

Corporate Welfare Under the ETS

Introduction

The following provides indicative estimates of the subsidies that will be payable to eight major industrial emitters if the proposed rules for the Emissions Trading Scheme (ETS) are approved by Parliament.

Proposed Subsidy Regime

The Government cites “equity” as a goal of the ETS – for delivery “in the long term”.¹ By setting very different proportions of the emissions each sector will be liable for over the first five years, it opened up wide disparities in the application of scheme. In particular, households, road users, and small and medium enterprises (SMEs), that generate a third of the nation’s greenhouse gas emissions, were to meet over 90% of the payments required before 2013 as a result of the ETS rules first proposed.²

Under the revised plans for sector liability, that split in revenues collected remains the same for the first commitment period (2008 to 2012 or CP1), despite liquid fuels now entering the scheme in 2011 - two years later than first proposed.³ What the legislation reported back from select committee makes clear however is the extent of additional subsidies the major emitters will receive as a result of the second revision – the six year extension in the period before these corporate welfare payments begin to fade out.

The Climate Change (Emissions Trading and Renewable Preference) Bill now proposes a “pool” that will provide subsidies up to the end of 2018 to cover:

- Emissions directly produced by qualifying firms up to 90% of 2005 levels. This includes the direct burning of fossil fuels and also emissions arising from industrial processes; and
- The full rise in the cost of electricity to qualifying firms, for 90% of the volume of electricity consumed by this group in 2005.⁴

¹ New Zealand Government, *Framework for a New Zealand Emissions Trading Scheme*, September 2007, p 14.

² Geoff Bertram and Simon Terry, *The Carbon Challenge*, Sustainability Council, April 2008, chapter 6.

³ See Sustainability Council press release: *ETS Change Puts Major Pressure on New Carbon Currency*, 8 May 2008.

⁴ See explanation on page 21 of commentary to the Bill as reported back to Parliament and section 69(2)(b) for the legislative provisions.

The following is important to note in interpreting this provision:

- While the legislation caps the size of the pool on the basis of the volume of emission credits (NZUs)⁵ required to deliver a 90% subsidy for each qualifying firm, there is to be a negotiation with the companies involved to determine the basis for assessing how many NZUs any single company will actually receive.⁶
- However, there is no suggestion that the group as a whole will be means tested in any way. The Treasury is planning on the basis that all the NZUs placed in the pool will be distributed.⁷
- The criteria a firm must meet in order to be able to access the subsidies have yet to be set, so the total size of the pool is not known at this stage. The threshold was originally proposed to include firms with emissions in excess of 50,000 tonnes⁸ and further specific criteria are set out in the Bill⁹ but discussion is currently focussed on whether the threshold may be lowered to include more companies.

The same section of legislation also specifies a long phase-out period for the subsidies - twelve years from 2019 to 2030. NZUs to cover these subsidy arrangements will also be pooled and allocated as described above. The decaying rate of subsidy from 2019 means that at some point in the phase-out, the major emitters will become net payers of emission charges, rather than receivers of emission subsidies. However the focus of the calculations below is on the next decade. That is partly because of the difficulty in narrowing the range of assumptions required to extend the analysis past 2018, but more because it is the long holiday provided to emitters over the next decade before the phase-out begins that is the most immediate policy issue.

Background to the Estimates

Eight of the larger emitters that are understood to qualify¹⁰ for the assistance have been selected for individual study. These are: New Zealand Aluminium Smelters, New Zealand Steel, Fonterra, Carter Holt Harvey, Norske Skog Tasman, Pan Pac Forest Products, Winstone Pulp, and New Zealand Refining.¹¹

As described above, the proposed ETS legislation delivers NZUs to the pool as a result of two separate calculations. These are the number of NZUs required to cover direct emissions and the increased cost of electricity resulting from the ETS taxing

⁵ This is the new carbon currency proposed under the ETS, with each unit to represent a tonne of CO₂e emissions.

⁶ Personal Communication, John Scott, The Treasury, 19 June 2008.

⁷ Personal Communication, John Scott, The Treasury, 19 June 2008.

⁸ New Zealand Government, *Framework for a New Zealand Emissions Trading Scheme*, September 2007, p 93.

⁹ See Schedule 3, parts 3 and 4.

¹⁰ While the proposed legislation leaves considerable room for interpretation, MED and the Treasury have confirmed that they expect each of the eight companies selected to qualify. Personal communications, 23 June 2008.

¹¹ The objective was to cover the largest major emitters and then extend the set somewhat where data was available. Cement manufacturers are not included as figures for cement industry power use and direct emissions were not readily available.

fossil fuel generators. The following are the key assumptions behind indicative estimates of the subsidies payable to each firm.

- The subsidy regime is assumed to be that defined in the Bill as reported back by select committee to Parliament as of 16 June 2008, and as further described immediately above.
- The value of the subsidies obtained by each firm is assumed to be the average of that the Bill provides for to the whole pool, and thus may overstate some values and understate others. The subsidies are to be provided in the form of gifted NZUs.
- Volumes for energy inputs are sourced as far as possible to those consumed in 2005, where these are required. While 2010 figures are available in some cases, and serve as the value for future input requirements, given the relatively static energy demands projected for most of the companies covered, historic figures have also been used. This may, if anything, understate the value of the subsidies.
- The value of the emission credits is taken to be \$30/tonne of CO₂e throughout the study period. The emission credits in question are a combination of the NZUs gifted to the companies, and the value of NZUs and/or Kyoto currencies purchased by fossil fuel generators and priced into the power sold. A series of influences on the potential value of these instruments are described in *The Carbon Challenge*.¹² Rather than attempt to forecast future international prices and the traded prices of NZUs, a conservative approach is taken and a price equal to the current value of good quality carbon credits is used.
- The scale of the increase in power costs to firms is taken as \$17/MWh. This figure is based on the estimate provided in the ETS framework document of \$14/MWh at a carbon price of \$25/t¹³, which scales to \$17/MWh at a carbon price of \$30/t.¹⁴ Such a rise appears to assume that every unit of electricity sold will increase in price by the average cost of the emission credits acquired. While the Government has yet to determine how it will calculate this factor for any given carbon price, this seems an appropriate assumption given the observed functioning of the wholesale electricity market, absent any new regulatory constraint. An issue discussed in *The Carbon Challenge* but not factored into these estimates is whether generators will in fact seek to recover revenue equivalent to the average cost of acquisition, or the marginal cost of acquisition.¹⁵
- Power supply contracts to major industrial users often have specific terms and these can affect the degree to which changes in wholesale power prices are passed through. These contract terms are generally confidential but when the impact of these is assessed for a period of nearly a decade, many specific provisions (such as delayed impact) will tend to wash out and only those that relate to factors other than wholesale price movements will persist. In absence

¹² See in particular sections 6 and 7.

¹³ New Zealand Government, *Framework for a New Zealand Emissions Trading Scheme*, September 2007, p 111. This figure also matches that independently estimated in *The Carbon Challenge*.

¹⁴ Although the modelling would not produce a direct linear scaling, this is a close approximation and if anything understates the effect of the change in carbon price.

¹⁵ See section 7.

of more specific information, wholesale price increases are assumed to be passed through in full.

- For the first five years, CP1, projected gross emissions and excess emissions are based on those set out in *The Carbon Challenge*, as derived from official projections,¹⁶ while the Kyoto Protocol determines the international target (1990 level emissions). For the next six years, 2013 to 2018, there is a wide range of potential estimates for the gap between the level of emission reductions that international negotiations will determine New Zealand is responsible for, and the gross emissions that will be produced.¹⁷ A conservative approach is taken and the assumption made that the gap between the two will be only 20% of 1990 emission levels.
- Subsidies are calculated against a counterfactual of excess emissions being allocated on the polluter pays principle (pro rata to current total national emissions), as further described in *The Carbon Challenge*.¹⁸ This is based on gross emissions as it is assumed Kyoto forest owners will be fully credited for the carbon absorbed.

Analysis of Estimated Subsidies

The table below aggregates the subsidies to be received by the eight firms covered, after allowing for emission credits required to be surrendered by the firms to the Government. Under the conservative assumptions outlined above, the indicative payments total about \$1.4 billion in the period up to the end of 2018.

	2008 to 2012	2013 to 2018
Emissions subsidy (\$m)	147	68 ¹⁹
Electricity subsidy (\$m)	370	882
Total Subsidies (\$m)	517	950

The payments are dominated by the electricity subsidies that make up more than two thirds of the total payments during CP1. The almost 10,000 GWh of electricity that is estimated to have been used by the eight companies in 2005 represents about 26% of the total electricity consumed that year.

¹⁶ See section 5.

¹⁷ If the Treasury's optimistic scenario were to unfold and the target was no more stringent than a 5% reduction on 1990 levels, and at the same time emissions came down from expected CP1 levels to reach 1990 levels, this would produce a very low burden for the New Zealand economy – a 5% gap. Alternatively, if New Zealand's international target for CP2 is assumed to be 1990 levels less 25% (which is at the bottom of the range the IPCC has recommended to the UNFCCC for CP2 target setting), and at the same time emissions simply stabilised at currently projected 2010 levels, then this would open up a 55% gap.

¹⁸ See pages 64 to 66.

¹⁹ The emissions subsidy for this period from 2013 to 2018 is very subject to assumptions about the level of the nation's future excess emissions and could vary a great deal from the conservative assumptions adopted to provide an indicative estimate.

The indicative subsidies to individual companies are as follows.

Company	Subsidy for 2008 to 2012 (\$m)	Subsidy for 2013 to 2018 (\$m)
NZ Aluminium Smelters	184	481
NZ Steel	70	63
Fonterra	86	108
Carter Holt Harvey	45	78
Norske Skog Tasman	55	110
Pan Pacific Forest Products	22	44
Winstone Pulp	16	31
NZ Refining	39	35
Total	517	950

The metals manufacturing sector stands out as the biggest subsidy recipient (\$800m), not least because the Tiwai Point aluminium smelter uses over half the total electricity consumed by all the companies covered. Under a regime dominated by power price subsidies, it therefore also takes the largest single payments.²⁰

While the dairy industry is the third largest electricity load,²¹ Fonterra's nearly \$200 million in subsidies represents only a small part of the agriculture sector subsidies under the ETS. The exemption of agricultural emissions (from animals) amounts to a net subsidy to the sector of \$1.31 billion for CP1 alone, after account is taken of the charges farmers pay on electricity and fuels. Thus when considering just CP1, this exemption plus the CP1 payment to Fonterra total some \$1.4 billion, as against a total of \$431 for the other seven firms during CP1.

The four pulp and paper firms are likely to receive a total of some \$400 million over the two periods, nearly all of which arises from electricity use. The New Zealand Refining Company would receive around \$75 million over the two periods.

The proposed arrangements promise extraordinarily high levels of protection to the major emitters. There will be good cases for the Government providing transitional assistance, but it is completely unnecessary to pre-commit so far into the future, at such a high rate of subsidy. The legislation proposes setting the subsidy levels in place before the information is available for Government to assess and then pay to each firm only the level of transitional assistance that is in the nation's interest to provide at each stage. Its review clauses offer little comfort as once a level of subsidy is in place, the recipients tend to regard this as an entitlement and it can be extremely difficult to unwind.

²⁰ The scale of the payments in CP1 is less than otherwise expected as the existing contract provides for a one year lag in the transmission of increased electricity costs. In the second period, NZAS comes under a new contract for electricity supply from 2013 and while this is still related to movements in the wholesale price, it also has components that allow for changes in the price of aluminium and the rate of inflation. As Meridian Energy, considers their weighting to be confidential, a price based simply on power price increases is assumed.

²¹ This ranking includes not only Fonterra's milk processing requirements but also the electricity used by its farmer suppliers.

Indicative Payments to Eight Companies Under ETS Subsidies Regime

Carbon price: \$30/t and conservative national emissions excess for 2013 to 2018.

	NZAS	NZ Steel	Fonterra	CHH	Norske	Pan Pac	Winstone	Refining	Totals
Energy Use									
Electricity (GWh)	5187	413	960	800	1200	480	340	232	9612
Gas (PJ)		1.9	18	6					26
Coal (PJ)		18.6	6.3						25
Emissions									
Energy Emissions, Annual (kt CO2e)		103	1526	317					1946
Process Emissions, Annual (kt CO2e)	683	1742							2425
Total Emissions (kt CO2e)	683	1849	1526	317				1017	5392
Emissions Subsidy									
Payments CP1 (\$m)	8	17	14	3				9	51
Net subsidy CP1 emissions (\$m)	17	51	42	9				28	147
Payments 2013 to 2018 (\$m)	16	33	27	6				18	101
Net subsidy 2013 to 2018 emissions (\$m)	5	25	20	4				14	68
Electricity Subsidy									
Subsidy CP1 (\$m)	167	19	44	37	55	22	16	11	370
Subsidy 2013 to 2018 (\$m)	476	38	88	73	110	44	31	21	882
Total subsidies for CP1 (\$m)	184	70	86	45	55	22	16	39	517
Total subsidies for 2013 to 2018 (\$m)	481	63	108	78	110	44	31	35	950
Total subsidies 2008 to 2018 (\$m)	665	133	195	123	165	66	47	74	1467