Emissions Trading in New Zealand

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Outline

- Basic emissions trading system design
  - Cap
  - Measurement of emissions and ‘Point of obligation’
- Maintaining simplicity
- Controlling ‘leakage’
- Equity in free allocation
- Future issues

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Role of Motu in Climate Change Policy

- Excellent, objective advice
- Promote informed debate
- Non-advocacy

Climate change dialogue and Leadership Forum sub-group

- Provide technical solutions to technical problems.
- Facilitate clear communication among disparate parties.
- Combine economic experts' knowledge with the expertise and experience of private sector participants.

EcoClimate { Integrated Research on the Economics of Climate Change Impacts, Adaptation and Mitigation

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Global greenhouse gas emissions cap

An emissions trading system limits greenhouse gas emissions

The global limits defined in the international agreement (and compliance with them) define the environmental impact of Kyoto

Trading should have no environmental effect

‘Hot air’ and the environment

- Some countries have been given more generous caps than they need
- Some argue that they should not be allowed to sell their excess
- This sounds superficially attractive but two reasons make it environmentally unsound

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Why we should buy ‘hot air’

Climate change is long term problem

We can only solve it with global cooperation even though we have no global government

We have to build trust; reneging on our previous agreement does not do this – it sends a very bad signal to developing countries

Why we should buy ‘hot air’ cont….

In any case, if we don’t buy the ‘hot air’ it will simply be saved for post 2012.

If we want to do more for climate change we should negotiate for and facilitate achievement of more stringent global targets

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NZ greenhouse gas emissions cap

- The NZ government has a certain allocation of Assigned Amount Units under our Kyoto obligations.
- These can be supplemented through carbon sequestration.
- If NZ wants to emit more than this, it must buy additional units from the international market.

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Measuring emissions

- New Zealand generates a ‘National Inventory’ each year which measures all greenhouse gas emissions and sequestration based on international rules.

- New Zealand must surrender enough assigned amount units to match net emissions as measured in this inventory.

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Devolution of obligations and emission units

- A domestic emissions trading system issues emission units to the private sector by sale or gift.
- It makes private actors responsible for
  - Reporting information that can be used to model greenhouse gas emissions from their chain of production
  - Surrendering emission units that match the inferred emissions
  - Claiming emission units to match sequestration

In an all-sources, all-gases system, the total units surrendered will match the national inventory and New Zealand compliance will be assured.

Points of obligation

- The points of obligation should
  - Obtain comprehensive coverage
  - Minimise transaction costs
  - Provide clearly targeted incentives to maximise flexibility in reducing emissions

The point of obligation does not affect:

- The ability of any party to mitigate
- Parties' incentives to respond
- How the economic burden is shared
- The parties to which any free allocation occurs

If accurate targeting of GHGs cannot be achieved at all points, there may be a trade off between efficiency and simplicity

- Agricultural emissions are affected by on-farm mitigation options.
- Carbon sequestration depends on actions in forests.

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Maintain simplicity

- Lower transaction costs
- Less scope for manipulation and opportunism
- Less risk
- Greater responsiveness

Perfection should not be the enemy of good.

Overall economic impact

- Impact in the period to 2013 is probably low relative to other shocks
- Fuel and electricity prices will rise
- The cost arises primarily from Kyoto compliance not from the emissions trading system

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Impact on specific firms and workers

Could be high for:

- Sectors that produce a lot of greenhouse gas emissions
- Products that are vulnerable to leakage

Controlling ‘leakage’

Leakage arises when, as a result of carbon regulation, production and emissions fall in New Zealand and rise in a country with no or weaker regulation.

- ‘Leakage’ is an environmental issue.
- The emission rises in other countries are a net global environmental loss because they are not constrained by Kyoto.

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Economic impacts of ‘leakage’

‘Leakage’ is also an economic issue if we lose capital, skilled labour and market share that we later regret.

Economic regret arises if:

- Production ‘should’ occur in NZ in the long run;
- Production will leak in the short run;
- The loss will be irreversible; and
- The social losses are greater than the costs of protection

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Significant leakage?

Significant leakage will occur only when

- Domestic supply is elastic – i.e. can change easily
  - New investment is most likely to be vulnerable
- NZ is competing with unregulated countries
- The GHG intensity of production is high

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Leakage makes compliance easier

- If New Zealand's emissions intensive production falls, we will meet our formal international obligations more easily.

Addressing leakage

- It's complex so will be imperfect.
- Have to first identify products/processes that are likely to contribute to significant leakage and economic regret.
  - Make this list short!
- Regret may be more likely to occur when electricity consumption is high

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- Leakage can occur as shutdown, no maintenance, contraction or no new investment

- For products that are deemed worthy of protection, share free allocation on the basis of current and future output not history.

Distribution of economic burden

- There are one-off costs/benefits for ‘stranded assets’ which include workers with specific skills
- In the long run all costs are borne by consumers.
- Free allocation of emission units transfers wealth – this could partially compensate for stranded assets.
- Freely allocated emission units impose a cost on the tax payer.

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Effects on workers

Workers involved in production of GHG intensive goods are likely to be affected

Some workers will be affected by leakage

Is providing subsidies to firms the most effective way to protect workers?

Issues to address when ETS is settled

- Adaptation to climate change that is already occurring
- New Zealand's role in the global agreement

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