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These comments are by Suzi Kerr and do not represent an official view of Motu or any of its supporters or of course Stanford University. They have been completed very rapidly. I apologise for any errors or poor wording. I hope they are useful in clarifying issues.

## Comments to Select Committee

### Key points

1. If there is a price cap, there should be no banking of units except within forestry.
2. Foresters should not be able to take advantage of the price cap.
3. Detailed harmonisation with Australia is not necessary or desirable.
4. Levels of free allocation in the current bill are almost certainly too high on economic grounds and for economic efficiency reasons alone should be phased out quickly regardless of how international agreements evolve. The proposed amendment exacerbates this problem.
5. The form of allocation in agriculture should not be specified yet. It is not necessary to specify it and the current proposal could be damaging. If agriculture's full entry must be deferred, a tax on nitrogen fertiliser and subsidies for nitrification inhibitors should be considered for early introduction.

### Overall comments

#### 1 Price cap with banking allowed – high fiscal risk

If you include a price cap in the legislation you must also limit 'banking' of units. Otherwise, if the international price of units goes above \$25 you will get perverse effects. This may never be an issue (if the price does stay below \$25) but the costs if the international price goes high could be significant and do not seem to have been considered. If we were sure that the price was going to stay below \$25 we would not need a price cap.

I will demonstrate this through an example.

#### *Price cap and banking example – highly emissions intensive eligible industrial firm with international CO<sub>2</sub> price of \$50 in 2011*

Firm produces 100 units of output. They receive  $\frac{1}{2} 0.9 \text{ AB} \times 100$  or 45AB emission units free (AB= allowance basis). Because the international emission price is high they will choose to pay

\$25 rather than surrender units. These units are valued at \$2250AB because although they cannot export them now, they can bank them and sell them after 2012.

Suppose their emissions per unit of output are AB – they could be slightly less or more. They are required to pay for half their emissions or a total cost of \$1250\*AB.

The government must still cover the emissions at full international cost. They will need to buy 100AB emission units at a cost of \$5000AB but will receive only \$1250 from the firm. The government will face a short-term need to buy large quantities of units and will face a high fiscal cost.

In contrast, if there is no banking, the domestic price will never exceed \$25. IN the highest price scenario, the firm will surrender their free units (45AB) and buy only 5AB at \$25 from the government. The government will spend only \$250 to purchase international units (or may be able to buy them from other firms within NZ at \$25) and will receive \$125 from the firm.

With banking and an international price of \$50 the firm profits by \$1000 or \$10 per unit of output. They will have an incentive to increase output beyond business as usual. This is inefficient by any measure and increases the fiscal cost further.

### Potential solutions:

Ban all banking of units except sequestration credits from forestry until price ceiling is removed.

Allow banking but force firms to surrender their freely allocated allowances for compliance before they take advantage of the \$25 price ceiling. This will not work where allowances are allocated to different firms than the point of obligation (e.g. stationary energy).

Possible concerns about limiting banking – and responses

1. *Banking is important for efficient smoothing of prices over time.* This is true but will occur in the international market where the long term carbon price will be set. New Zealand does not need to have domestic banking to allow this to happen. The point of the NZ price ceiling is to artificially lower the short term price and create a price jump between 2012 and 2013.
2. *Banking is important to allow firms to manage their long term price risk.* This is also true but if a firm wants to protect themselves against price risk after 2012 they can buy international units and keep them outside of the NZ ETS until after 2012. This achieves the same outcome as domestic banking.
3. *Limiting banking reduces the scale of the market and could allow market manipulation.* Only the demand for NZ units could possibly be manipulated. The NZ unit supply is more or less fixed and the supply of international units is not controlled. The market price could only be manipulated by a large buyer who reduces their own demand for NZ units strategically to lower the price below the international price. It is hard to imagine who this could do this without others increasing their demand for NZ units and offsetting the effect. Limiting banking does reduce the market scale for those who are selling units they were freely allocated; they could be disadvantaged in specific trades. It conversely

makes these units more easily available to those who do not have enough freely allocated units increasing market liquidity for them. The domestic market is likely to be less liquid but will also have lower prices than the international market. This is the point of the temporary price cap.

## 2 Foresters' use of price cap on harvesting liability

Foresters should not be able to take advantage of the price cap.

If the international price is above \$25 and there is a price cap, foresters will again have a perverse incentive to harvest and deforest before 2013 when the carbon price they face will suddenly rise. This seemed to be a serious issue before 2008. This could lead to premature harvest and unnecessary deforestation of some forest. This perverse incentive does not apply to other activities because they do not have the same time flexibility in their activities.

In any case, for those with harvesting liability (not deforestation liability) none will have a net positive liability. They do not need the protection of the price cap.

### Potential solution:

Do not allow foresters to take advantage of the \$25 price cap. If there are still concerns with liability from deforestation address them through mechanisms that do not induce shifting of activity over time.

## 3 Price cap with banking allowed: Very low costs and potential subsidy for highly emissions intensive eligible industrial activity.

### 1 July 2010 – 31 Dec 2012

Maximum emissions cost per unit output (emissions per unit output = epuo)

$$= \text{emissions per unit output} \times 0.5 \times \$25 - \text{value of free allocation per unit output}$$

$$= \text{epuo} \times 12.50 - p_{\text{CO}_2} \times 0.5 \times 0.9 \text{ AB}$$

If epuo is equal to AB (allowance baseline) and the international price,  $p_{\text{CO}_2}$  is \$25 – this is an effective tax of only \$1.25 per tonne of CO<sub>2</sub> when the firm is deciding whether to increase output. Firms that emit more than AB will face a slightly higher cost of increasing output. This seems more than enough protection to avoid emissions leakage but it is hard to establish the potential risk so this is a judgment call.

If the international price goes higher than \$25 however (the current price in the EUETS is \$27.23 and the US government official cost of carbon is around \$25) there could be a subsidy for output from emissions intensive eligible firms. This would certainly be perverse.

For example if the international price goes to \$50 per tonne which is not impossible if international negotiations are at all successful, before 1 Jan 2013 the emissions cost to the firm per unit output will be

$$\text{epuo} (12.50 - 50 \times 0.5 \times 0.9) = \text{epuo}(12.50 - 22.50)$$

or an emissions subsidy of \$10 per tonne. The international price needs only to reach \$28 for there to be a subsidy.

Do you mean to do this?

## 5 Overall generosity of free allocation – speed of phase out

Free allocation redistributes the cost of climate policy away from the owners of protected firms, who tend to have higher than average incomes, toward all taxpayers. It also significantly raises the overall cost of the climate policy to the economy. A policy that is fiscally neutral can still have large damaging effects on the parts of the economy and society that do not receive free allocation.

Without banking, the high levels of free allocation in New Zealand should not lead to windfall profits relative to no regulation (as free allocation did in Europe) because firms need to produce output and hence have emissions that they pay for in order to earn the free units.

If firms are able to pass on part of their emissions costs to consumers and workers, they should also pass on part of the value of the free allocation because it is tied to output. The potential for windfall profits will however depend on where the allowance baseline is set. If it is set high, those with emissions below allowance baseline (either historically or because they are able to mitigate) could potentially have windfall profits and a perverse incentive to increase production beyond business as usual.

The key arguments for free allocation are avoiding emissions leakage and avoiding ‘economic regret’. The first can be more efficiently achieved through border tax adjustments if that were possible or alternatively the environmental impact of leakage could be offset by NZ voluntarily cancelling extra emission units at significantly lower cost than high levels of free allocation.

The long term ‘economic regret’ is highly uncertain and likely to be low relative to the certain high costs of protection. Firms bear most of the regret and will take this into account in their decision making. If regret is high relative to short term profit gains from moving offshore, firms will choose not to move.

The other argument for free allocation is compensation for ‘stranded assets’ or the fall in the value of existing investments in carbon intensive assets. In the US around 20% of the emissions cap is sufficient to fully compensate owners of capital and this is about how many are being freely allocated to firms in the current bills in the Congress and Senate. New Zealand’s intensity-based allocation does not directly compensate firms for loss of stranded assets. However by protecting firms from most cost for several years, the value of the stranded assets will fall as they depreciate and there will be little or no need for compensation when the free allocation ends. Any new investments including maintenance should now be being made in full knowledge of the carbon price and thus will not fall in value when free allocation ends – they will not be ‘stranded’. They should not be eligible for any compensation.

It is very costly to taxpayers and the economy as a whole to maintain this high level of protection. To raise the taxes to pay for it we need to distort economic activity (people work and save less when their earnings are taxed). In the US the cost of raising taxes is on the order of 40c in every dollar. It is

probably similar in New Zealand, i.e. it costs the economy around \$1.40 for every dollar worth of free allocation given to specific sectors.

Free allocation should certainly be removed as our competitors enter the agreement. It should be phased out relatively quickly even if they do not. This is for the same reasons that we do not subsidise our agriculture even though the US and EU do. The benefits to the protected activities are vastly outweighed by the costs to the economy as a whole. The phase out of free allocation in the existing bill was probably already too slow on economic grounds.

## 5. Harmonisation with Australia

New Zealand would benefit from linkage with Australia's emissions trading system because it would deepen the market for emission units and hence improve liquidity. Linking requires a minimal level of harmonisation. We must simply be trading units that can be converted to AAUs, have compatible restrictions on units that can be brought in internationally and have matching price ceilings/floors, banking and export (outside NZ and Australia) limits. I understand that we will not be able to link before 2013 because of the Australian limits. Not linking before 2013 will not be a big issue if there is a price ceiling in New Zealand that mitigates the effect of poor liquidity. More generally there are benefits from more similar regulation because it is simpler for companies operating (or wishing to operate) in both countries.

We do not need to harmonise our free allocations with Australia. I demonstrate this by going through each of the arguments for free allocation.

If free allocation is on an historic basis it is for compensation purposes, does not affect behaviour and is purely a domestic issue.

If free allocation aims to reduce emissions leakage to countries that are not covered by an emissions cap, this does not apply to Australia because it has ratified Kyoto. Any emissions that move to Australia will be their responsibility. The Australians might be concerned about the fiscal cost of this but NZ only gains. There is a fiscal gain and no environmental loss.

If free allocation aims to avoid economic regret, we must balance the very high fiscal cost of free allocation (around \$1.40 of economic loss for every \$1.00 of support) against the social benefits of avoiding potential loss of production and hence jobs. Firms will move production only if it is beneficial to them in the long term – that is, the lost future profit and future opportunities do not justify running the activity at a loss in the short term. There should be no inefficient private losses. Firms that are likely to be highly profitable in New Zealand are either unlikely to leave, or will come back quickly when conditions change.

Social losses could occur in the short run if jobs are lost and not quickly replaced with equivalent jobs. This is more salient while the recession lasts; that will be a few years at the most. There are however almost certainly better ways to create jobs if that is the concern. Additionally there could be some effects on other industries in the supply chain whose losses are not taken into account by the firm that leaves because of difficulties in coordination across firms. There will also be some impacts on our terms

of trade – in proportion to the scale of lost activity. Finally there may be some effects on total investment in New Zealand – these are however impossible to assess empirically.

Thus a certain cost must be balanced against highly uncertain gains when considering economic regrets. Altogether this argues for a low level of concern about competitiveness with Australia and little or no pressure to harmonise levels of free allocation to EITE activities. If we use their analysis to identify eligible activities, output definitions and allowance baselines we will be closely harmonised even if our rates of protection are different.

## 6. Agriculture

I assume that agriculture's entry is being deferred to 2015 on technical grounds – i.e. that it is better to go straight into a farm-level obligation if we can and we can't easily do that by 2013.

**Intensity based allocation in agriculture:** Given the high level of uncertainty about how to include agriculture in an emissions trading system, if it will not enter until 2015 I think it would be better if possible to defer a decision on the grounds on which allocation will be made in that sector rather than setting a precedent which it might be hard to change. Empirical evidence suggests that there is likely to be very little production leakage from the agricultural sector. The key issue is more likely to be compensation of farmers whose land will fall significantly in value. Intensity-based allocation will not provide this compensation in a well targeted way. Motu will be running a dialogue group on this issue and doing more relevant research in the next two years. We may find that it is better for farmers as a group, is fairer and is better for the economy to use any free allocation available to the agricultural sector in a different way.

**Mitigation in agriculture before 2015:** A possible suggestion to address concerns that agriculture is too favourably treated by deferral of full entry into the ETS and that there are emission reduction opportunities in agriculture that are not being encouraged is to introduce a nitrogen tax at the fertiliser manufacturer level in 2013 (or before). This would be administratively straightforward and would create efficient incentives for reduced nitrous oxide emissions. No farm level information is needed for nitrous oxide – other than where nitrification inhibitors are used; emissions as currently measured in the inventory depend only on the volume of nitrogen applied in fertiliser. Some of the revenue could be used to fund subsidies for nitrification inhibitors in appropriate places. This would speed learning about nitrification inhibitors and adoption of them. This nitrogen tax could be a long term feature of the system even when a farm scale system is implemented. It would also have water quality benefits.

## Responses to specific questions / submissions

1. The submitter argues that certainty of pricing in the initial period is crucial while international agreements are being finalized to provide business certainty. How would a lack of predictability of initial carbon pricing affect New Zealand businesses?

International agreements are unlikely to be finalised for a long time. It does not make economic sense for government to bear the risks indefinitely. Firms that are very concerned about price volatility could buy all the units they need now at current prices and provide complete protection against carbon price risk. They do not need to buy in a spot market. This strategy of course has its own risks and costs.

In the short term it is harder for firms to manage their carbon risk because markets are only just developing and policy uncertainty is extreme with NZ, Australian, US and international policies all rapidly evolving. This suggests that providing a high price ceiling until 2013 could be efficient.

A price ceiling also protects firms against liquidity problems in the market – i.e. if they have trouble finding units to buy; and against getting bad deals when there are relatively few sellers. Early in new markets price dispersion tends to be very high with less sophisticated players making bad deals. A price ceiling puts a limit on the ‘mistakes’ a new market player can make. By 2013 all traders will be more experienced and markets will be better developed.

2. The submitter makes the point that this Bill allows access to AAU's and enables borrowing of units which are two of the economic protections provided for in the Kyoto protocol that were rejected in the existing NZ ETS legislation. Please can you comment on how these will benefit the NZ economy.

I don't think our system allows 'borrowing' – at least certainly not across commitment periods. The Kyoto Protocol doesn't allow this either. Allowing us to buy AAUs in a relatively unrestricted way lowers the international carbon price that is relevant to New Zealand thus reducing the economic and, if the price ceiling binds, fiscal impact.

3. The submitter argues that there should be the ability to phase out free allocation to NZ industry to align with the carbon price imposed internationally within the applicable sector. How well does the review mechanism in the Bill provide for this?

I can't comment on the detail of the specific review mechanism. It will not be possible or desirable to exactly match the phase out exactly with carbon prices in applicable sectors internationally. We should be phasing out faster than this in any case. Protecting emissions intensive industries is economically very costly. It will be a very long time before all our competitors are not only involved in a binding international agreement but also have effective domestic price policies. This may never happen in some

countries and sectors. To avoid emissions leakage (the environmental damage) all that is required is that countries' emissions are covered by the international agreement (a strong but lesser requirement than full carbon pricing) and in any case I think that we will need to make a tradeoff between economic cost of the protection and the scale of likely emissions leakage and withdraw protection through intensity based allocation relatively quickly.

We could address any concerns about emissions leakage by taking on a tighter target or surrendering extra units to offset the environmental cost of leakage at lower cost than continued output-based allocation. I have supported intensity-based allocation on the basis that if we are going to give away a large fixed amount of allocation we should do something useful with it and not simply create windfall profits for a small number of firms. I do not think this high level of allocation is efficient or equitable in the medium term.

4. Can you comment on the views of this submitter that the architecture of the New Zealand ETS is correct but that the transitional measures provided for in this Bill are essential to ensure we don't lose significant portions of our industry off shore to less restricted countries which would not only hurt NZ economically but would also increase global emissions.

#### Holcim (New Zealand) Limited

5. Based on this submission it appears that without the changes proposed in this Bill NZ would face the potential loss of significant numbers of jobs, reduction in the tax base, loss of skilled workers and increased balance of payment deficits as we import more product to replace domestic production. In your opinion, is this correct and is it possible to measure the fiscal cost of those outcomes?

#### Questions 4 and 5

We do not have strong empirical evidence on this for New Zealand. In other countries the total scale of leakage (loss of jobs, production etc) is not expected to be high. In New Zealand because we have a small number of firms in the key sectors we may completely lose some activities while others that are trade exposed may be unaffected. With the extremely low effective emission costs per unit of output identified above, the level of protection offered in the current Bill may be excessive relative to the risks of loss of production but this is a question of judgment not something that can be empirically established. The loss of production will not necessarily lead to significant loss of jobs as the economy recovers in any case. Some of the very high emitting activities are not associated with large employment. The cost of protecting each job is extremely high and protection is not justified on this basis. The high cost of protecting firms from the effect of climate policy will also make NZ firms less competitive overall leading to some loss of jobs, reduction in the tax base etc. These effects need to be balanced. My personal opinion, though I cannot prove this, is that the level of free allocation is almost certainly higher than efficient for the economy as a whole.



6. Please comment on the submitter's assertion that if concrete plants becomes financially non viable in New Zealand as a consequence of our existing domestic ETS scheme then this production is likely to relocate to other possibly less regulated economies resulting in not only economic loss to NZ but also a potential increase in global emissions.

My understanding is that concrete plants are not at risk but clinker production is. Any protection should be targeted at the output of the activity that is at risk on the firm or even plant as a whole. Otherwise the clinker production could close down while the firm receives generous free allocation. This would lead to large windfall profits. We do want concrete prices to rise domestically to encourage a move toward lower carbon products where possible. The ideal solution in this case is to put the emissions charge on any imported clinker. In lieu of that, some short-term free allocation of units on the basis of clinker production is a second best solution.

7. The submitter raises issues with the definition and application of the new entrant provisions in the Bill and is particularly concerned with the way these provisions would apply to the replacement of an old plant with a newer more efficient one. What changes may be required to address those concerns?

I cannot comment on the detail of the provisions. If allocation is intensity based, new plants should receive allocations in exactly the same way as old ones. New investments are at greater risk of leakage than existing plants.

8. No comment

9. The submitter supports the all-gases, all sector approach – what would the impact be on our Kyoto obligations of deviating from this stance?

Not having effective reduction policies in every sector would raise the costs of compliance to the economy as a whole. Excluding a sector from the emissions trading system or providing high levels of free allocation to some firms imposes high costs on all other sectors and firms who must cover the costs of those emissions through taxes. Over time all sectors should have effective regulation (though this should not be limited to the ETS) and free allocation should be phased out.

10. The submitter supports having the point of obligation high up the supply chain, particularly for the natural gas sector – please comment on this and the ability to better see costs passed through to consumers as an aid to influence behavior?

This makes sense in general for administrative reasons. The arguments for giving better signals to consumers, 'salience' are not well developed and there is currently no empirical basis for them. Forcing people to pay attention to carbon costs may induce them to make greater reductions but this may come at high cost. This is the subject of active psychological and economic research at Stanford and elsewhere.

I understand that Contact's argument for having a downstream point of obligation is related to the incentives for their upstream suppliers to manage the costs of carbon well. They fear that all costs will

be passed down to them and with a small number of suppliers they will not be able to force the suppliers to minimise the cost of carbon (or give them the option to do it themselves). This seems like a more generic problem in the gas sector if Contact's concerns are justified. I do not have specific expertise on this.

11 – no comment

12 – It is not possible to empirically assess – this is the reason why free allocation should be available on an equal basis to new entrants as incumbents.

13 – Given the very low costs of carbon per tonne under the new transitional arrangements leakage seems unlikely to be significant as a result of costs before 2013.

14 – no comment

15. Putting aside transition issues, what is your opinion on the appropriateness of the proposed amendments in the Bill in terms of New Zealand as an exporting nation competing with developing economies such as China?

In my opinion this issue can be dealt with in the medium term only by encouraging China in their efforts to address climate change (not inconsiderable) and encouraging them to participate in the international agreement. Protecting NZ industry against this competitive difference (one among many) is too expensive to our economy to be justified in the medium term. We should aim to improve the competitiveness of our economy in general.

16. In your opinion, what are the potential economic risks to New Zealand if New Zealand were to develop an ETS scheme that is more aggressive and quite different to the scheme being developed in Australia?

This would require more empirical work to answer quantitatively. Of course we should remember that it will be in the interests of the Australian government and economy not to allow too many emission intensive activities to move to Australia as they will then pay the fiscal cost of covering the emissions. There is no environmental risk from NZ production moving to Australia if Australia is less aggressive in its ETS. The emissions will continue to be capped. The cost of avoiding leakage to Australia is almost certainly higher than the overall economic cost of leakage. Firms will move only if it is profitable to do so.

**Questions particularly in relation to submissions from the Parliamentary Commissioner for the Environment, Institute of Policy Studies, Council of Trade Unions, New Zealand Business Council for Sustainable Development, Kent Duston (includes supplementary submission from Rio Tinto), Sustainability Council, Royal Forest and Bird Protection Society, and Dr Christina Hood)**

8. In your opinion, which, if any, of the key concerns expressed by the following submitters do you think are well founded, and which do you disagree with?

- a) Parliamentary Commissioner for the Environment
- b) Institute of Policy Studies

- c) Council of Trade Unions
- d) NZ Business Council for Sustainable Development
- e) Kent Dunston (includes supplementary submission on Rio Tinto)
- f) Sustainability Council
- g) Royal Forest and Bird Protection Society
- h) Dr Christina Hood

These are comments on their summaries not the complete documents.

### Parliamentary Commissioner for the Environment

I largely agree with their summary recommendations. Free allocation should be clearly motivated, transparent and should be more rapidly phased out. We should feel constrained to harmonise too closely with Australia and should review agriculture (or defer decisions).

### Dr. Christina Hood

Her attempt to make public the scale of the costs and transfers involved is very valuable. The fact that the current emissions trading system transfers \$25bn and that these amendments could transfer up to \$130bn should be well known. If US estimates are applicable to NZ this involves an economic cost of \$10bn – \$52bn relative to no free allocation. If transfers on this scale are to be made, the mechanisms should be transparent. This is an extremely useful submission and clarifies the problems in the Bill.

A couple of small 'criticisms'.

*She says: To ensure that the scheme is fiscally neutral, include a requirement that any ETS revenue be recycled to compensate consumers and small businesses for the increased costs they face assist with adjustment to a low carbon future, and fund climate change adaptation work. However the target will not be effective unless it drives decisions on allocation within the ETS. I submit that as part of each five yearly review of the legislation, there should be a requirement that the level of free allocation of units be set to give effect to achieving the stated emissions reduction target.*

**I do not believe that the scheme should be fiscally neutral.** We should achieve any compensation or protection goals we choose in the short run and at the same time try to maximise the amount of money gained by government and then have a public debate about the most useful way to use those funds. If/when free allocation is phased out the ETS will be a considerable source of government revenue. How this is used will have macroeconomic and society wide effects. It should not be specified in haste in an emissions trading bill.

Some revenue may best be saved for future crises (it has not hurt New Zealand to be in a good financial position in the current crisis); some could be used to cut taxes for efficiency reasons; some could be used to support complementary measures on climate policy or to fund adaptation – these expenditures should be judged on their merits; some could be used as a social dividend to support education, health or other needs. These options would support consumers and small businesses more effectively than any effort to allocate allowances to them directly.

Any units that are not sold, and any revenue from the sale of units that is not used to reduce debt or taxes forgoes a large efficiency gain. One of the wonderful things about revenue from economic instruments for environmental protection it is not associated with any additional distortions. This does not mean it should be carelessly used.

**50 by 50 target and free allocation:** I do not think that there need logically be any consistency between the target and the allocation approach. They are aimed at different objectives. The target can be achieved by domestic reductions or international purchases. They do however jointly currently imply extremely high fiscal and hence economy wide cost in the future. I believe that for economic efficiency reasons, free allocation should be phased out long before 2050 in any case.

### **Institute of Policy Studies**

This is a more emotive submission. I agree with the concern that free allocation is too generous, that the Bill will need to be further amended in future and that this creates business uncertainty. I agree that an 80 year 'transition' cannot be efficient for the economy as a whole.

What will be important for NZ's contribution to the global climate agreement will not be targets set in domestic legislation now but the commitments we agree to in international fora. While a critically important issue this seems like a red herring in this context.

### **Council of Trade Unions**

This is a very useful submission that I largely agree with.

I agree with the following statement: 'The Bill goes too far to protect heavy emitters, sends a weak price signal, loads costs on to taxpayers, will not promote energy efficiency and sustainable development and risks a consumer backlash which will impact on jobs in the long run.'

### **NZBCSD**

Many similar issues are raised here.

I agree that climate change policy will be an ongoing issue and a stable, high quality, and politically independent analytical and communication capacity needs to be built to address it on an ongoing basis.

I agree that complementary measures should also be considered – an emissions trading system alone will not lead to efficient responses to climate change. However I do not agree that revenue recycled from the system should be earmarked for these activities. If these involve cost (some may be legal changes) they should be individually assessed for value. The default use of revenue from the scheme should be debt reduction or tax cuts which definitely lead to economic benefit.

### **Kent Duston**

This makes a strong case that needs to be considered. The only potential factual mistake in this submission (that I can see) is that it will make the companies that receive the free allocation rich. If they do not receive windfall profits they will not get richer relative to not having an ETS. This does not mean

that others will not suffer economic costs and his parallel with SMPs is on the whole a good one that illustrates why we cannot support this high a level of free allocation for any length of time.

### **Sustainability Council**

The general comments on the low effective price and high cost of the Bill to the economy as a whole (outside the protected sectors) are consistent with other submissions and my comments.

I agree that there are probably abatement opportunities in agriculture and that these could begin to be addressed. I do not agree that we have sufficient evidence to show that there would be such large profitable reductions or even that for example 'standoff pads' would actually reduce emissions significantly. These are areas where current evidence is weak and mixed and more research is needed (and, I think, is currently underway).

### **Royal Forest and Bird Protection Society**

I agree that indigenous forests and carbon sinks are important stores of carbon that could be enhanced. I do not think these can or need to be addressed in the current Bill. They do require significantly more basic research which should be a priority. I understand that MAF could change the indigenous forestry tables when they have better information. I understand that the numbers cited for Kanuka/Manuka reversion apply only to East Cape. Equivalent numbers need to be estimated for other areas. Control of invasive pests on DOC land to increase carbon storage could be justified separately from the ETS as a complementary measure.

I agree that farm land that may be reverting to indigenous forest could be in some cases be endangered by the forestry aspects of the ETS. More accurate estimates of current stocks of carbon in reverting indigenous forest and of their potential sequestration might help this issue.

This suggestion is also worth exploration if that has not already happened. 'adopt instruments 1 and 2 of the New Zealand Forest Accord for any afforestation scheme or other land use which seeks to claim NZ units.'

I do not think that NZ units should be used to reward complementary activities or non-climate related activities. This would reduce the transparency of the policy and could undermine it. Complementary measures to identify units that originate from biodiversity rich forests could be used to enhance the marketing of these units possibly giving them a higher price.

**I do not have comments on the specific questions – either this requires modelling that I am not aware of or I have addressed the key points elsewhere – I am also running out of time...**

**Questions particularly in relation to submissions from Wairakei Pastoral (including supplementary submission from Ross Green), Temperzone Limited, New Zealand Business Roundtable, and Solid Energy**

9. In addition to general comments on these submissions please provide comment on the following:
- a) Wairakei argued that the government should have insisted on offsetting as part of the Kyoto agreement. Why didn't they? Was there any logical reason not to? Should pre 1990 forest owners be penalised because the government did not agree to offsetting? Should the cost of this failure be met by all taxpayers?
  - b) Wairakei also argued the pre and post 1990 forest owners should be treated the same. Do you agree?
  - c) Wairakei argued that free credits (be they 19, 39 Or 60 credits per ha) are a generous giveaway to pre 1990 forest owners where the land can not be used more productively than for forests. i.e. once the trees are felled the owners would only replant anyway because there is no other use and so credits are needed. Is this correct? They also advocated that should a distinction between pre and post 1990 be maintained, the credits allocated should be kept in a special pool and so those pre 1990 owners who had the most to gain from the conversion to pastoral would be better assisted. This scheme was outlined in their supplementary submission. Do you agree?

I agree that pre 1990 land that is deforested is disproportionately disadvantaged by Kyoto and hence the current ETS. The Kyoto rules were poorly defined so that foresters are liable for all the carbon stored at maturity rather than the average carbon stored in a rotation forest which would have been appropriate in terms of impact on the atmosphere. The incomplete coverage of forests in Kyoto (distinction between pre 1990 and post 1989), while understandable for practical reasons, also makes the system more complex than is ideal.

Allowing offsetting (but then not allowing NZ units ever to accrue on this land) would make 'deforestation' environmentally equivalent to harvesting. This would however be complex because the land would need to be tracked forever, and it does impose a fiscal cost. Possibly a compromise would be for foresters to surrender units to match the average carbon across a rotation on deforestation. Then, if they choose to offset by planting elsewhere, they will reclaim these over time, albeit with a lag. If they chose to enter the afforestation tender programme they could gain some of the revenue from future credits immediately.

I don't know that the current allocation of free units to pre 1990 forestry land which was agreed through sensitive negotiations can be reversed so the pool of free units that could have been used to finance this compromise may have been lost. I do agree that these have been poorly targeted and given in some cases to foresters with no need for compensation.

There should not be any international implications of these decisions within our own ETS and it may be possible that the Kyoto rules relating to forestry will be improved during the current international negotiations. This is the longer term solution to the problem.

On the other hand, to the extent that land would be being deforested for intensive pastoral production that is already being protected from inclusion in the ETS it may not be appropriate to offer further protection. I am not convinced that we should further subsidise high emitting agricultural activities to encourage their growth (see my comments above on whether intensity-based allocation should be used in agriculture).

Overall forestry has done well out of the emissions trading system with significant rewards going to forests planted as early as 1990 with no expectation of carbon rewards. I do not believe that owners of pre-1990 forests should receive credits in the same way. There would be efficiency benefits from involving them in the system and hence encouraging changes in forest management but their baseline for entry should be less generous.

I have not seen Professor Mason's analysis but Motu's preliminary analysis suggests that, the ETS has already created significant incentives to plant new forest. We are not seeing the results of this in large part because of the effects of ongoing regulatory uncertainty and because of currently low log prices. The latter is out of NZ's control but we can try to minimise the former.

10. Solid Energy: A distinction was drawn by Mr. Elder between reworking old mine tailings where the methane would have been released when they were first mined and virgin mining. Do you agree?

I don't know anything about this issue

- a) Mr. Elder also argued we should get the ETS "right", but then only activate it once certain preconditions are met. Do you agree? What preconditions would you suggest?
- b) Do you believe we would be best to pass legislation at this stage delaying the introduction of those sectors due in January 2010 and wait until this Copenhagen Round is completed? Or wait until Australia's scheme is finalised?

The cost to New Zealand arises because we ratified and intend to comply with the Kyoto Protocol, not because of the ETS. The ETS should help us achieve that goal at lower cost to New Zealand. Thus there is no argument to wait especially with the current protection for competitiveness at risk activities.

If all countries wait for others to act we will never get movement on international cooperation. New Zealand is not currently a leader on climate change (in terms of actually implemented legislation) and the current ETS will not put us far ahead of other OECD countries in terms of domestic implementation. While the transfers proposed through free allocation are enormous (and potentially very costly to the economy), the net cost to the economy from actual reductions is probably very small. I believe we should watch other countries closely, encourage them to act more strongly and simultaneously make commitments commensurate with our resources but also generous to those with considerably lower living standards than us and take actions that make those commitments credible. An international

agreement is not primarily a legal document, it is a gradual building of trust. The trust is among a group of people who recognise that we will all be better off if we cooperate but also recognise that they do not want to be 'suckers' who bear an unfair share of cost.

11. Were methane emissions only added to the ETS at the last stage. If so, why?

As I understand the system was from the beginning intended to be 'all sources, all gases'. I don't know about the specifics of this source of methane.

12. Elder argued that the current ACT results in massive revenue grabbing by the government. Is this correct, and approximately by how much over say the next 5, 10 and 20 years?

See comments above on this issue.

13. The NZ Business Roundtable argues that there has not been a proper regulatory impact analysis completed? Is this correct? Why? How long would one take to do? What are the advantages of doing one know?

More rigorous analysis is always useful but should not be used on its own to argue for delay in general. It is not possible to estimate the benefits from the ETS or New Zealand's involvement in Kyoto because they are not quantifiable. Even the benefits from the global agreement are not easily estimated (as Stern found) and many of the benefits relate to reducing the possibility of extremely serious risks which are poorly understood. We should continue to model the costs to New Zealand and try to enhance our policies and should watch international efforts to estimate the benefits of control.

On the other hand, it seems that analysis of the current amendments has been weak and there has not been enough informed debate. I have not been involved in the latest round of analysis so am unable to comment in any more detail.

### **HFCs and Montreal**

Montreal was successful in large part because it was cheap and in the direct economic interests of the most powerful country and largest producer, the US. The Kyoto Protocol was modelled on it and has struggled not because of differences in the Protocols but differences in the underlying problems they address. That said, to the extent that HFCs are ozone depleting chemicals as well as greenhouse gases there is no reason they should not be controlled under both Protocols. If Montreal can make progress faster than the climate agreement on HFCs that offers side benefits. There is also no reason why we should not continue to learn from the successes (and failures) of Montreal and benefit from the institutions it has been able to build to support its implementation.

If we try however to use Montreal for purposes it was not intended for, that may undermine Montreal and confidence in international agreements more generally. It is also an inefficient way to balance efforts to control HFCs relative to other greenhouse gases. Given the high cost of protecting the climate efficiency is important to consider. That said, Kyoto does not currently balance efforts across gases and countries effectively either (with poor balance between methane and CO<sub>2</sub> and incomplete coverage of countries). These issues need to be tackled head on.

I believe that we should be aware of the potential to reduce greenhouse gases in association with other activities whenever it arises. This is particularly evident with problems of black carbon which is



associated with very dirty cooking stoves which also cause severe health problems; and with urban air pollution in many developing countries. Within New Zealand addressing Auckland's congestion and addressing transport emissions may be complementary. We should not however allow this to divert us from simultaneously gradually building global infrastructure and knowledge to monitor and reduce GHG emissions and the global trust that will allow us to use that infrastructure to make sufficient reductions through cooperative efforts.

I am not an expert on HFCs and their use so cannot comment on the specifics of his proposal.