SUBMISSION

Submission to MINISTRY FOR THE ENVIRONMENT on

"NEW ZEALAND EMISSIONS TRADING SCHEME REVIEW 2015-2016" (FEBRUARY 2016)

INTRODUCTION

1. Straterra[1] welcomes the opportunity to submit on the New Zealand Emissions Trading Scheme Review 2015-2016 consultation document[2]. The submission deadline of 19 February 2016 is noted.

2. Straterra submits from the point of view that New Zealand needs to consider basic principles of economics, and the role of technology, when reviewing and developing climate change policy.

3. In preparing this submission, Straterra has consulted with the New Zealand coal sector, comprising producers for domestic consumption and export, blenders/traders and industrial users.

4. Straterra would welcome further engagement with the Ministry for the Environment on the issues raised in this submission.

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[1] Straterra represents NZ minerals production, exploration, research, services, and support http://www.straterra.co.nz/about/

[2] http://www.mfe.govt.nz/publications/climate-change/new-zealand-emissions-trading-scheme-review-2015-16-discussion-document

EXECUTIVE SUMMARY

Objective of the NZ ETS

4. The objective of the NZ ETS should be to form part of international carbon markets, to which New Zealand has access at affordable prices. This upholds a well-established principle in economics, which is that the most efficient reducers of pollution should do most of pollution reduction, in this case, of GHG emissions in a global context.

5. The rational behaviour for New Zealand points of obligation to adopt is to: (A) buy emissions reduction units from countries with a lower marginal cost of abatement than New Zealand, or (B) to move to lower-carbon technologies, and sell surplus emissions units, if that is cheaper than (A) and if those technologies exist; or (C) close down and move offshore, if that is cheaper (carbon leakage).

Problem definition

6. The greatest challenge with reviewing the NZ ETS is the lack of certainty in the international context.

7. In particular, there are currently no international carbon markets to which New Zealand has access at affordable prices. Nor are there agreed rules on forestry and land-use. In addition, there is the fundamental uncertainty as to whether New Zealand's actions to achieve its ambitious emissions reduction target will be matched by the actions that the Paris Agreement signatories actually take.

8. At issue is that for coal producers, both for domestic consumption and for export, and coal users, cost-effective, lower-carbon technologies and practices do not exist, at the present time, and opportunities for economic abatement in New Zealand is extremely limited. Any price on carbon may be seen simply as an impost that will lead to no change in behaviour except – in the event of carbon prices becoming unaffordable - business closure, businesses[3] moving offshore, or new investments not being made in New Zealand.

9. Businesses to which the above considerations apply include:

   - Emissions-intensive, trade-exposed (EITE) businesses: methanol; paper pulp and urea manufacture; large-scale gold mining; the aluminium smelter;
   - Coal producers for export and domestic consumption, who are also EITE; and
   - Coal users (some of them acknowledged as EITE): steel, cement and lime-making; dairy and other food processing; hothouse horticulture; wood, timber, wool and leather processing; breweries; and heating large buildings and a wide range of commercial facilities (e.g., hospitals, schools and universities in the South Island); and the Huntly power station.

10. A robust sector-by-sector economic impact analysis would be more credible than the NZIER General Equilibrium modelling to help ascertain at what price of carbon affected businesses

[3] When the term businesses is used in this submission, this also refers to coal producers.

would close down, and/or move offshore, and/or not invest in New Zealand. This would be essential information before considering any ETS policy change.

11. That analysis should include impacts on coal producers. If exposed to a price on carbon, coal exporters would still have to address the costs of fugitive emissions of methane, for which no technologies exist for reducing these. Coal producers also face a number of operational costs that would indirectly impose a carbon price, e.g., diesel. If other coal producing countries do not face a price on carbon, or if they face a lower price of carbon, there is the possibility of coal mining ceasing in New Zealand, and of New Zealand importing coal.

Policy response

12. Given the above, the conditions do not exist at the present time in which New Zealand could phase out the one-for-two surrendering obligation for fossil fuel producers, exporters and users and other relevant industries, or could phase out free allocation for EITE industries. These instruments should be retained until adequate international market conditions exist, and then phased out over time. (Straterra understands New Zealand is working with other countries to develop international carbon markets, an initiative that, in principle, we strongly support.)

13. As well, there is merit in introducing an auctioning scheme as one mechanism of avoiding carbon prices exceeding a price cap, as part of dealing with international uncertainty, as well as managing price volatility.

14. A price cap is needed to avoid gaming by purchasers of NZUs (e.g., under an auctioning scheme), and to benchmark that price cap with the carbon prices faced by our international trade competitors and partners.

15. Access to international units is also needed so that trade exposed companies do not face an uneven international “playing field” with their trade competitors.

16. The call for a transition to cost-effective, lower-carbon technologies and practices is fine in theory; however, deployment depends on the existence of these technologies and practices. That argues in favour of R & D into “clean coal” technologies, as well as other lower-carbon technologies and practices, globally and also in New Zealand.

17. It is noted that contestable funding of minerals and energy research has diverted away from coal in recent years. The trend needs to be reversed.

18. Coal producers must deal with fugitive emissions of methane, which arise in the course of mining coal. There is no technology at present for dealing with these emissions. Our view is that this category of emission included in an assessment of whether or not a business is emissions intensive and trade exposed.

Conclusion

19. The Government is urged to exercise great caution when making any changes to policy measures designed to protect relevant industries from unfair international trade competition, or from unnecessary or counter-productive negative economic impacts.

20. New Zealand industry has extremely limited access to economic abatement opportunities, and this fact reinforces the need for caution in changing the NZ ETS.

RECOMMENDATIONS

21. Strateerra recommends the Ministry for the Environment to:

a) Note that coal producers and users in New Zealand (especially in the South Island) cannot transition to cost-effective, lower-carbon technologies and practices at the present time, because they do not exist;

b) Note that the coal sector is under significant economic pressure at the present time and for the foreseeable future;

c) In the shorter term, agree to:

- retain the one-for-two surrendering obligation;
- free allocation for EITE industries;
- include within the above category coal mines, and if not, zero rate fugitive emissions of methane;
- retain a price cap, to prevent gaming by NZU purchasers and holders of auctions of NZUs;
- benchmark the price cap to the carbon prices faced by NZ's international trade competitors and partners;
- provide access to international units, until international carbon markets are created, to which New Zealand has access at affordable prices;

d) In relation to Rec. (c), if the Government insists on phasing out one-for-two and free allocation, agree to implement this transition over several years to provide for affected emitters to access well-functioning international carbon markets, and to manage the financial risk associated with that transition; and

e) In the longer term, agree to promote or support the research and development of "clean coal" and other lower-carbon technologies and practices, globally and in New Zealand.

ANSWERS TO QUESTIONS

Context and drivers for the review

1. Do you agree with the drivers for the review? Yes/No/Unsure

Yes, however, not entirely.

The discussion document has presented a well-considered but slightly misleading characterisation of the climate change issue, in terms of the global response. The drivers provided are not complete.

An important driver should be to develop policy that recognises the very significant uncertainty over the global response to the climate change issue, and uncertainty over a number of assumptions that would need to hold for the Paris Agreement to have any effect.

These assumptions relate to, for example:

- The actions that the 196 signatories to the Paris Agreement[4] will actually take[5];
- The existence of, and rules governing international carbon markets, and access for New Zealand to those markets, at affordable prices;
- Related to the above, future international and domestic carbon prices, including the range of different carbon prices in different regional/national policy regimes;
- Rules for forestry and land-use;
- The development, availability and uptake of cost-effective, lower-carbon technologies and practices, globally and in New Zealand.

At issue is that the climate change issue, globally and in New Zealand, is connected to such issues as: economic development, energy, infrastructure, transport, urban form/planning, and international trade. Climate change is not an issue that can be considered in isolation. In developing climate change policy, the Government must recognise the connections with other areas of policy.

It is noted that the NZIER analysis[6] assumes, among many other things, on page 3 that "*capital stock is able to change in response to relative prices*". While reasonable to make for a report of this sort, this assumption does not hold in the case of the coal sector (discussed in more detail elsewhere in this submission).

2. What other factors should the Government be considering in this NZ ETS review?

As stated above, we disagree with some of the characterisation of the climate change issue in the consultation paper, and we elaborate over the page:

- The paper says "*it is also encouraging that no new fossil fuel electricity generation is planned*". The fact is that if New Zealand were to approach 100% renewable electricity generation with current technology, the marginal cost of electricity generation would increase exponentially in order to insure against problems of dry hydro years and intermittent generation. There is, therefore, a continuing residual, though strategic role for

[4] On a positive note, the Paris Agreement is a truly global agreement, and it does chart a broad direction of climate change policy intent.

[5] For example, http://af.reuters.com/article/commoditiesNews/idAFL8N15U3QM , http://www.theguardian.com/environment/2015/dec/14/india-says-paris-climate-deal-wont-affect-plans-to-double-coal-output

[6] NZIER (December 2015). Economic impacts of removing NZ ETS transitional measures. MfE, Wellington http://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/Economic%20impacts%20of%20removing%20key%20ETS%20transitional%20measures%20-%20FINAL%20FINAL.pdf

coal and gas-fired electricity generation. As well, coal is an essential and significant input into renewable electricity generation and transmission infrastructure (steel, cement).

- The paper alleges that "*some other businesses are investing in emissions-intensive assets … because firms and households are not able to make informed choices … due to the uncertainty of future carbon prices … it could also be that people are unclear or lack confidence in the government's intentions for distributing the costs of future emissions liabilities to emitters*". We think it is more likely that alternative cost-effective, lower-carbon technologies are not available currently for a number of sectors, including for coal producers (noting they could be in the future).

- As to the assertion that "*increasing certainty around future policy settings in the NZ ETS could make it easier for firms … to plan for the future*", that would only hold if that certainty is workable for businesses, including coal producers for domestic consumption and export. Certainty could simply lead to business closures, businesses moving offshore, or new investments not being made in New Zealand. Certainty should include access for New Zealand to international carbon markets at affordable prices. The issue is more one of promoting resilience in NZ businesses, and that is achieved by enabling businesses to manage risk.

- In response to the assertion that "*the New Zealand economy has made a solid recovery since the 2008/09 recession*", that is not the case for the minerals and mining industry, in particular, coal producers and many coal users.

- "*Moving to full surrender obligations would increase the incentive to reduce emissions, and give businesses greater certainty when making business decisions*" – At issue for coal producers and users is that there are no alternative cost-effective, lower-carbon technologies at present. Increasing the carbon price would be simply an impost with no behavioural changes possible other than the negative outcomes listed above. A robust sector-by-sector economic impact analysis would be more credible than the NZIER General Equilibrium modelling to help ascertain at what price of carbon affected businesses would close down, and/or move offshore, and/or not invest in New Zealand.

At issue is that the global response to human-caused climate change is a "wicked problem"[7], which argues for caution when implementing market-based economic incentives. The NZ ETS, if arbitrarily strengthened, runs the risk of creating an additional source of market failure. That is because the magnitude of uncertainty around the Paris Agreement is such at the present time that great caution must be exercised in making any changes to the NZ ETS.

At issue is that there are no indications at this early stage as to the range of prices of international emissions reduction units (including relating to forestry) that will be available for New Zealand to meet its international obligations.

Arguably, it is too early for New Zealand to make decisions concerning its carbon price when it is not clear what range of prices our trading partners/competitors will face.

[7] Wikipedia https://en.wikipedia.org/wiki/Wicked_problem

It is noted that New Zealand is on track to meet its 2020 commitment under current NZ ETS settings. On that basis, it could be argued that no change in NZ ETS settings is needed at least until after 2020.

The international analysis, e.g., the IEA, has a long-standing view that a range of measures will be needed, including energy efficiency and new technologies. There is no silver bullet, and if there was, the NZ ETS would most certainly not be it.

In summary, the response to the climate change issue has to do with technology. Straterra has come to the view that the solutions, globally, will lie, ultimately, in technology.

Moving to full surrender obligations

3. Should the NZ ETS move to a full surrender obligation for the liquid fossil fuels, industrial processes, stationary energy and waste sectors? Yes/No/Unsure

No. That is to say, not at this time.

To move to full surrender obligations, the Government must assume at least the following:

- Cost-effective technologies or practices for reducing emissions in response to rising carbon prices, globally and in New Zealand;
- The businesses eligible[8] for free allocation are the only businesses in NZ that are emissions intensive and trade exposed (EITE);
- The existence of a well-functioning international framework, including access for New Zealand to international units at affordable prices (from the 2020s);
- Related to the above, informed markets that behave rationally; and
- A workable framework for forestry and land-use.

None of the above assumptions hold at present, and – on the experience of the last 20 years - there is no guarantee that they will hold in the future.

The former Minister for Climate Change Issues, Hon Tim Groser, told the media[9] that "*the Government would take a 'more strategic view' with businesses and how they improved their emissions*". On the basis of the above, moving to a full surrender obligation, at the present time, would not be a "strategic view"; if anything, it would be the opposite.

A different approach to the climate change issue should be taken.

[8] EITE businesses include: NZ Steel, the aluminium smelter, Methanex, as well as cement, lime, urea, paper pulp manufacturers, and some horticulturists. Gold and coal extraction, dried milk production and other industries may also be EITE but are not included in the Government's inequitable criteria related to the exclusion of liquid fossil fuels.

[9] http://www.stuff.co.nz/business/75047978/paris-climate-deal-new-zealand-must-improve-plans-to-meet-global-target

Straterra has come to the view that the global response to the climate change issue lies, ultimately, in technology, with market-based economic instruments providing a supporting role – to attain the transition to a low-carbon economy.

In other words, unless there are cost-effective technologies and practices on which to draw, market-based economic instruments will achieve no benefits for New Zealand, in terms of the Government's policy objectives, unless New Zealand has access to international carbon markets at affordable prices.

The Government should be driving or supporting technology solutions, in New Zealand and overseas, e.g., continuing the excellent research into agricultural emissions, increasing the uptake of electric vehicles, promoting energy efficiency in homes and businesses and the construction of energy-efficient homes, promoting the conversion of carbon into chemical feedstocks that are then fixed in products, further increases in renewable electricity generation and transmission. This issue is discussed in more detail below.

4. **What impact will moving to full surrender obligations have on you or your business? Please include specific examples or evidence of the impacts on you or your business of:**
   a) **increased carbon prices, including actions to reduce emissions and future investment decisions. Please comment on effects that may occur at carbon prices ranging from $5 to $50, including any evidence of actions taken previously when carbon prices were higher.**
   b) **any NZ ETS administrative or operational issues, for example the option for participants to apply for a unique emissions factor.**

In terms of the sector Straterra represents, the following are affected:

- Coal producers, both for domestic consumption and for export;
- Coal blenders and traders;
- Coal users:
  - Huntly power station, remaining Rankine units;
  - Steel-making (NZ Steel at Glenbrook);
  - Cement-making (Holcim, Golden Bay Cement) and lime manufacture;
  - Dairy and other food processing;
  - Hothouse horticulture;
  - Wood, wool and leather processing;
  - Breweries;
  - Heating of schools, universities, hospitals, laundries, hotels, offices, swimming pools and other facilities.

Increases in carbon prices ranging from $5 to $50 a tonne, however achieved, would simply be imposts on the above categories of businesses until a point is reached for each business when it is put out of business, and/or moves offshore, and/or no further investment and/or no new investment is made in New Zealand. That is because there are no alternative cost-effective, lower-carbon technologies at this time for our sector. A carbon price will not incentivise a change in behaviour because there is no alternative, practical behaviour to adopt, other than to purchase international emissions reduction units if these are available at affordable prices.

Note that coal producers must address fugitive emissions of methane, and also face a range of carbon-related operational costs, e.g., diesel.

If coal production moves offshore, New Zealand coal users will simply use imported coal from countries where there is no price on carbon, or a lower price on carbon.

The key issue for industrial users of coal as process heat is that the capital costs of switching from one type of energy to another – in-house, and in terms of external infrastructure and delivery – are prohibitive. As well, electricity is, roughly speaking, three times the price of coal per unit of heat produced, in particular, in the South Island, where gas is not available.

Converting to biomass poses similar costs, as well as a number of technical issues that must be first resolved for commercial use at scale. That is not to say that these issues cannot be surmounted, at least to a degree – this is a question of time, effort and access to investment capital.

Given that coal users account for some 6% of New Zealand's gross GHG emissions, it would be foolish in the extreme to impose a full surrender obligation on this sector, at the present time. The benefits for New Zealand would be minimal or non-existent, and the economic consequences could be serious for many businesses and commercial operations, especially in the South Island.

A robust sector-by-sector economic impact analysis would be more credible than the NZIER General Equilibrium modelling to help ascertain at what price of carbon affected businesses would close down, and/or move offshore, and/or not invest in New Zealand. This would be essential information before considering any NZ ETS policy change.

5. **If full surrender obligations are applied, when should this be implemented?**
   a) **2016**
   b) **2017**
   c) **2018**
   d) **other – please specify**

   Outline the reasons for your answer, and include any comments on the pros and cons of applying an increased surrender obligation to a partial or a full NZ ETS reporting year.

Option (d) Other.

The introduction of a full surrender obligation should be implemented only in response to actions that other countries actually take, and following the completion of the Paris Agreement framework (e.g., international carbon markets at affordable prices), which is currently highly uncertain, as discussed under various submission points, above.

The date for full removal should also take into account the development, availability, and uptake of cost-effective, lower-carbon technologies and practices, globally and in New Zealand.

To be clear, rather than setting dates, the triggers for change should be related directly to international conditions.

Any programme for full removal should be implemented over a period of years to provide for a smooth and managed transition.

Managing the costs of moving to full surrender obligations

6. **If the NZ ETS moves to full surrender obligations, should potential price shocks be managed? Yes/No/Unsure**

As per the above comments.

Any carbon price on coal producers and users is simply an impost on those businesses. The only benefit for emissions reduction in New Zealand (helping meet our target of 30% emissions reductions on 2005 levels, under the Paris Agreement), would come from business closures, unless these businesses can access international emissions reduction units at affordable prices. That is not the case at the present time.

While price shocks could potentially have a major impact on the New Zealand economy, some of that economic output would be replaced by plants based in developing countries, and such may well be less efficient than that of New Zealand. In other words, imposing a carbon price on New Zealand businesses, without considering the global context, could well result in being counter-productive for the global climate change response.

7. **If potential price shocks associated with moving to full surrender obligations should be managed, how should this be done?**
   a) **maintain the fixed price option at $25**
   b) **lower the fixed price option**
   c) **gradually move to full surrender obligation**
   d) **other methods.**

See above. Instead of focusing on price shocks, it would make more sense to tie a phase-out of the one-for-two surrendering obligation to the establishment of internationally-recognised carbon trading mechanisms, as part of completing the global Paris Agreement framework. Regardless, a price cap should be retained against potential supply shortages or gaming by NZU purchasers and holders.

The price cap should be set no higher than the carbon prices our trade competitors and partners pay, to “level the playing field”.

8. **If the $25 fixed price surrender option value should change, what should it change to and why?**

As discussed above. This is a second-order issue. The real question is what to do with the NZ ETS. Straterra considers that this scheme would work best in the context of a well-functioning market-based global emissions reduction framework. The NZ ETS should be implemented in such a way as to

provide legitimate protection of those sectors of the New Zealand economy that would be unfairly disadvantaged in a poorly functioning global framework, and this is the case currently.

Notwithstanding the above, the guiding principle should be a fair and level playing field for New Zealand businesses, especially those that are emissions intensive and trade exposed, whether or not they fit into the Government's definition of EITE. The price cap, therefore, should be no higher than the carbon prices faced by our international trade competitors and partners.

Other issues: business responses to the NZ ETS

9. **Do you consider the future cost of emissions in your business planning? Yes/No**
   If yes, how do you do this?

Each company will address this issue in its own way. Given the discussion of the issue above, Straterra considers that New Zealand's climate change policy, if it leads to increased uncertainty, or if it adopts an inappropriate approach to managing uncertainty, will simply increase New Zealand's sovereign risk as a place to do business.

The future cost of emissions will become an additional cost to manage in the face of uncertainty, of the sort posed by fluctuations in exchange rates, interest rates, prices for inputs or factors of production, and in the market for outputs.

A carbon price on coal producers for domestic consumption and export, and for industrial coal users is an impost at this stage, which will not lead to any change in behaviour because there is no practical alternative for coal producers to absorbing the costs of fugitive emissions of methane or indirect operational costs, or, in the case of industrial users, to using coal, in the South Island. In the case of the North Island, gas is an alternative, however, in only some situations where investment capital for fuel conversion is available. All that most industrial coal users will be able to do for the foreseeable future is pay for their emissions at the NZU price because no international units are available.

10. **What would improve your ability to take into account the future cost of emissions in your business planning?**

There are at least three key things the Government could do:

- Operate the NZ ETS with appropriate protections for relevant sectors until a definitive international climate change framework is created, and that would have to include international markets for emissions reductions to which New Zealand has access at affordable prices;
- Promote and support the development and uptake of cost-effective, lower-carbon technologies, in New Zealand and overseas, as a key policy tool for Paris Agreement signatories to achieve global climate change objectives;
- The above should include "clean coal" technologies, e.g., CCS; and

- Provide forecasts on NZU price paths to help businesses manage financial risk.

Other issues: protecting competitiveness through free allocation

11. Under what conditions should free allocation rates start to be reduced after 2020?

Free allocation rates should only be reduced once a definitive, clear international framework has been created, with evidence that it is being adhered to by New Zealand's trading partners/competitors.

That would include international carbon markets to which New Zealand has access at affordable prices.

Recall that the purpose of free allocation is to protect EITE businesses, and these should include a range of businesses that are not classified by the Government as EITE, from exposure to unfair international trade competition. Only when the possibility of unfair international trade competition is removed can free allocation rates be reduced. These rates should be reduced over a period of time, to provide a smooth and managed transition.

12. What impact would it have on your investment decisions over the next few years if there was a clear pathway or criteria for phasing out of free allocation after 2020?

In the absence of a transparent, global, well-functioning climate change response framework, EITE businesses would consider moving to other countries where there is no price on carbon, or where there is a cheaper price of carbon, and/or would not consider investing in New Zealand.

There can only be a "*clear pathway or criteria*" if our trading competitors are exposed to similar carbon prices to those applying to New Zealand businesses, and international carbon markets are established to which New Zealand has access at affordable prices.

Other issues: managing unit supply – international units

16. If international units are eligible for NZ ETS compliance in the 2020s, should any of the following restrictions be placed on their use?

a) **restrictions on where units can be sourced from (location of and/or types of projects)**
b) **restrictions on how many units can be surrendered**
c) **others (please explain).**

In introducing the concept of restrictions, the New Zealand policy framework immediately creates uncertainties in relation to the carbon price and access to international units. This is a serious concern. It suggests that New Zealand will take it upon itself to decide whether particular units are acceptable or not, on an *ad hoc* basis. What would happen if every country did the same thing? Plainly, this issue should be addressed within a global framework, determined globally.

Other issues: managing unit supply – auctioning

17. **Should auctioning be introduced in the NZ ETS? Yes/No/Unsure**

    If yes, when?

    a) **in the next two to three years**
    b) **within five years (before 2020)**
    c) **after five years (post 2020).**

Yes, provided a price cap is maintained to prevent gaming by purchasers and holders of NZUs. That price cap should match or be benchmarked to the carbon prices that New Zealand's international trade competitors and partners face, as discussed elsewhere in this submission.

Straterra is arguing in this submission that the NZ ETS should continue to operate with appropriate levels of protection for relevant sectors, and that could include auctioning as a way of managing carbon prices, in particular, in response to price volatility.

As stated elsewhere, the climate change issue is a "wicked problem", subject to significant uncertainties in the global policy framework and actions that other countries will take, and in the development and uptake of cost-effective, lower-carbon technologies, globally and in New Zealand.

18. **What should be the role or purpose of an auctioning function in the NZ ETS, if one were introduced?**

    a) **to align supply in the NZ ETS more closely with our international target**
    b) **to more actively manage NZU prices**
    c) **other (please explain).**

All of the above could apply.

An auctioning function would provide a balancing mechanism, in the context of international trading markets for carbon, and the New Zealand forestry sector.

A price cap is also a high priority, to provide certainty for businesses, as well as workability, for the reasons already discussed in this submission, and also to prevent gaming by holders and purchasers of NZUs.

The auctioning function could also help manage the supply of NZUs, as a way of managing price volatility.

19. **How should auctioned NZUs relate to other sources of unit supply in the NZ ETS, especially NZUs generated through forestry removals and/or international units?**

As discussed above, there is only a point to this discussion if a global, well-functioning market-based emissions reduction framework exists. That is particularly the case for sectors that have no ability to change their behaviour at the present time (because cost-effective lower-carbon technologies and

practices do not exist), and which will rely on access to international emissions reduction units at affordable prices.

Other issues: managing price stability

20. What impact has carbon price volatility in the NZ ETS had on your business?

a) **minor**
b) **moderate**
c) **significant.**

Price volatility has been an issue for the coal sector (and could be in the future). The removal of access to international units would likely cause a spike in NZU prices. The current price of around $9 a tonne is simply an impost on coal users, for the reasons discussed elsewhere in this submission.

To provide an indication of the impacts of carbon prices on coal producers and users, following are figures from a small South Island coal mine:

- School boiler type coal, at an NZU price of $5, sells for $83.44 per tonne, not including GST;
- At an NZU price of $50, the sale price increases to $130.74 per tonne, a 157% increase;
- On removing the one-for-two surrendering obligation, the sale prices increase to $182.52 per tonne, a 219% increase.

21. Do you think measures should be in place to manage price stability? Yes/No/Unsure

Yes.

The Government has a responsibility to ensure an adequate supply of units to minimise and manage price volatility, as discussed elsewhere.

22. What do you consider are important factors for managing price stability?

a) **upper price limits (eg, fixed price option, or a price ceiling implemented through an auctioning mechanism)**
b) **lower price limits (eg, price floor)**
c) **other (please explain).**

The establishment of international markets would create a set of carbon prices. That is the context in which a discussion on price stability should be held.

23. What should the Government consider when managing price stability?

As above, the first priority is to create international carbon markets to which New Zealand has access at affordable prices.

Other issues: operational and technical matters

24. Are you aware of ways the administrative efficiency of the NZ ETS could be improved? Yes/No/Unsure

The NZ ETS is in place, and all of these issues have been worked through. That said, matters to do with GST cause an intense cash flow issue for businesses. Some mines have embedded the carbon price within the coal price, while others have not done so. That makes carbon accounting very complex and onerous for end-users.

The New Zealand Emissions Trading Scheme Evaluation 2016 Summary states: "*Participants do not view the NZ ETS as overly burdensome or high in additional costs... although there are specific situations where costs are relatively high (e.g., compliance for small businesses ...*)". This conclusion was drawn on the basis of 22 interviews with ETS participants that included just one from the stationary energy sector. Similarly, the Business Operations Survey 2012 was open to all businesses but a more relevant exercise should be focused on energy-intensive businesses that are the ones most severely impacted by the ETS.

Straterra stresses that ETS administration and compliance costs for medium and small-scale coal producers and suppliers are very significant and officials should seek a wider range of opinions from such participants.

25. Can you provide further information to support your answer? We would be interested in comments on:

a) **complexities involved in NZ ETS participation**

b) **penalties for breaching NZ ETS obligations**

c) **any technical or operational changes that could be made to the NZ ETS to improve efficiency.**

As above.

Other issues: addressing barriers to the uptake of low emissions technologies

26. Are there any barriers or market failures that will prevent the efficient uptake of opportunities and technologies for reducing emissions?

There are many barriers and/or market failures, and they include:

- The lack of a definitive, well-functioning international market-based framework to reduce GHG emissions globally;
- The lack of international carbon markets with clear rules, and access for New Zealand at affordable prices;
- Lack of nationwide infrastructure to support electric vehicles;

- The lack of commercially-viable biomass combustion and delivery technologies, at scale, as a source of industrial process heat for industries that currently use coal;
- Lack of technologies for or inability to managing fugitive emissions of methane from coal mining operations;
- The lack of a commercially-viable alternative to fossil carbon in steel-making;
- The lack of a legislative and regulatory framework that would enable CCS (at appropriate international prices of carbon); and
- A downturn in contestable government funding of research into "clean coal" technologies, low-emissions technologies, as evidenced by funding rounds in recent years.

27. If so, is there a role for the Government in addressing these barriers or market failures and how should it do this?

There most certainly is a role for the Government to make positive interventions to address market failures. That is a basic principle of economics.

The first step is to ensure adequate caution in the implementation of the NZ ETS, in the face of global uncertainty on many matters of importance.

The second step is to continue participating in good faith in the international negotiations to firm up on the international framework, in particular, to create well-functioning, international carbon markets to which New Zealand has access at affordable prices.

The Government could also do the following, some of which are already being acted upon, and which are mentioned in the paper:

- Continue to pursue the global agricultural emissions alliance, and consider other research alliances;
- Introduce modest or practical incentives for the uptake of electric and other lower-carbon vehicles;
- Continue to promote cycling, walking, public transport, and other forms of lower-carbon transport;
- Resume public funding of R & D into "clean coal" technologies;
- Other government R & D, including in the application and uptake of new technologies in NZ;
- Support investment in resource industries that fix carbon into high-value products, such as plastics, carbon graphite, methanol, urea;
- Continue with initiatives for energy efficiency in homes and businesses;

- Promote entrepreneurial and economic independence thinking in New Zealand's high quality school curriculum;
- Better urban planning.