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# Possible Design for a National Greenhouse Gas Emissions Trading Scheme

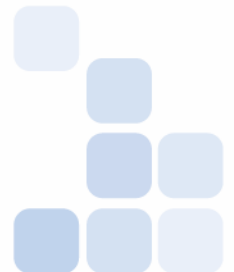
22 May 2007

Anne McCasland-Pexton, Solicitor



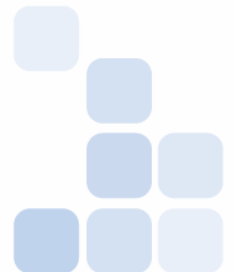
## Possible Design for a National Greenhouse Gas Emissions Trading Scheme (NETS)

- Discussion Paper prepared by the National Emissions Trading Taskforce (NETT) released August 2006 after submissions to September 2005 *Background Paper for Stakeholder Consultation into Emissions Trading*
- Stakeholder forums in capital cities
- 134 Submissions to date
- 9 February 2007 - Council for the Australian Federation announced that the States and Territories would introduce an emissions trading scheme by the end of 2010, if the Commonwealth Government did not commit to a scheme following the report of the Prime Minister's Task Group on Emissions Trading
- NETT aiming to recommend a preferred scheme design in the second half of 2007



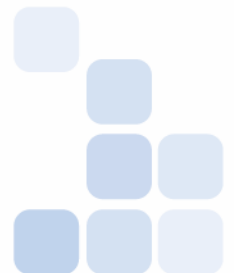
## Why do the States want a Carbon Trading Scheme?

- Uncertainty over future policy re: climate change is hindering investment in electricity generation and energy intensive industries
- Continued uncertainty could lead to higher electricity prices and less reliable supply in the future
- Early action would allow smoother path to carbon-constrained economy
- Delay could mean sharper reductions in emissions at higher costs and more significant negative impacts on economy
- Tradeable permits would provide credible price signal to guide investment decisions and encourage low emissions technology
- Fundamental obligation of governments to create robust and predictable regulatory framework to stimulate new technology and improved environmental outcomes
- Action by Australia would build international confidence and encourage cooperation to cut emissions globally



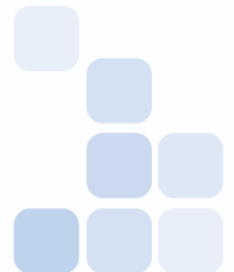
## Objectives of scheme design

- Reduce Australian emissions by ~60% compared with 2000 levels by mid-century
- Environmental integrity
- Investor certainty
- Minimise impact on economy (especially energy-intensive, trade-exposed industries)
- Flexibility
- Equity



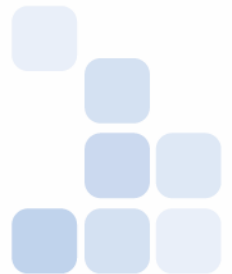
## Coverage of Scheme Design

- Stationary energy sector – largest component of Australian emissions
- Electricity generators with capacity over 30MWe (~100 facilities) – 190 Mt of emissions
- After 5 years add imputed emissions from retail natural gas sales and fugitive emissions from gas pipelines – total 275 Mt emissions from ~250 facilities – 45% of emissions in 2015
- All 6 Kyoto Protocol gases included for permits and offsets
- Firm annual caps for first 10 years



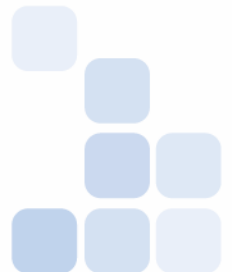
## Allocation of permits

- Permit = right to emit 1 tonne of CO2 emissions
- Permits date stamped with first year of validity (vintage)
- Free allocation to existing electricity generators adversely affected by scheme up until 2030
- No free allocation to new generators
- Free allocation of permits to trade-exposed, energy-intensive industries (old and new)
- Remainder of permits to be auctioned
- Revenue from auctioned permits divided between States and Territories to fund assistance to households, regions, small business etc.



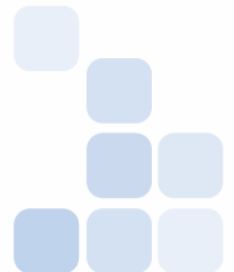
## Scheme caps for the electricity sector

- Firm caps to be set for first 10 years
- Upper and lower bounds of future caps ('gateways') proposed for second 10 years – extended every 5 years
- Permits issued up to the lower bound of gateways in advance
- **Scenario 1:** cap of 176 Mt in 2030 (5% reduction from 2005 levels)
- **Scenario 1a:** same cap as 1 but with additional policy measures to encourage energy efficiency, offsets and technology to reduce costs of compliance
- **Scenario 2:** cap of 150 Mt in 2030 (19% reduction from 2005 levels)
- Caps to be adjusted when other elements of stationary energy added to scheme



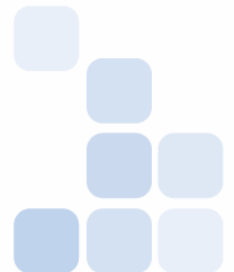
## Estimated economic impacts

- Modelling coordinated by Insight Economics and The Allen Consulting Group
- Electricity market modelling – McLennan Magasanik Associates
- Economy-wide modelling – Centre of Policy Studies based on computable general equilibrium (CGE) model of Australian economy (MMRF-GREEN)
- Results vary widely depending on assumptions used
- Greater impact on some areas and industries
- Boon for renewable energy, gas-fired electricity generation and forestry
- Inequities to be address through allocation of free permits and permit auction revenue
- Minimal impact compared with price of oil, drought, interest rate rises etc



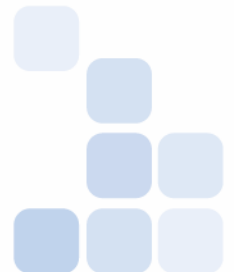
## Estimated impact on electricity prices

- Small rise initially
- Greater rise in SWIS and DKIS than NEM due to limited fuel switching opportunities
- Lower impact on retail prices than on wholesale prices
- Additional average weekly electricity costs 2010-2030:
  - **Scenario 1:** \$1.00 (Vic) - \$3.20 (NT)
  - **Scenario 1a:** \$0.70 (SA, Vic) - \$2.20 (NT)
  - **Scenario 2:** \$1.20 (Vic) – \$3.60 (NT)
- Wholesale price increases (above BAU) 2010-2030:
  - NEM: up 17-22%
  - SWIS: up 27-40%
  - DKIS: up 20-30%
- Retail price impact largest for industrial customers



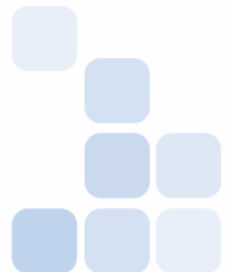
## Permit prices

- Likely to rise from \$12/t in 2010 to \$20/t by 2015
- Banking of permits expected in early years while caps are high and reductions are cheaper
- Scenario 1: prices rise to just under \$30/t by 2024 and then level off (avg \$22/t)
- Scenario 1a: lower permit prices (beginning at \$6/t) in earlier years due to energy efficiency and biosequestration offsets, but end up at same level by 2030 (avg \$15/t)
- Scenario 2: prices peak at \$34/t in 2022 (avg \$24/t)
- Net present values:
  - Scenario 1: \$49 billion
  - Scenario 1a: \$35 billion
  - Scenario 2: \$53 billion



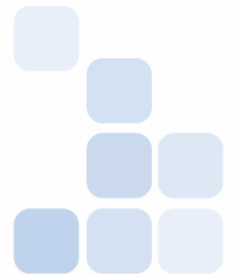
## Compliance

- Penalties ensure compliance and cap costs – balance of environmental integrity and certainty for investors
- Area of contention in submissions
- Civil penalties – set at level that caps cost of scheme
- Publish list of non-compliers
- Possibly criminal sanctions at later date
- Make-good provisions not proposed at this stage – due to reduction of certainty for investors and increase of large, sudden impacts on economy
  - Reduces environmental integrity of scheme
  - Potential problem for bilateral linking with other schemes (ie EU ETS has make-good provision)



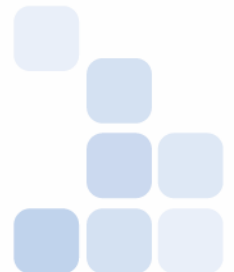
## Banking and borrowing of allowances

- Unrestricted banking of permits allowed to encourage early emission reductions and reduce compliance costs
- Possible limit of 10 years on banking
- Borrowing not proposed
- Market solutions (forward contracts etc) to accommodate shortfalls



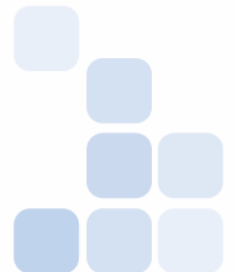
## Offsets

- Offset credits broaden scope of scheme, increase liquidity of market and lower cost of meeting cap
- Should meet strong additionality, permanence and measurement criteria with robust baseline and monitoring methods to ensure environmental integrity
- Generally consistent with Kyoto Protocol Joint Implementation (JI) mechanism and Clean Development Mechanism (CDM) to allow linking with other schemes in future
- Flexible approach to encourage investment – proponents to submit methodologies for approval by Scheme Developer
- Area of contention in submissions – breadth of offsets allowed, methodologies, transaction costs
- Seller liability for compliance with rules
- Focus on forestry, carbon capture and storage (CCS), reductions in industrial process emissions, destruction of methane in waste sector



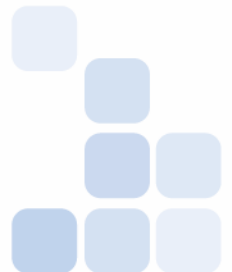
## Monitoring, reporting and verification

- Need effective, credible, efficient systems
- Ideally national processes in place by 1 January 2008 for 2010 start
- Overall cost savings from streamlining of reporting requirements under various schemes
- Should be consistent with international standards
- Penalties for non-compliance (providing false, misleading or late reporting etc)
- Public disclosure of emissions data by facility or aggregated
- Auditor accreditation and sanctions



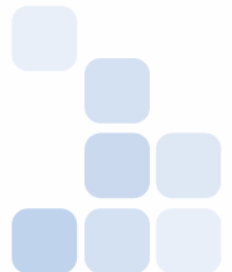
## Compatibility with other schemes

- NETS can operate in parallel with current domestic schemes –
  - Cth Mandatory Renewable Energy Target (MRET)
  - Victorian Renewable Energy Target (VRET)
  - Qld 13% Gas Scheme
- NSW & ACT Greenhouse Gas Abatement Scheme (GGAS) has some overlap with proposed scheme, therefore careful transition needed
- Unilateral linking with the CDM from outset – Certified Emissions Reductions (CERs) count towards domestic obligations
- Possible exclusion of some categories of CDM projects and limit on volume of CERs recognised
- Bilateral linking possible in future – should be dealt with by Cth – need further analysis of impact on Australian economy
- Focus is on strong domestic market suitable for Australian economy



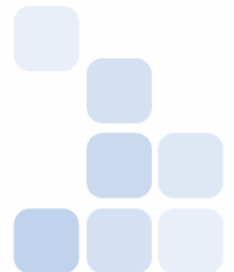
## Complementary measures

- International engagement and negotiations
- Research, development and demonstration
- Areas where NETS not feasible due to high transaction costs etc
- Areas with non-price barriers
- Areas with significant price inelasticities of supply/demand
- Energy-efficiency programs
- Renewable/low-emissions energy deployment
- Transport
- Industrial process emissions
- Agriculture
- Waste
- Land use/change and forestry



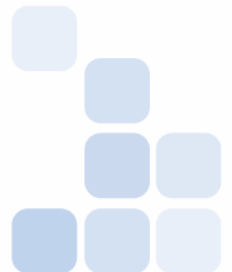
## Establishment of Scheme

- By end of 2010 need legislation, institutions, monitoring/reporting of emissions, permit allocation process, rules for offsets, capacity building and education
- Commonwealth involvement preferred – could use existing institutions ie Ministerial Council on Energy, Australian Energy Market Commission, Australian Energy Regulator etc
- Otherwise need intergovernmental agreement between States and Territories to form new institutions:
  - Ministerial Council/Forum: final decision-making, scheme oversight and accountability
  - Scheme Developer: support to Council/Forum, ensure efficient, effective scheme, perform scheduled reviews
  - Scheme Regulator: day-to-day operating of scheme
- Initial auction of permits including for future years to occur before scheme commences
- Dry run of trading and operating before scheme commences



## Capacity building

- Need to source skilled staff for new institutions
- Increasing international demand for personnel with appropriate skills and experience
- Need to educate public and stakeholders about aims and operation of scheme
- New role for intermediaries – banks, lawyers, traders etc to ensure abatement projects, contractual arrangements and trading of permits and credits proceed smoothly
- Need to establish accounting and taxation treatment of permits



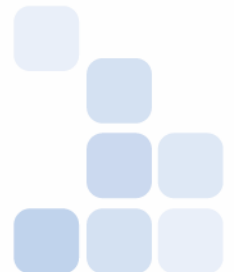
## Stakeholder views

### **Issues on which there was significant consensus**

- The need for prompt 'action' in relation to climate change
- The concept of emissions trading and a cap and trade scheme
- A preference for a single coordinated international (and national) scheme

### **Issues for which there was a significant difference**

- How proposed scheme should or could interact and interlink with existing schemes and policies (State, national and international)
- Offsets - the number and type of offsets to be allowed, whether CER (CDM) offsets should be used
- Sectors to be covered - both initially and as the scheme develops
- Free permit allocations ('grandfathering') - whether should be allowed at all, areas and sectors to be covered, duration
- Cap limits
- Penalty for non-compliance - financial amount and whether should be required to 'make good'
- Type and suitability of modeling used





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