
**North Queensland Energy Forum
Townsville Enterprise Ltd
EUAA
28-29 November 2007**

Emissions Trading in Australia

**Walter Gerardi / Bob Graham
McLennan Magasanik Associates**

Agenda

- **Emissions Trading**
- **PM Task group scheme**
- **NETT scheme**
 - MMA modelling
 - Electricity Prices
 - Carbon Prices
- **Effect on energy users**

Emissions by Sector

Sector	Australia Mt CO ₂ e
Total net emissions	564.7
Stationary Energy	
Electricity generation	195.2
Other energy industries	13.0
Manufacturing and construction	42.5
Other sectors	19.4
Transport Energy	76.2
Fugitive	31.0
Industrial processes	29.8
Waste	19.1
Agriculture	
Livestock	65.0
Other agriculture	28.1
Land use and forestry	
Afforestation	-17.8
Land use change	53.3

Emission Task: How Could it be Achieved

- **Deep cuts require broad based measure**
 - Market based mechanism to avoid picking winners
 - Enable low cost options to be adopted early
 - Emissions Trading
 - Sets targets, but cost is estimated
 - Carbon Tax
 - Sets cost, but abatement is estimated
- **Emissions trading is the best of possible options**
 - Effective (targets set and required to be met)
 - Efficient (should encourage least cost option)
 - Equitable (depends on compensation mechanisms and coverage)

Emission Abatement Task: Policy Issues

- **Need for emissions trading scheme now widely recognized**
- **Emissions trading will likely see**
 - Fuel switching and uptake of gas-fired generation in the short term
 - But deep cuts over the longer term requires low or zero emission technologies to be adopted.
 - Uncertainties over cost could see mild cuts in emissions adopted in the short term

PM Task Group on Emissions Trading

- **Commissioned in Dec 2006**
- **Reported in May 2007**
- **Recommended that a 'Cap and Trade' scheme**
 - Be committed to in the near future
 - Be running by 2012
 - Not prejudice the competitive position of our trade-exposed, emissions-intensive industries

PM Task Group on Emissions Trading

- **Key Features of scheme**
 - Long term aspirational goal
 - Flexible trajectory is periodically recalibrated
 - Maximum practical coverage
 - Once-off compensation via free permits
 - ‘Safety valve’ emissions fee
 - Allows credible off-sets
 - International linkages
 - Early abatement encouraged

PM Task Group on Emissions Trading

- **Coverage**
 - Excludes agriculture and land use
 - Includes
 - Major emitting facilities eg. >25ktpa, plus
 - Upstream fuel suppliers
- **Economic Impact Analysis**
 - To be done by Treasury in 2008

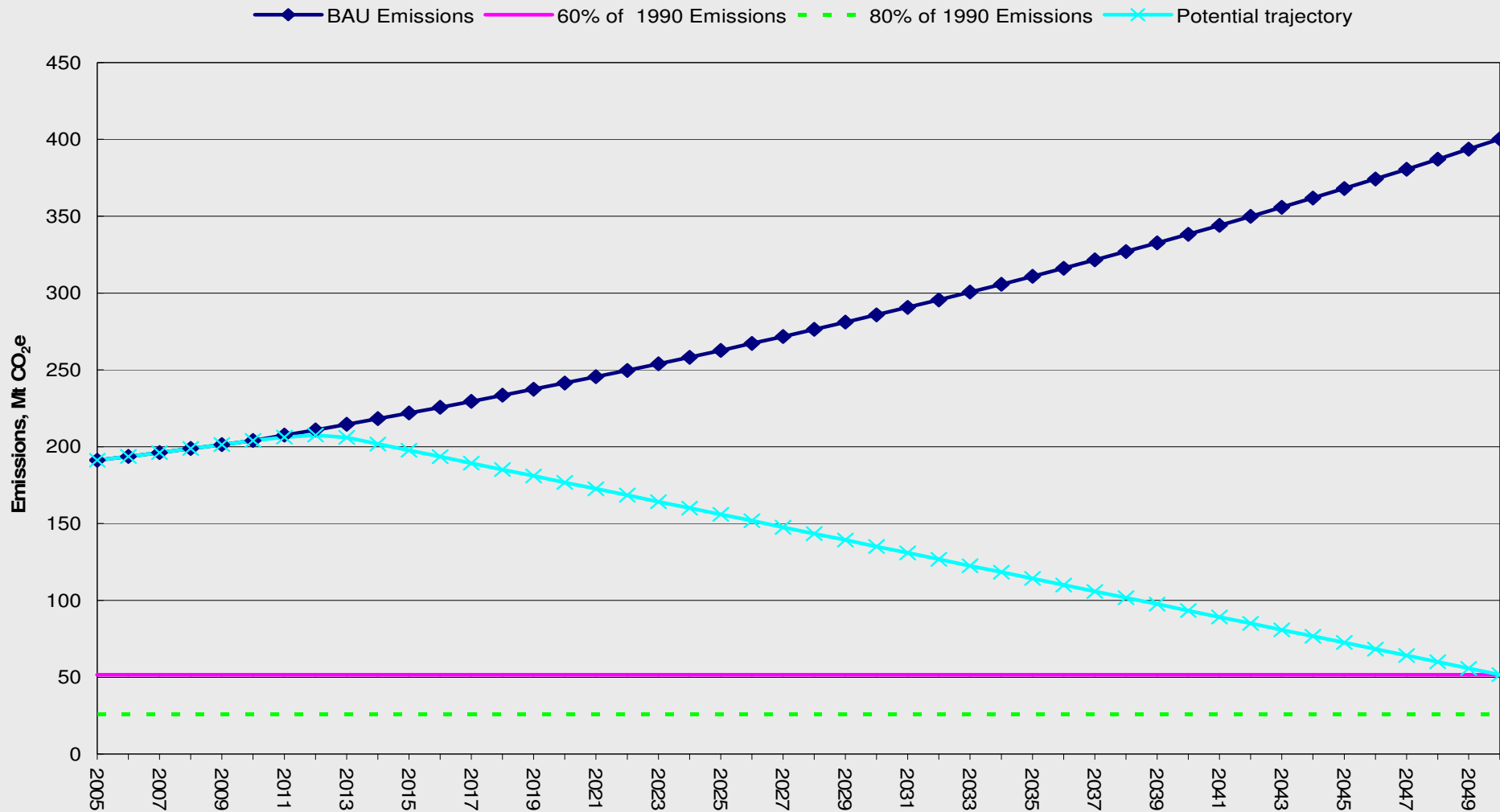
National Emissions Trading Taskforce (NETT)

- **Prior to this, in 2005 State and Territory Governments established the NETT to**
 - develop a multi-jurisdictional emissions trading scheme
 - for consideration by State and Territory Governments
- **Published “Possible Design” discussion paper in August 2006**
 - MMA assessed impact on electricity markets
 - Allen Consulting & Centre of Policy Studies assessed impact on economy

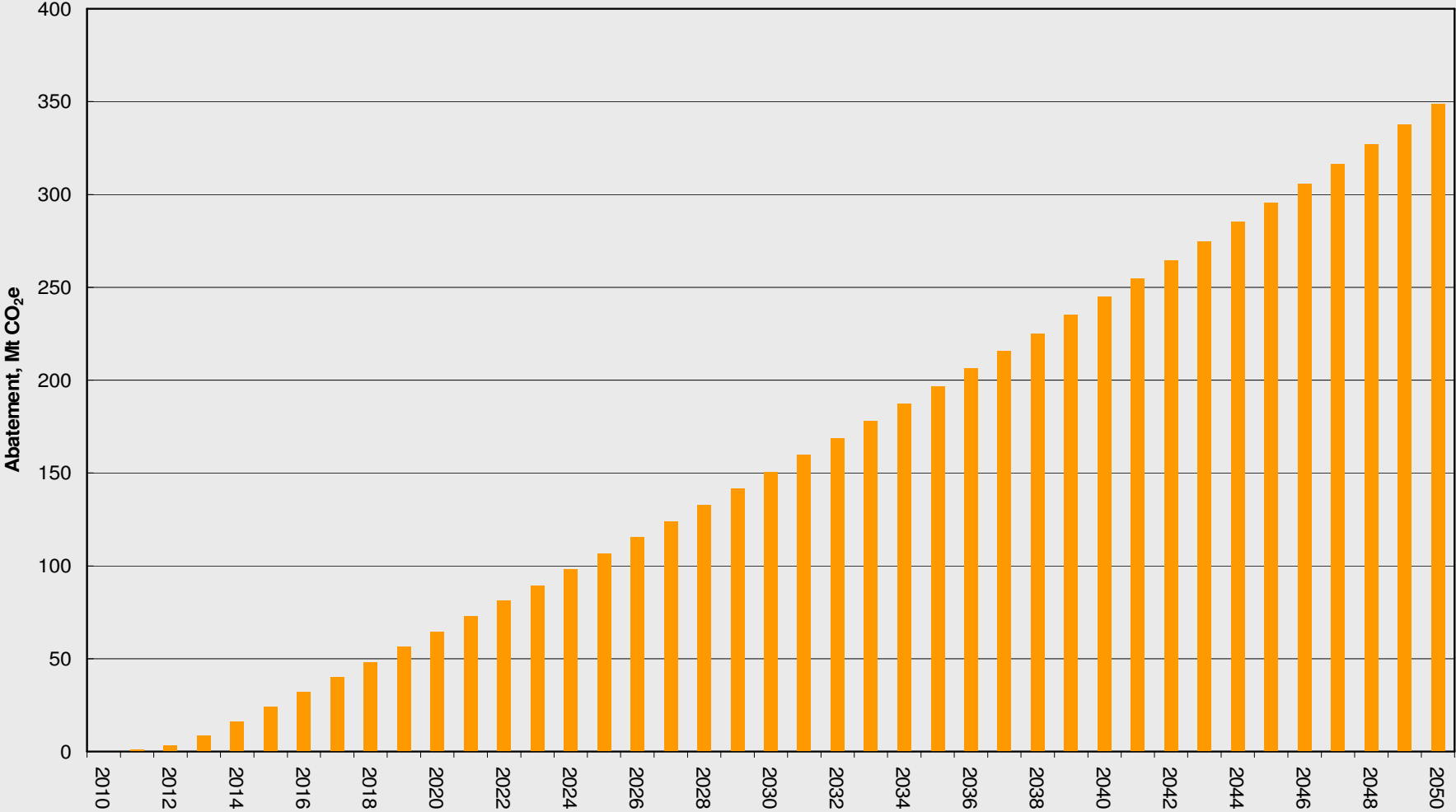
Possible NETT Design

- **Targets 60% reduction from 2000 levels**
- **Covers**
 - Initially only the stationary energy sector (>30MWe)
 - Currently looking at increased coverage
- **Had otherwise similar features to the subsequent Federal scheme**

Emission Reduction Task: Emission Projections from Electricity Generation



Emission Reduction Task: Abatement Required



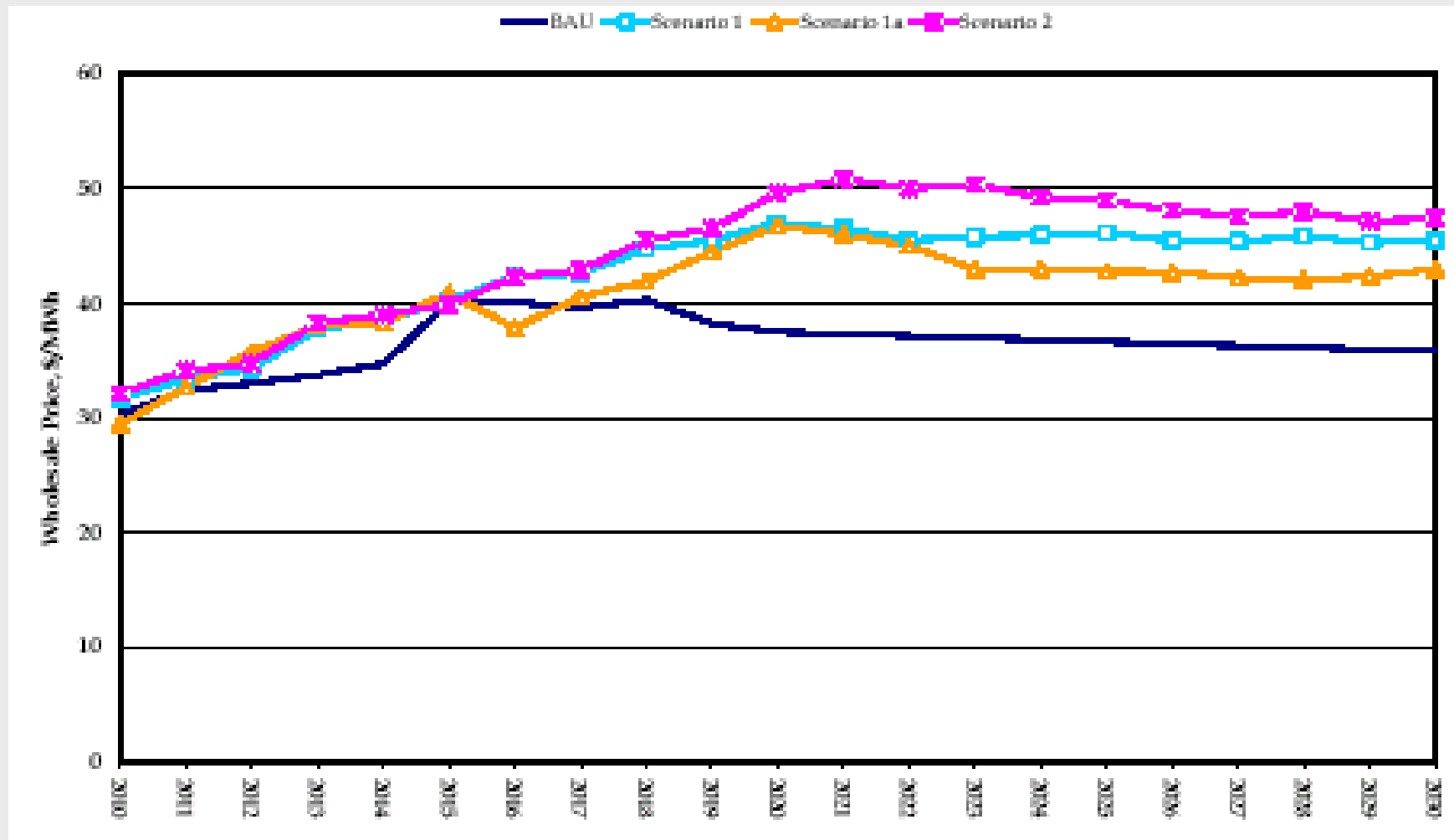
MMA Study on Impact on Electricity Markets

- **Studied 2010 to 2030**
- **Banking allowed**
 - Leads to cumulative targets
 - Options selected which minimise total cost over study period of meeting cumulative targets
- **No grandfathering**
- **CO₂e abatement comes from**
 - Switching to lower emission technologies
 - Energy efficiency
 - Biosequestration

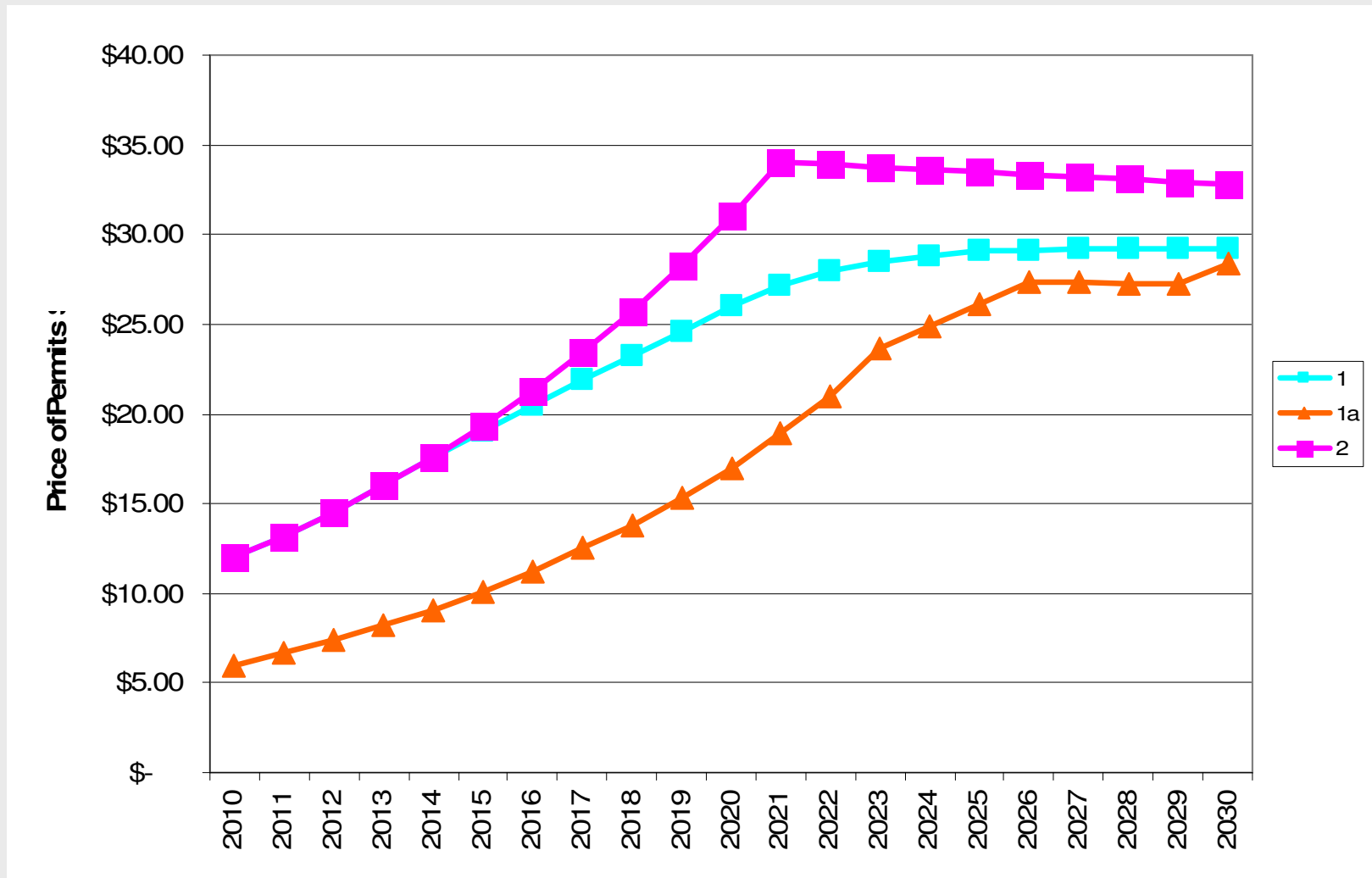
MMA Study on Impact on Electricity Markets

- **Modelled 'Business as Usual' plus 3 Scenarios**
 - 1 - Down to 176 Mt by 2030 (~ 2000 levels)
 - 1a - Down to 176 Mt by 2030 with more Energy Efficiency
 - 2 - Down to 150 Mt by 2030

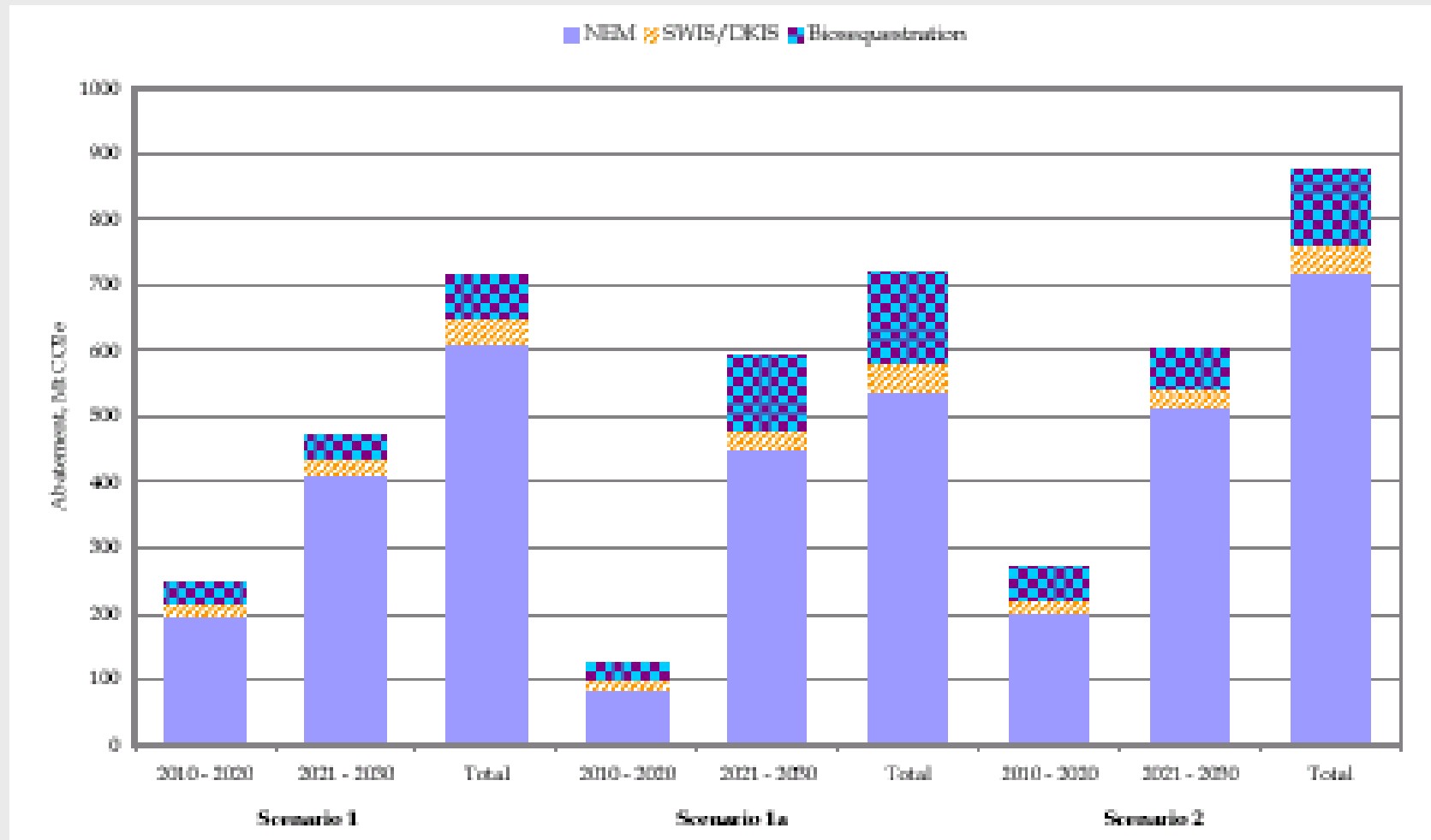
MMA Study on Impact on Electricity Markets



MMA Study on Impact on Electricity Markets



MMA Study on Impact on Electricity Markets



Effect on small energy users (Not covered)

- No direct effect
- Electricity prices will rise (e.g. as per previous)
- Fuel prices will rise to account for permit prices (e.g. as per previous) based on CO₂e impact of fuel, both in fuel consumption and production
 - Black coal ~ 2.5 t CO₂e /t
 - Natural gas 0.064 t CO₂e /GJ
 - Distillate 3.1 t CO₂e /kL

Effect on large energy users (Covered)

- **Electricity prices will rise**
- **Fuel prices to these users**
 - will be increased by the permit price of production
 - will not be increased by the permit price of consumption, to avoid double-counting
- **Can only emit annual quantity of greenhouse gases (GHG) for which permits are held, or else must pay fee for excess**
 - May be allocated permits
 - Trade-exposed, emissions-intensive industries, or
 - Compensation for loss of value
 - Purchase permits from trading or auctions
 - Generate own permits through off-sets
 - Reduce GHG emissions/unit of production
 - Reduce production to permit level
 - Reduce production below permit level and sell excess permits

Impacts Depend On

- Target range
- Design of measure
- Costs of new generation

Concluding Comments

- **What we know**
 - Emissions trading will be implemented
 - Emissions trading will increase electricity and fossil fuel prices
 - Emissions trading will change the mix of generation and change the profitability of generators
- **What we do not know:**
 - Level of caps and sectoral coverage
 - Extent of compensation
 - Extent of international agreements
 - Cost of low emission technologies
 - Extent of ancillary measures such as energy efficiency programs and support for low emission technology development and deployment

References

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