



Australian Energy User 2010 conference

Living with an ETS and other climate change policies

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www.meug.co.nz
www.mfe.govt.nz/issues/climate/index.html
www.climatechange.govt.nz



Background to MEUG

- NZ total annual power demand 40 TWh (all numbers \approx)
- MEUG members consume 25%+ of total NZ demand
- Largest 5 power users' are:
 - Rio Tinto, 5 TWh, Aluminum smelting
 - 1 TWh each Norske Skog Tasman and Carter Holt Harvey (both pulp & paper), Fonterra (dairy processing) and NZ Steel
- MEUG members co-generation totals 1TWh+



NZ' s C footprint

- < 0.2% of global GHG
- NZ is unique amongst Annex B countries as $\text{CH}_4 > \text{CO}_2$
- NZ has 0.12% of global CO_2 emissions

Emissions sector (74.7 Mt, 2008)	Percent
Agriculture	46.6%
Energy: Mainly transport, <15% electricity generation	45.3%
Industrial processes	5.7%
Waste	2.2%
Solvent and other	> 1%



NZ' s Kyoto Protocol target

- Kyoto Protocol target of 1990 emission levels by 2012
 - Protocol adopted 1997 and NZ ratified Dec-2002
 - Average Annex B target of -5%
 - Australian target was +8%
- Last projection in May 2010 is for a surplus of 11.2×10^6 units
- @ NZ\$19.46/t, surplus valued at NZ\$218m ... not expecting a cheque any time soon
- It' s been a roller coaster ride in forecasting possible surplus or deficit. In December 2005 officials were expecting a deficit of 64×10^6 units.



NZ' s more recent international policy position

- Conditional responsibility target for reductions between 10% and 20% below 1990 levels by 2020 [set Aug-2009], “if there is a comprehensive global agreement.” This means:
 1. The agreement is on the path towards 2°C temperature rise.
 2. Developed countries make comparable efforts to NZ.
 3. Advanced and major emitting developing countries take action fully commensurate with their respective capabilities.
 4. Effective rules on land-use change and forestry; and
 5. Recourse to a broad and efficient international C market.
- LT target of 50% reduction in net GHG from 1990 levels by 2050
- Support \leq 450 ppm CO₂e



ETS as the cornerstone of NZ' s domestic policies

- Comprehensive all gases. Agriculture in 2015. Obligations at source with option generators & large downstream user' s to opt in
- Price cap or NZ\$25/t and 1 for 2 unit surrender obligation gives an effective price cap at NZ\$12.50/t until Dec-2012
- Free credits for trade exposed firms (mainly power costs)
- Review in 2011 to allow changes to be in place Jan-2013

- It could have been worse. The original ETS had no effective cap. Legislation was amended in late 2009.
- The original ETS also had other measures such as a ban on new thermal generation. Within a month of the late 2008 general election that ban was removed.



A range of non ETS policies also, eg

- NZ Energy Strategy (being reviewed)
- NZ Energy Efficiency and Conservation Strategy (being reviewed)
- Vehicle fuel economy labeling (since Apr-08)
- Grant to biodiesel producers (started Jul-09, \$36m over 3 years)
- Global Alliance on agricultural emissions (announced Sep-09)
- Electric vehicles exempt from road-user charges (from Oct-09)
- Primary Growth Partnership, \$30m 2009/10 to \$70m 2012/13

Co-benefits:

- Improve public health
- Reduce erosion

Private sector efforts eg CSS



Expected financial impact on consumers

- Prior to the changes to the ETS legislation, a \$25/t C price was expected to add 1.4 c/kWh to power prices, before free allocations
- This equaled \$½ billion pa
- The effective cap of \$12.50/t has halved the cost
- Free allocations to trade-exposed firms are in the order of \$65m pa
- Though as it has turned out, Fonterra is getting very little relief



Feedback from major power users' on living with an ETS

- It's just another cost to managed
- Too early to say because high water inflows have depressed spot prices ... but NZ is prone to volatile spot prices as result of dry periods ... so cost impact still likely to flow through

Jul-Sep	Average spot price (c/ kWh) at Haywards
2005	7.4
2006	6.5
2007	5.6
2008	10.8
2009	3.7
2010	4.9



With ETS now on the books, other policies equally important

- Before ETS amended late 2009, power costs could have gone up by \$½ billion pa @ \$25/t. This cost excludes free credits.
- Actual cost is ≈ \$240m pa.
- Therefore risk is a reversion to the original ETS and another \$240m pa
- Electricity consumers in NZ have other opportunities and risks:
 - 5% improvement in competitive spot and hedge prices is worth \$250m pa (assuming wholesale and retail market \$5b pa).
There is significant scope for improvements and part of the challenge is to bed in recent decisions to improve the market
 - A 3% lift in the regulated WACC for transmission and distribution businesses would, within 3 years, increase delivered prices by \$½ billion pa



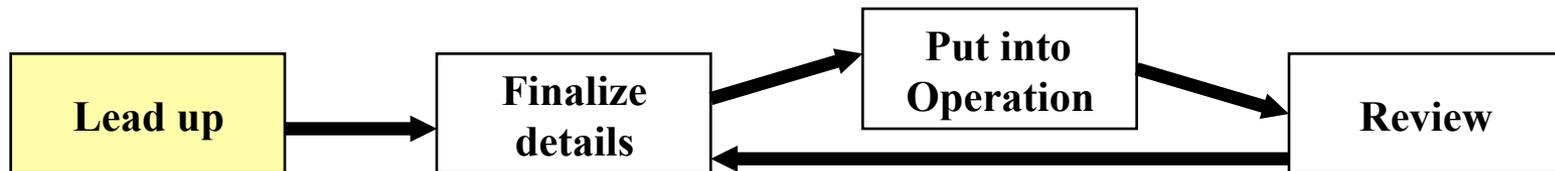
How hard is it living with an ETS?

- Take four phases:
 1. Lead up to deciding an ETS or other policies
 2. Once decision made, finalize details
 3. Managing operations once ETS goes live
 4. Prepare for the next ETS review!
- And go back to phase 2 [or even phase 1(?)]



Phase 1: Lead up to deciding an ETS or other policies

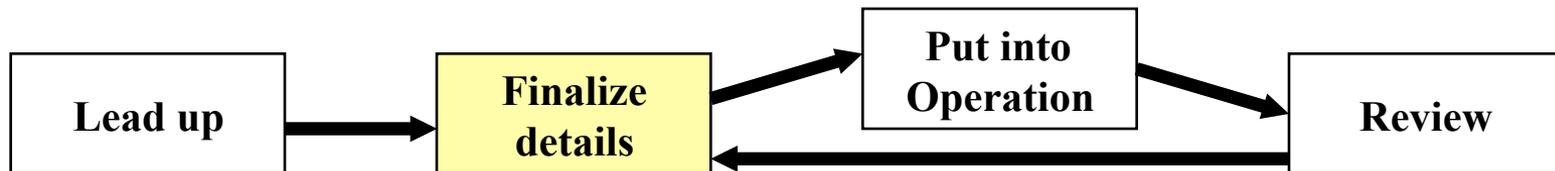
- An unwelcome distraction – doesn't help lower costs of producing another widget or selling widgets in international commodity markets
- Major power users' had other GHG obligations also, eg fuel oil and diesel. By far largest exposure was C add-on to power prices





Phase 2: Once decision made, finalize details

- Officials were not aligned with trade-exposed businesses risk. “Officials were one sided”. See example on next slide
- Rushed. Pragmatic shortcuts – benefit of doubt not empathetic to trade-exposure risk
- Gathering data for assessing eligibility and allocation for credits for trade exposed firms was a major task
- One positive in this process was businesses got a better picture of how use energy and therefore opportunities for energy efficiency





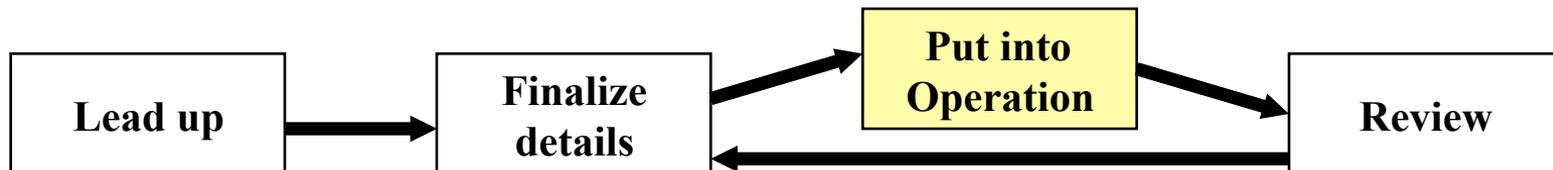
Electricity Allocation Factor set at 0.52 MWh/t CO₂e

- Complex to estimate given marginal price effects and risk of strategic behavior by generators
- Poor process to determine value, eg no cross-submission phase, and officials failed to adequately consider and test submissions
- Given uncertainty, decisions should have taken into account asymmetric social costs of setting too high or too low a factor
 - If too low, firms shift from NZ even though for the world it would have been lowest cost for them to have stayed in NZ.
 - If firms that are trade exposed are also best in class in terms of GHG emissions, then an electricity allocation factor set too low will lead to those firms leaving NZ and relocating (or using existing overseas plant overseas) with higher GHG emissions

Officials in NZ did not consider this asymmetric social cost when recommending an electricity allocation factor to Ministers

Phase 3: Managing operations once ETS goes live

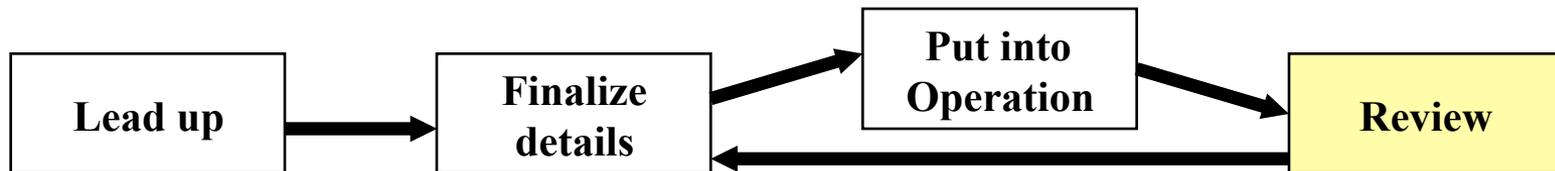
- Takes lot of management time to set up
 - Dealing with credits from an accounting perspective
 - Selling and buying credits through bilateral contracts
- Hopefully once systems in place, ongoing costs will reduce





Phase 4: Preparing for the next ETS review

- The ETS legislation requires a review in each commitment period, or every 5 years if no 2nd commitment period ... details next slide
- This is prudent given international policy flux
- A review may lead to changes to the legislative or regulations ... hence start they cycle again. There is a low probability, but not completely out of bounds outcome, that the review may lead to the ETS being replaced by a tax
- ETS until 2012 not onerous compared to what it might have been, but the risk is what it might look like 2013 onwards





Details of legislated review of NZ ETS

- Government will announce between 3 to 7 members of a Review Panel before end of 2010. There will be submissions and we will seek cross-submissions. Probably no public hearings. The legislation requires the terms of reference to be comprehensive.
- Review panel must report to Government by 31 Dec-2011
- Government will decide changes in 2012 and make changes, including any legislative changes to come into effect by Jan-2013

The most influential factor will be what happens in the international scene. In terms of protection for trade exposed businesses, the Act requires the review to consider “the relative climate change obligations and emission policies of NZ’ s trade competitors and trading partners.”



Advice from NZ major power users' on an ETS

- Make sure officials and Ministers understand and are empathetic towards trade-exposure risk until global market in place
- Use any ETS scheme as a springboard for energy efficiency improvements
- Don't underestimate the internal education needed to keep those within the firm suitably informed
- Put together dedicated team with process/technical and accounting expertise to engage in eligibility/allocation
- Whatever policy is decided; be prepared for the next review