



THE KYOTO LIABILITY/PROVISION

The Current Kyoto Provision

The current official Kyoto Provision, as at 28 February 2006, is \$582 million. This is based on a New Zealand/US dollar exchange rate of NZ 0.6598 cents, an estimated deficit of emission units of 64 Mt (million tonnes) and a price per tonne of carbon of \$US6.00 (or \$NZ 9.09) per emissions unit. The price of Kyoto-compliant emission units is updated annually by Treasury and will be next updated in the June 2006 'actuals' reported to Treasury.

Calculating the Kyoto Provision

When New Zealand's Provision was entered into the Crown accounts for the first time in May 2005, it was calculated using three variables, as follows:-

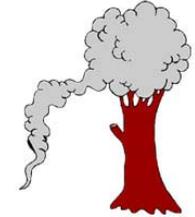
The balance of our projected greenhouse gas emission units;

The price for Kyoto-compliant emission units (in \$US per tonne of carbon dioxide equivalent); and

The \$US/\$NZ exchange rate. All of these variables can be expected to fluctuate.

Updating the Provision

The balance of our projected greenhouse gas emission units is reported to the Minister Responsible for Climate Change Issues on May 15th each year. The balance may also be adjusted through the year when



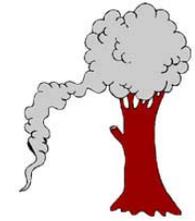
significant new information is available. A report is compiled by the Ministry for the Environment, based on projections from the Ministry of Agriculture and Forestry, the Ministry for Economic Development and Ministry for the Environment. The price of Kyoto-compliant emission units is updated annually by Treasury and will be next updated in the June 2006 'actuals' reported to Treasury. The Provision is also valued monthly based on the current \$US/\$NZ exchange rate.

Recent changes in the Kyoto Provision

In January 2006 the Kyoto Provision changed from \$307 million to \$563 million. This increase was partly due to the re-forecast of the deforestation numbers which the Ministry of Agriculture and Fisheries (MAF) recently completed. MAF's historical figures indicated deforestation was at 6.3 million tonnes. This has now been revised to 21 million tonnes which is the figure at which the Government liability for deforestation has been capped. There was also an adjustment of \$13 million tonnes as a result of the decision not to proceed with the Carbon Tax. This has resulted in an increase from \$307 million to \$563 million.

New Zealand and the Kyoto Protocol

New Zealand is a signatory to the Kyoto Protocol which imposes binding emission reduction targets on New Zealand over the First Commitment Period (CP1: 2008 - 2012). The Kyoto Protocol entered into force on 16 February 2005 as a result of Russia's decision to ratify.



The position of each country for CP1 is calculated using an internationally agreed method. Countries may sell any surplus emission units they earn through the Kyoto Protocol to countries that need to purchase emission units to make up for any deficits they may have in meeting their Kyoto obligations. Alternatively, countries can choose to hold on to any surplus emission units to count against emission obligations in future commitment periods.

About the Kyoto Liability/Provision

When New Zealand ratified the Kyoto Protocol we agreed to work towards reducing our greenhouse gas emissions back to the levels they were in 1990. We agreed to try and achieve this in the period 2008 – 2012. Although we haven't reached that time period yet, we have done some preliminary estimates of how we are tracking towards achieving that goal. These preliminary estimates show New Zealand is behind its desired target.

Because New Zealand operates on an accrual accounting system any potential or recognised provision has to be recorded in the books. Most other countries that ratified the Kyoto Protocol work on a different accounting system and don't have to do this. However many countries are now working towards trying to calculate the Provision in advance. Treasury felt that the first official Provision was sufficiently robust enough to book an actual value, enter it into the books and publicly announce it. This happened in May 2005 when the Provision was estimated to be \$307 million.



We calculate a Provision in order to work out how much the cost will be to the Crown to meet our Kyoto commitments. When we do this Provision it goes through a robust review process involving Audit New Zealand and other external reviewers.

When New Zealand's Provision was entered into the Crown accounts for the first time in May 2005, it was calculated using three variables, as follows:

The total sum of our projected greenhouse gas emission units deficit;
The price for Kyoto-compliant emission units (in \$US per tonne of carbon dioxide equivalent); and
The \$US/\$NZ exchange rate.
All of these variables can be expected to fluctuate over time.

Why does the Kyoto Provision keep increasing?

In January 2006 the Kyoto Provision changed from \$307 million to \$563 million. This increase was partly due to the re-forecast of the deforestation numbers which the Ministry of Agriculture and Fisheries (MAF) recently completed. In the past MAF's historical figures indicated deforestation was at 6.3 million tonnes. They have now completed further research into this and now estimate it to be between 21 and 38 million tonnes. The Government has capped this figure at 21 million tonnes. The increase from \$307 million to \$563 million was also due to the removal of the Carbon Tax. Even if the Carbon Tonne level doesn't change – the dollar value will as exchange rates, the price of Carbon and the dollar value changes. The Kyoto Provision is updated each month.



What are the costs of climate change to New Zealand?

From an economic perspective the most significant costs of climate change will be an increase of up to fourfold in flood risk in most regions; a twofold to fourfold increase in drought risk, especially in eastern regions; eroding and retreating coastlines; and changing biosecurity risks. The costs of these impacts are likely to be highly significant for New Zealand. The February 2004 flood cost was about \$0.3 billion. The late 1990s droughts cost well over \$1 billion.

Is estimating our Kyoto Protocol provision complex?

Yes it is complex because the Kyoto Protocol is a new initiative and the forecasting methods are still evolving. New Zealand is one of the first countries in the world to put the Kyoto Provision on the country's official accounts. We are doing a good job in this area and have received praise internationally for the methodologies we have adopted to undertake this task.

Imagine trying to do a prediction of the future value of the NZ dollar, GDP, oil prices, energy use, the climate, car numbers, tree planting, tree cutting and industry devices for a period of 10 years ahead of time. The Kyoto Provision combines all these factors. It's very complex and there are a lot of variables that change all the time.

Who provides the numbers for the Kyoto Provision?



Estimating the Kyoto Provision is a Whole-of-Government initiative involving the Ministry of Agriculture and Fisheries (MAF), the Ministry of Economic Development (MED), the Ministry for the Environment (MfE) and Treasury. In terms of time spent working on the Kyoto Provision, each Government department spends a different amount of time calculating their components of the Provision, as follows:

MAF: 40%

MED: 30%

MfE: 20%

Treasury: 10%

What influences the level of the Kyoto Provision?

The numbers represent our greenhouse gas emissions minus our ability to remove Carbon via forest sinks. If our greenhouse gas emissions are estimated to be high, then the level of the Kyoto Provision will be high. The reality is we have cut down more forests than we have planted – that is going to have a direct impact on our greenhouse gas emissions.

Is the Kyoto Provision likely to increase again?

The number is always going to change. However as we get closer to the end of the first commitment period (2008 - 2012) the forecasts will be more robust.

Does anyone review these numbers before they are entered in the books?



Yes. Audit New Zealand always reviews and approves the numbers before they are entered in the books and publicly declared.

How come the Government can't confirm our exact Kyoto Provision right now?

It is the nature of forecasting and the nature of provisions that they change all the time. However over time we will have more certainty in the numbers. These are all just forecasts at the moment – they are not set in concrete. If our actions change, then our numbers may change.

History of New Zealand's Kyoto Provision

May 2005

In May 2005 the projected Kyoto Provision was updated and for the first time projected a deficit of 36.2 million units (million tonnes of Carbon Dioxide equivalent).

Treasury estimated the price of emissions units using World Bank Data on early trades and the end of month exchange rate.

The liability associated with the 2005 Kyoto Provision 'net position' report used a price of \$NZ8.48 (\$US6.00) per emissions unit. The estimate of the price of emissions units used by Treasury was reviewed by the Allen Consulting Group.

The Kyoto Provision in May 2005 was estimated at \$307 million (\$NZ8.48 X 36.2 Mt CO₂-e).

December 2005



In December 2005 the projected deficit of emissions units was increased from 36.2 million units to 50.9 million units (increase of 14.7 million units) reflecting the latest information from the Ministry of Agriculture and Forestry (MAF) for deforestation intentions 2008-2012. Projected deforestation increased from 6.3 Mt CO₂-e to 21 Mt CO₂-e for the first commitment period.

The change from deforestation is a forecasting change and was noted in the Ministry for the Environment's December Cabinet paper.

The decision not to proceed with the proposed Carbon Tax added approximately 13.1 million units to the Kyoto Provision. This was based on SADEM model results from the Ministry for Economic Development. The cancellation of the proposed Carbon Tax constituted a policy change and the resulting increase in liability was appropriated in December 2005, at the same time the policy decision was taken to not proceed with the proposed tax.

The Kyoto Provision, based on latest information regarding expected deforestation and the decision to withdraw the Carbon Tax, will probably increase the deficit of emissions units to 64.0 million units (36.2+14.7+13.1).

January 2006

The valuation of the Kyoto Provision is adjusted monthly for the average exchange rate. On 31 January the exchange rate was 0.68245 implying a local price for emissions units of \$NZ8.79. These values were



reported in the Crown Financial Statements on 10 March 2006. Based on these numbers, the Kyoto Provision was then adjusted to \$NZ563 million ($\$NZ8.79 \times 64.0 \text{ Mt CO}_2\text{-e}$).

April 2006

The Kyoto Provision is updated each month in the Crown financial statements to reflect the changes in the Provision such as the exchange rate. • As the US/NZ Exchange Rate has changed to 0.65980 the Kyoto Provision for April 2006 is estimated at \$582,000 (64,000,00 Carbon Units at \$6 USA/ 0.65980 US/NZ Exchange Rate).

Source: New Zealand - Ministry for the Environment (<http://www.mfe.govt.nz>)
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