presentation: MRET and REC Update WA, 25 Oct 2005

NSW Greenhouse Gas Scheme

- Start in 2003 (prior voluntary scheme 1997-2001)
- Policy intent
  - "reduce greenhouse gas emissions associated with the production and use of electricity..."
    (Overview to the Electricity Supply Amendment Bill, 2002)
- Implementation
  - State per-capita greenhouse gas emissions targets for the NSW Electricity Industry via Retailer Licence Conditions
    (NSW Electricity Supply Act, 1995)
  - Baseline+credit 'emissions reductions' trading

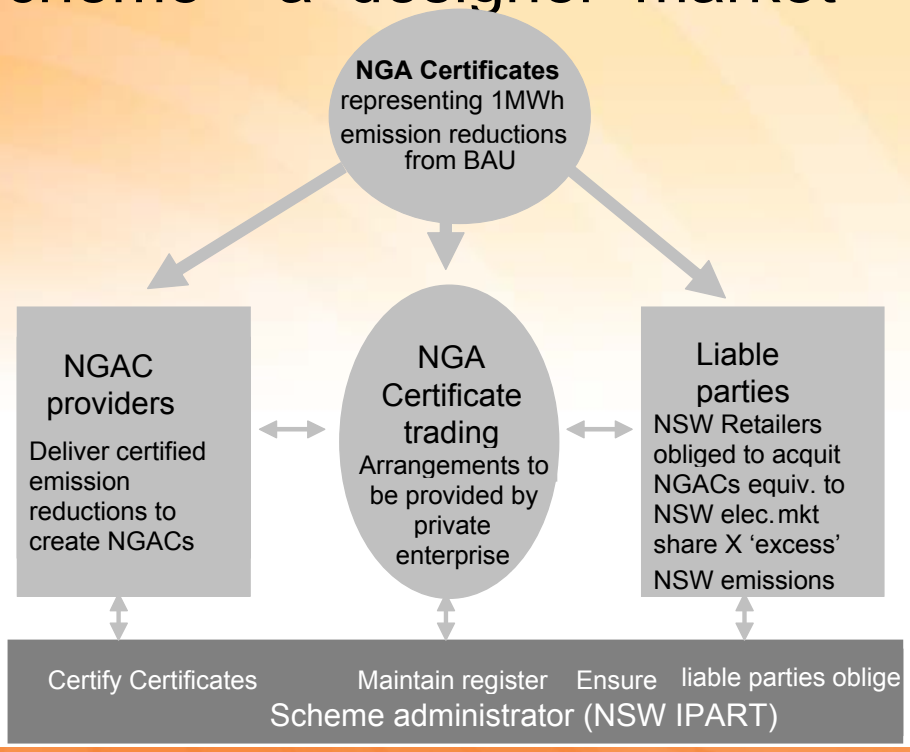
NSW Scheme – a 'designer' market

Create NGACS via

Low-emission generation (gas, new coal)

Demand Side Abatement

Sequestration



NSW = New South Wales

Problems with the NSW Scheme

- **Abstraction**: means physical electricity generation emissions in NSW can continue to climb even while NGAS declining State per-capita target is met
- **Additionality**: NGAS doesn't *explicitly* discuss or attempt to assess additionality at all. CEEM evaluation has shown that:
  - More than 95% came from projects built + operating well before 2003
  - Great majority of these projects were not required to make operational changes in order to earn NGACs
- **Transparency / Complexity**: Limited public data makes evaluation very difficult
- **Leakage** (sinks projects): No leakage to be considered. Increase in sequestration might be offset by deforestation in another place
- **Market concentration**: Five largest - 79% (2003), 72.5% (2004) of market or NGAS Herfindahl-Hirschman Index (HHI) = 2,540 (2003), 1,862 (2004)*
- **Distributional impact**:
  - End users pay present spot price for all 2003 NGACS = A$70 million
  - If transaction costs 10% of price = A$7 million
  - If 10% of NGACs additional, abatement (investment + operational) = A$7 million
  - Remaining A$59 million represents windfall profits to NGAC creators and/or retailers

* HHI > 1,800 is highly concentrated

Characteristics of State based Scheme

1. Cap and trade approach
2. National Scheme (Australia wide)
3. Overall emissions target
4. Limited to stationary energy sector (downstream: electricity generators / upstream: other gas and coal)
5. Covers all six greenhouse gases
6. Mix of free and auctioned allowances
7. Penalty to encourage compliance and set price ceiling
8. Offsets allowed
9. Mechanisms to assist adverse effects and structural adjustments
10. Rewards early action and facilitates new entrants

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Potential linking issues: Australia (state based) – EU ETS

- **Ratification of Kyoto Protocol**
- **Sink-projects:** inclusion (A) – today not included (EU)
- **Non-CO_2-gases:** inclusion (A) – today not included (EU)
  - Risk to import uncertainty of accounting
- **Verification:** equal stringency
- **Traded units:**
  long term and short term (A) – periodical approach (EU)
- **Sanctions:** price cap (A) – non-price cap (EU)

Conclusions – Australia's Trading Instruments

- MRET: very little remaining incentive for investment in renewables, new commitments necessary. Some state's proposing their own market-based renewables schemes in absence of federal govt. support.
- NGAS:
  - Divers problems with the design
  - Extending NGAS to 2020 (as raised in NSW Energy Directions paper)
    - Continuing efforts to strengthen energy-related climate change policy (eg, recently announced NSW Demand Management fund projected to reduce emissions by 800,000 tCO2-e /year by 2011 (DEUS, 2005). Will earn NGACs?)
    - BAU development of the National Electricity Market (Considerable gas plant projected to enter NEM post 2012 period)
    - Interaction with state based cap and trade? Transition or replacement?
- State based ETS – Linking with EU ETS:
  - Most of the design propositions are acceptable but possible devils in the details
  - Interaction of different propositions needs further assessments
  - Linking will require some changes

Thank you very much for your attention!

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"Emissions Trading for Australia: Design, transition and linking options" by Regina Betz and Iain MacGill

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All papers can be downloaded from: www.ceem.edu.au