

# How should we pay for our Kyoto liability?

## Our Kyoto liability

New Zealand is locked into a commitment under the Kyoto Protocol to cut emissions to a certain level by 2012.

The commitment is *to emit no more than 275 million tonnes of CO<sub>2</sub> during the period 2008-12, and to buy equivalent carbon credits for any amounts over this.*

This commitment will be hard to meet. Business NZ calculations (below) indicate that we will actually emit close to 350 million tonnes over that period and NZ will therefore need to buy carbon credits worth around \$688 million.

## Kyoto benefit turned into Kyoto liability

This commitment was made by the government on behalf of the whole country. At the time that the NZ government made the commitment, it was anticipated that it would produce a financial benefit to the country of around \$500 million, because of the carbon-friendly status of our forestry sector.

This proved to be incorrect, and instead of being able to sell carbon credits, NZ will instead have to buy them, in order to meet the liability that will arrive in 2012.

The Government's balance sheet provides for a contingent liability of \$537 million for this purpose (a bit less than the \$688 million amount likely to be required according to Business NZ figures).

This amount of \$537 million is predicated on the NZ government being the holder of the liability, and the NZ government being the entity that buys the carbon credits on the international market.

However, the government has indicated that it intends to transfer all or part of this liability to the 'productive sectors' of the NZ economy (industry, transport, electricity generation, agriculture etc). The liability will then be borne by businesses within those sectors.

## Liability transferred to businesses means a much bigger liability

Transferring it to businesses in this way will significantly increase the liability, as individual businesses do not have the purchasing power that government has. Business NZ calculations (below) indicate the liability if transferred to enterprises is likely to be in the order of \$3.5 billion – around seven times higher than if the liability were to be met from the consolidated account. As many of the businesses concerned would pass the increased costs onto their customers, the effect would simply be higher prices for NZ-produced goods and services.

## Transferring liability to businesses requires an emissions trading scheme

In order for those businesses to meet this liability, legislation is planned by May 2008 to enable them to take part in emissions trading. Those businesses will then have the option of:

- (a) cutting output to cut emissions,
- (b) introducing energy efficient technology to cut emissions, or
- (c) meeting the liability by buying carbon credits via an emissions trading scheme.

There are problems with each option.

Option (a), cutting output, would harm profitability (but may be chosen by some firms rather than face significant cost increases that cannot be passed on).

Option (b) has timing issues. Many firms would be unlikely to obtain and deploy new technology soon enough to cut emissions significantly in the timeframe 2008-12.

Option (c), buying carbon credits via an emissions trading scheme, is likely to be the default option for most businesses, but will entail major costs. There are also concerns about whether it is feasible to get a workable emissions trading scheme up and running by 2008.

The situation raises two questions:

1. *Should the liability be transferred at all?* - It could instead be met from the consolidated account. Given that it was anticipated that the consolidated account would benefit by NZ\$500 million from Kyoto, it seems reasonable that it should therefore meet the deficit
2. *Is it possible to get an emissions trading scheme up and running by May 2008?* - The timeline in Table 3 below indicates a development period of 12 weeks, yet schemes in other countries have taken five or more years to develop their first tentative stage of trading.

Business NZ believes that an effective emissions trading system is essential for a market-based solution to environmental issues and is raising these issues now in the interests of wider debate on this important topic.

Data used for this analysis is the best available publicly, and Business NZ acknowledges more refined information may be available within government.

The figures in the attached tables may be open to debate for many reasons, and that is the intent of this paper. New Zealand needs robust and focused debate on its sustainable future.

This discussion paper follows a major Business NZ-sponsored study by NZIER on emissions trading released earlier this year, containing timing and operational guidelines, best practice, and how to include firms whose competitiveness will be at risk given emissions constraints.

### **Background**

- NZ is locked into a commitment to maintain emissions during 2008-12 equal to five times 1990 levels = approx 275 million tonnes of CO<sub>2</sub> or to buy equivalent credits for emissions above this – *'Kyoto CP1 liability.'*
- The intention appears to be to transfer this liability to all sectors of the NZ economy, the actual liability to be borne by businesses in those sectors.
- In order for those businesses to meet the liability, legislation is planned by May 2008 to enable them to take part in emissions trading.

- The businesses affected will then have the option of (a) reducing output, (b) introducing new technology to reduce their emissions, or (c) meeting the liability by buying carbon credits.
- Option (a), reducing output, will be an unlikely choice for most.
- Option (b), introducing new technology to achieve reductions by 2012, will be difficult for many to achieve in this tight timeframe.
- Option (c), buying carbon credits, will therefore be the default option for many.
- Treasury calculates the cost of credits at NZ\$13.14/tonne (projected value of credits from Kyoto-approved *Clean Development Mechanism* (CDM) projects).
- NZ has not started purchasing in the CDM market and it is unlikely the total liability could be offset by this means so the value of NZ\$13.14/tonne currently used by Treasury may no longer be appropriate (a figure closer to NZ\$30/tonne is the firm price on international markets, and this has been predicted by some experts to rise to NZ\$60/tonne over the next 5 years).

### **Tables 1 and 2 show the projected costs of Kyoto CP1 liability**

*Assumptions, basis of calculations:*

- *Cost of carbon credits to government assumed at an average price of NZ\$15/tonne*
- *Forestry credits valued at NZ\$30/tonne which is the current firm price internationally*
- *Where liability is devolved cost to individual enterprises is allowed at NZ\$30/tonne*
- *Emission levels are as published by MED for 1990–2005*
- *Emission levels 2006-12 assumed to be rising at the average rate from 1990–2005*
- *Enterprises will aim to reduce emissions 2008-12 by 1% per year*
- *Enterprises will be granted gratis allocation of credits at their 1990 levels unless they can pass on the cost (as recommended by the NZIER Report on Emissions Trading, based on a review of the EU Trading Scheme where generators were granted gratis allocation of credits but still passed on the cost to consumers)*
- *Growth in the forestry sector is assumed, with the introduction of an emissions trading scheme government to release credits for new planting*

#### **Table 1 shows that:**

- If the government retains the Kyoto CP1 liability and purchases carbon credits to meet it, funded from the consolidated account, the cost will be around \$688 million.

#### **Table 2 shows that:**

- If, instead of retaining the Kyoto CP1 liability, the government transfers it to businesses in the productive sector, then those businesses will have to buy carbon credits. Instead of a total cost to NZ of \$688 million, the cost under this scenario could be as high as NZ\$3.5 billion, because businesses do not have the international purchasing power that government has.
- If the government retains the Kyoto Forest offsets, and does not allocate credits to the generation or transport sectors (on the basis that those sectors are able to pass increased costs on to their customers), then the government will have a \$2.8 billion surplus of credits, but the economy will bear the \$2.8 billion cost.

#### **Discussion**

- The impact on the economy will in fact be greater than NZ\$2.8 billion, as any additional cost in the electricity sector will apply to every unit of electricity generated, not just thermal generation, and these costs will be passed on to consumers.

- By 2012 NZ firms will find it difficult to compete internationally with input costs of this magnitude since our trading partners are protected by government regulation to ensure they remain competitive.
- The NZ government has a contingent liability of NZ\$537 million for Kyoto on its balance sheet, equating to NZ\$107 million each year for 2008-12.
- If government believes this figure to be robust, then it would be more realistic for the government to start buying international credits now to meet the Kyoto CP1 liability rather than transferring the liability to businesses.
- This would be consistent with government's original intent to retain the \$500 million surplus.

**Table 3 shows the timeline for having an emissions trading scheme by 2008**

- The intention of introducing an emissions trading regime by 2008, in order to transfer Kyoto CP1 liability to enterprises may not be realistic.
- It is unlikely that NZ could design a robust emissions trading scheme in this timeframe when overseas schemes have taken over 5 years to develop their first tentative stage of trading. The Howard Task Force predicts 2011 as the earliest for their trading scheme.

**Conclusions**

- An emissions trading regime should not be rushed into place in 2008 if this results in other than a robust system.
- Instead of transferring the Kyoto CP1 liability to enterprises during 2008-12, taxpayers should meet this liability (paid via the consolidated account) since taxpayers would have benefited from the predicted NZ\$500 million surplus.
- The government should meanwhile adopt a policy that allows firms to choose the appropriate mix of technology or carbon credit purchases in working towards whatever long-term goal is chosen for NZ (e.g. '50 by 50' or carbon neutrality by 2050, or other).
- It would be appropriate for NZ to set our own voluntary reduction targets for the period beyond 2012 (CP2) until such time as there is international consensus.

Table 1: Projected cost to taxpayer if government retains Kyoto CP1 liability (NZ\$)

	Industry	Generation	Transport	Other Sectors	Fugitive	Industrial Processes	Agricultural Sector	Forest Offsets	Total
1990	4,568,000	3,486,000	8,633,000	2,851,000	621000	2,661,000	32,116,000	-19,080,950	46,882,000
1991	4,972,000	3,883,000	8,640,000	2,666,000	708000	2,786,000	32,048,000	1,435,460	46,848,000
1992	4,618,000	5,010,000	9,025,000	2,978,000	675000	2,892,000	32,062,000	1,743,520	47,632,000
1993	4,737,000	4,061,000	9,441,000	2,779,000	634000	3,038,000	32,643,000	1,146,830	48,535,000
1994	5,160,000	3,233,000	10,144,000	2,937,000	677000	2,942,000	33,197,000	375,940	49,897,000
1995	5,051,000	2,920,000	10,856,000	2,955,000	636000	3,018,000	33,641,000	-851,840	51,106,000
1996	5,557,000	3,713,000	10,942,000	2,827,000	649000	2,987,000	33,869,000	-330,770	51,274,000
1997	5,941,000	5,646,000	11,258,000	2,752,000	701000	2,890,000	34,110,000	-1,676,630	51,711,000
1998	6,015,000	3,989,000	11,449,000	2,725,000	674000	3,046,000	34,231,000	-2,217,750	52,125,000
1999	5,693,000	5,239,000	11,699,000	2,903,000	630000	3,210,000	34,644,000	-599,890	53,086,000
2000	5,899,000	4,897,000	12,281,000	3,051,000	587000	3,152,000	35,381,000	-266,220	54,452,000
2001	6,007,000	6,100,000	12,658,000	3,222,000	628000	3,245,000	36,180,000	-294,750	55,933,000
2002	6,318,000	5,229,000	13,231,000	3,209,000	603000	3,232,000	36,507,000	-725,390	56,782,000
2003	6,038,000	6,335,000	13,829,000	3,141,000	644000	3,459,000	36,865,000	-1,493,820	57,938,000
2004	5,267,000	6,041,000	14,113,000	3,207,000	883000	3,434,000	36,866,000	-1,729,140	58,503,000
2005	4,871,000	8,171,000	14,005,000	3,341,000	950000	3,479,000	37,124,062	-466,743	58,899,062
2006	4,932,862	8,274,772	14,182,864	3,383,431	962,065	3,523,183	37,383,930	-475,611	59,435,473
2007	4,995,509	8,379,861	14,362,986	3,426,400	974,283	3,567,928	37,645,618	-484,647	59,977,215
2008	5,058,952	8,486,286	14,545,396	3,469,916	986,657	3,613,240	37,909,137	-493,856	60,524,346
2009	5,123,201	8,594,061	14,730,122	3,513,983	999,187	3,659,129	38,174,501	-503,239	61,076,923
2010	5,188,265	8,703,206	14,917,195	3,558,611	1,011,877	3,705,599	38,441,723	-512,800	61,635,005
2011	5,254,156	8,813,737	15,106,643	3,603,805	1,024,728	3,752,661	38,710,815	-522,544	62,198,652
2012	5,320,884	8,925,671	15,298,498	3,649,574	1,037,742	3,800,319	38,981,791	-532,472	62,767,923
CP1 Allowance	22,840,000	17,430,000	43,165,000	14,255,000	3,105,000	13,305,000	160,580,000	0	274,680,000
CP1 Emissions	25,945,458	43,522,961	74,597,854	17,795,889	5,060,190	18,530,948	192,217,967	-28,557,311	349,113,956
Sector Liability	3,105,458	26,092,961	31,432,854	3,540,889	1,955,190	5,225,948	31,637,967	-28,557,311	74,433,956
Cost (NZ\$)	46,581,877	391,394,409	471,492,807	53,113,339	29,327,850	78,389,227	474,569,498	-856,719,332	688,149,677

Values in this table are based on the latest MED figures for emissions in CO<sup>2</sup>e tonnes from 1990 - 2005

The average price for emissions permits for CP1 has been set at NZ\$15/tonne.

Growth rate from 2006 through 2012 has been set at the annual average for the 1990 - 2005 period

In this scenario government would have to meet the full cost of our liability

**Table 2: Projected cost if government transfers CP1 liability to businesses (NZ\$)**

	Industry	Generation	Transport	Other Sectors	Fugutive	Industrial Processes	Agricultural Sector	Forest Offsets	Total
1990	4,568,000	3,486,000	8,633,000	2,851,000	621000	2,661,000	32,116,000	-19,080,950	46,882,000
1991	4,972,000	3,883,000	8,640,000	2,666,000	708000	2,786,000	32,048,000	1,435,460	46,848,000
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2009	5,123,201	8,594,061	14,730,122	3,513,983	999,187	3,659,129	38,174,501	-503,239	61,076,923
2010	5,188,265	8,703,206	14,917,195	3,558,611	1,011,877	3,705,599	38,441,723	-512,800	61,635,005
2011	5,254,156	8,813,737	15,106,643	3,603,805	1,024,728	3,752,661	38,710,815	-522,544	62,198,652
2012	5,320,884	8,925,671	15,298,498	3,649,574	1,037,742	3,800,319	38,981,791	-532,472	62,767,923
CP1 Allowance	22,840,000	0	0	14,255,000	3,105,000	13,305,000	160,580,000	0	214,085,000
CP1 Emissions	25,945,458	43,522,961	74,597,854	17,795,889	5,060,190	18,530,948	192,217,967	-28,557,311	349,113,956
Sector Liability	3,105,458	43,522,961	74,597,854	3,540,889	1,955,190	5,225,948	31,637,967	-28,557,311	135,028,956
Cost (NZ\$)	93,163,754	1,305,688,819	2,237,935,615	53,113,339	29,327,850	156,778,454	474,569,498	-856,719,332	3,493,857,998

Values in this table are based on the latest MED figures for emissions in CO<sup>2</sup>e tonnes from 1990 - 2005

The average price to businesses for emissions permits for CP1 has been set at NZ\$30/tonne.

The average price to government for emissions permits for CP1 has been set at NZ\$15/tonne.

Growth rate from 2006 through 2012 has been set at the annual average for the 1990 - 2005 period

The generation and transport sectors will not get carbon credits because they can pass the cost on to their customers

In this scenario government would have forest offsets plus a surplus of credits to reduce costs to selected sectors

Table 3:

# Timeline for Decisions

