

Free Allocation of NZ Units

Report from Cluster B

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Outline

- How much to freely allocate
- Key motivations for free allocation
 - Leakage / regrets / competitive at risk
 - Adjustment costs
 - Compensation / Stranded assets
- Sector issues
 - Forestry
 - Agriculture
 - Liquid fuel users / industrial processes / stationary energy users



How much to freely allocate

- Free allocation has an opportunity cost
 - Taxpayers face a higher burden
 - Lost opportunities to use revenue
- Households and consumers bear the long term costs of emissions control
- Free allocation to firms only compensates firm owners
- Firms seem satisfied with level of free allocation – though not with phase-out – is it too high?



Information needs

- Tax efficiency losses from free allocation
- Share of costs borne by households and consumers in short and medium term
- Existing modelling exists; Is it sufficient and easily available?



Key motivations for free allocation

1 Leakage / regrets / competitive at risk

- NZ's competitors do not face carbon price; NZ production (and emissions) fall; International production and emissions rise
- Environmental implications
- Globally inefficient short-term adjustment costs and long-term loss of economic opportunities
- Fiscal costs of protection. No 'regret' from loss if this is a long term issue.



Implication for free allocation?

- Damage arises from carbon price – increased cost of growth, new investment and marginal production
- Therefore allocation method must lower effective carbon price for affected products
- Intensity-based allocation does this



Information needs

- How great is leakage likely to be and what are the likely regrets?
- What are intensity-related mitigation options and their costs?
 - If emissions intensity can be easily reduced, leakage is not such a key issue
 - Affects appropriate total allocation to sectors with leakage – particularly phase-out.



Key motivations for free allocation

2 Adjustment costs

- Primary concern is effect on community and workers
- Slower adjustment is less costly
 - Spread adjustment over time through graduated entry of sectors
 - Reduce / address leakage
- Free allocation does not directly benefit communities or workers
- Implication: use other mechanisms as well



Information needs

- Which communities and groups of workers are likely to be heavily affected?
- What types of assistance would help those who face difficulties in adjusting?



Key motivations for free allocation

3 Compensation / Stranded assets

- Loss of capital value
 - Physical capital
 - Land
 - ‘human capital’ – education and experience
 - Housing
- Compensate those who own capital at time of ETS introduction
- Focus on significant, concentrated losses
- Implication: lump-sum allocation appropriate; consider equity across capital classes



Motivations and hence appropriate form of free allocation vary across sectors

Forestry – growing trees

- Issue is pre-1989 forests on good quality land
 - Significant, concentrated stranded assets
- Lump sum free allocation appropriate
- Outstanding issue is how allocation is spread within the sector



Agriculture

- Key issue is leakage – with closely linked implications for stranded assets / loss of profit
 - How great would regrets be?
- Implication: intensity-based free allocation?
 - Take total free allocation pool for agriculture each year and share based on output shares



Benefits of intensity-based allocation in agriculture

- Reduces incentives to limit production – focus on emissions intensity
- Reduces impact of stranded assets / loss of profit roughly proportional to loss
- Addresses exit/new entrant / transfer of allocation issues seamlessly
- Could allow low thresholds for allocation
- Output relatively easily measured



Benefits of intensity-based allocation in agriculture

- Need to address sharing across sub sectors where output is not comparable
- Benefits those who expand production at expense of those who reduce



Information needs

- How large is leakage likely to be
 - Some modelling already exists – can it be improved?
- How large are regrets likely to be?
 - How slow would build up of capability and capital be after its loss?



Liquid fuel users / industrial processes / stationary energy users

- Much harder!
- Primary motivation is leakage but hard to identify who faces it and how much
- ‘Output’ is harder to define
- Many different products

- Problem is temporary
 - Increased global participation will reduce problem
 - Some may be addressed through international sectoral agreements
 - Border adjustments are a potential option in future



Treat all as 'leakage' - intensity based allocation?

Advantages

- Reduces leakage
- Don't have to differentiate products
- Automatically directs some compensation to stranded assets

Disadvantages

- Have to define 'output'
- Weak incentive to reduce consumption of non-leaky products
- Those with genuine leakage cross-subsidise production of those without



Information needs

- Need credible sub-sector specific information on scale of leakage
- Need information on how ‘output’ could be defined in each sub-sector
- Need to identify products/sub-sectors where leakage is not an issue but stranded assets are



Fisheries: a sector that primarily faces stranded assets?

- Diesel is a major cost
- Harvests of many species constrained by Total Allowable Commercial Catch limits not economics
- Therefore won't leak
- Face international prices – cannot pass on costs
- Loss of value to quota owners

Are other sectors in a similar situation?



Summary

- Total level of free allocation (and phase-out) has efficiency and equity implications
- Appropriate form of free allocation depends on motivation
- For each sector we need more information to choose define key motivation and design system for free allocation



Economic Modelling: Report from Cluster B

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Economic modelling

- Principles
- Short run
- Long run



Economic modelling

- separate research funders from researchers to improve objectivity and credibility
- use best expertise for each question
- use alternative researchers as peer reviewers, at preliminary as well as final stage
- discuss preliminary research results within a group with a range of perspectives (but not fully public to allow free discussion)
- publish research, and guarantee this in advance
- document all data and methods for transparency.



Economic modelling: short run

- Adjustment costs
 - Use general equilibrium model to provide basis for structural shift scenarios
 - Explore implications for regions and occupation groups
 - Compare to scale of 1980s shifts
- Leakage
 - Take sector specific 'stories' and independently analyse and verify them
- Stranded assets
 - Choose critical sectors and analyse scale of effects: e.g. agricultural land; fisheries quota

Decide now if want analysis early next year!!!



Economic modelling: Medium to long run

- Mitigation options and costs curves
 - Likely to be funded through FRST, MAF...?
 - Private sector involvement and data provision would improve quality

...can feed into environmental impact assessment

- Set up database for emissions trading system to allow detailed evaluation once it begins operation.
 - Allow linkages to other key statistics NZ datasets

