

New Zealand Government



The New Zealand Emissions Trading Scheme

∴ New Zealand Emissions Trading Scheme Review 2015/16

DISCUSSION DOCUMENT AND CALL FOR WRITTEN SUBMISSIONS

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Foreword

Countries are meeting in Paris in December 2015 to establish a new international climate change agreement to apply to all countries after 2020. Several of our key trading partners are taking, or have announced plans to take, increased domestic action on climate change.

New Zealand is also playing its part. In July 2015 the New Zealand Government announced that our new climate change target is to reduce greenhouse gas emissions to 30 per cent below 2005 levels by 2030. This new, more ambitious climate change target will apply from 2021 to 2030, and will be more challenging to achieve than past emission reduction obligations.



The strengthening international response to climate change is likely to increase constraints on emissions, making emissions-intensive practices more expensive. Gradually transitioning to a low emissions economy will ensure that we can seek competitive advantages and manage costs from these changes. Reducing our dependence on imported fossil fuels and vulnerability to potentially high future carbon prices will build resilience in our economy. This will support producers to meet changing consumer preferences for goods with smaller environmental footprints.

In this context, the New Zealand economy needs to continue the transition to a low emissions economy. The New Zealand Emissions Trading Scheme (NZ ETS) is New Zealand's main tool for reducing emissions and will play an important role in this, although other measures will also be needed. The Government is already heavily investing in research and development and assessing what other policies will be needed.

Reviewing the NZ ETS means we can ensure the scheme is well placed to support this transition and that, as far as practicable, costs of emissions are borne by polluters. The NZ ETS has successfully assisted New Zealand to meet previous obligations, and we are on track to meet our 2020 target. A more ambitious 2030 target, and a carbon-constrained future, mean the investment decisions we make today need to take into account the costs and benefits that will apply to these investments in five or ten years' time.

To do this, New Zealand firms and households need to have greater confidence in NZ ETS policy settings now and in the future. Households should be able to assess what future fuel and electricity costs may be when purchasing a new car or home heating, while firms should be able to assess what the future cost of emissions may be before investing in equipment or deciding whether to plant trees. A key role for this review is to help build this confidence.

As an economy-wide tool, decisions to improve the effectiveness of the NZ ETS must take account of our economic, social, environmental and cultural needs. Through this review we want to hear from a range of New Zealand businesses and sector interests, because we recognise that many organisations, including iwi and Māori entities, hold interests across multiple sectors, and are impacted in different ways.

Consultation is critical to shaping the evolution of the NZ ETS. The nature of the NZ ETS means a wide range of businesses and firms participate in the scheme, and the impacts of any changes will extend to non-participating businesses and households. The questions in this document ask you to consider your needs now and in the future, and provide us with evidence to help inform decisions.

I urge you to carefully consider the issues raised and provide your input. It is in all of our interests that the NZ ETS helps New Zealand achieve our climate change goals, while strengthening the competitiveness of our economy.

A handwritten signature in black ink, appearing to read 'Tim Groser', with a horizontal line above it.

The Honourable Tim Groser
Minister for Climate Change Issues

1 Introduction to the New Zealand Emissions Trading Scheme Review

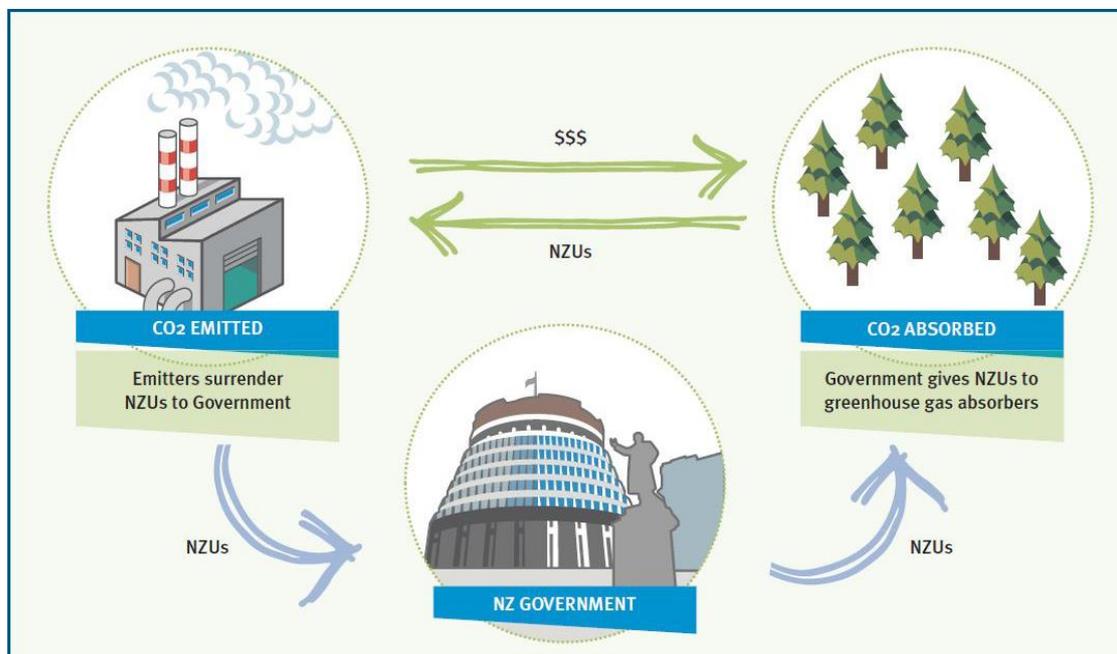
1.1 Background to the New Zealand Emissions Trading Scheme

The New Zealand Emissions Trading Scheme (NZ ETS) is the Government's principal policy response to climate change. Its objective is to support and encourage global efforts to reduce greenhouse gas emissions by:

- assisting New Zealand to meet its international obligations
- reducing New Zealand's net emissions below business as usual levels.

The NZ ETS requires all sectors of New Zealand's economy to report on their emissions and, with the exception of agriculture, purchase and surrender emission units to the Government for those emissions. This price on emissions is intended to create a financial incentive for investment in technologies or practices that reduce emissions, and for carbon removals from forestry by allowing eligible foresters to earn New Zealand Units (NZUs) as their trees grow and absorb carbon. Just over half of New Zealand's greenhouse gas emissions are now covered by NZ ETS surrender obligations. Further detail on how the NZ ETS prices emissions and creates a market for them can be found at www.climatechange.govt.nz.

Figure 1: The basic concept of the NZ ETS



Since the NZ ETS came into effect in 2008, several adjustments have been made to its operation. Through formal reviews undertaken in 2009 and 2011, a transitional phase to moderate the initial impacts of the NZ ETS during the worldwide economic downturn was implemented and then extended.

Due to this transitional phase, measures are in place that:

- allow non-forestry participants to surrender only one emission unit for every two tonnes of emissions
- provide participants with the option to buy NZUs from the Government for a fixed price of \$25, limiting the potential costs faced by emitters
- indefinitely delay the introduction of surrender obligations for the agriculture sector
- indefinitely delay reductions in the level of free allocation of NZUs to protect the competitiveness of businesses involved in emissions-intensive and trade-exposed activities.

More recently, the NZ ETS moved to being a domestic-only scheme in June 2015. This change was announced in 2013, when the Government decided that international units would no longer be accepted for surrender.

1.2 The 2015/16 NZ ETS review

This review of the NZ ETS is being carried out to assess the operation and effectiveness of the NZ ETS to 2020 and beyond, to:

- I. ensure that the NZ ETS helps New Zealand to meet its international obligations cost effectively
- II. ensure the New Zealand economy is well-prepared for a strengthening international response to climate change, and potentially higher carbon prices
- III. allow the NZ ETS to evolve with these changing circumstances, and particularly with respect to the framework provided by the new climate change agreement.

To do this, the review will focus on three key areas:

- the transition measures, with the exception of surrender obligations for biological emissions from agriculture
- the evolution of the NZ ETS design, taking into account the changing conditions in which it operates
- operational and technical improvements.

The review's Terms of Reference sets out its scope, timeframes approach to consultation, and factors that will have to be balanced in making any conclusions or recommendations. The Terms of Reference is attached at Appendix 1. The review will be led by the Ministry for the Environment, supported by other government agencies, and the results of the review will be incorporated into advice to Ministers on recommended changes to the operation of the NZ ETS. The Government may also publish a report on the review's key findings and the future direction of the NZ ETS.

Biological emissions from agriculture

Biological emissions from agriculture make up almost half of New Zealand's total emissions. The Government considered whether to introduce surrender obligations for the agriculture

sector as part of the last review of the NZ ETS in 2011, and at that time it indicated that the sector would have surrender obligations in the NZ ETS only if:

- there are economically viable and practical technologies available to reduce emissions
- our trading partners make more progress on tackling their emissions in general.

While there has been some progress towards meeting these conditions, they have not yet been met and therefore the issue is not being considered as part of this review.

The Government, however, continues to invest in research and development to identify new options to reduce agricultural emissions. Our key initiatives include:

- establishing the New Zealand Agricultural Greenhouse Gas Research Centre
- leading international efforts to help all countries reduce their agricultural emissions through the Global Research Alliance on Agricultural Greenhouse Gases
- ongoing collaboration with the agricultural sector through the Pastoral Greenhouse Gas Research Consortium.

This investment has identified a number of possible practical solutions including:

- identifying sheep and cattle that emit less methane due to their genetic makeup
- improved feed that results in fewer emissions
- a vaccine or inhibitor to reduce methane emissions from animals
- better nitrogen management including nitrogen inhibitors
- increasing the amount of carbon stored in soils.

These solutions have potential, but require further research and investigation before they can deliver results on New Zealand farms. For example, while a vaccine to reduce methane emissions is being developed, significant further work is required before it could be ready for market. Scientists estimate that some of these technologies may become commercially available over the next 10 to 20 years. As this occurs, the Government and the sector will need to consider how best to facilitate their adoption, for example through voluntary action, pricing emissions, or through setting standards or regulation.

This discussion document

This discussion document sets out the issues on which the Government wishes to consult with stakeholders as follows:

- Section 1 outlines the NZ ETS and the objective of this review
- Section 2 describes the context and drivers for the review
- Section 3 identifies the priority issues for consideration in the short term
- Section 4 outlines the other issues for consideration over the medium term
- Section 5 provides information on the process for stakeholders to provide their written submissions
- Section 6 summarises the consultation questions

- Appendix 1 provides the Terms of Reference for the review, setting out its scope, timeframes and approach to consultation
- Appendix 2 provides further information on the potential impacts of moving to full surrender obligations.

Further technical material and other opportunities to provide input

We will also be releasing technical notes on specific matters. These will provide further detail and analysis to help inform your input into the review. At this stage we anticipate that technical notes will cover the following issues, although further issues needing technical exploration may be identified as the review progresses:

- modelling the impacts of the priority issues outlined in the document
- forestry sector matters, including accounting methodologies for post-1989 foresters
- operational and other technical matters.

Officials carrying out the review also intend to meet with stakeholders representing a range of interests, such as iwi, the forestry sector, energy users, businesses, and non-governmental organisations (see section 5 on how to make your submission for further information).

Have your say

We are seeking written submissions on the questions asked in this document. There are two timeframes for submissions on the issues outlined in this document:

Priority issues – submissions close 19 February 2016

There are two linked priority issues to be considered. These are both associated with transitional measures, introduced to moderate NZ ETS costs while the scheme was new and the economy recovered from the global financial crisis. These issues have an earlier deadline, as they may be candidates for legislative change in 2016.

- moving to full surrender obligations
- managing the costs of moving to full surrender obligations.

Other matters – submissions close 30 April 2016

We have identified a number of other matters on which input from NZ ETS participants, other stakeholders and the public will help with consideration of the future direction of the NZ ETS, including:

- business responses to the NZ ETS
- protecting competitiveness through free allocation
- managing unit supply, including issues related to forestry, international units and selling NZUs by auction
- managing price stability
- operational and technical matters

- addressing barriers to the uptake of low emissions technologies.

These issues require further analysis before potential solutions or approaches can be identified and considered. On some issues, the review may need to take into account developments connected with the new climate change agreement.

For all of the issues outlined in this document, your feedback is critical. Where possible, please provide additional comment and/or evidence to support your responses.

2 Context and drivers for the review

The Government sees four key drivers for reviewing the New Zealand Emissions Trading Scheme (NZ ETS):

- improving performance of the NZ ETS against its objectives
- preparing for a more carbon-constrained future
- increasing certainty about future policy settings
- managing banked emissions units.

2.1 NZ ETS performance against objectives

The statutory purpose of the NZ ETS is to support and encourage global efforts to reduce greenhouse gas emissions by:

- assisting New Zealand to meet its international obligations
- reducing New Zealand's net emissions below business as usual levels.

To date, the NZ ETS has met the first objective. It has successfully helped New Zealand to meet its first commitment period target under the Kyoto Protocol, and has put us on track to meet our current emission reduction target to 2020. This was achieved at a low cost, in part because many participants purchased international units to meet their obligations. These units have helped the Government to meet our international emission reduction targets.

The second objective will become increasingly important for New Zealand's transition to a low emissions economy. It reinforces progress on the first objective, as domestic action will help New Zealand to meet its international obligations. It is difficult to determine whether past emissions reductions were due to the NZ ETS, or to other factors such as the global financial crisis or drought. What is clear is that the impact of the NZ ETS on New Zealand's emissions has varied over time as prices have fluctuated. While price changes are expected in a trading scheme, they have been greater than many expected.¹

From 2011, the very low price of international units reduced the price incentive for businesses to invest to reduce their emissions in New Zealand. When prices were higher however, the price incentive did impact decision-making. In the forestry sector, decisions on deforestation, and to a lesser extent new planting, have corresponded to price fluctuations. Some participants have recently indicated that the NZ ETS is not affecting their investment decisions, due to current low carbon prices and the effect of the transitional measures. In some cases, these firms could be relying on continued protection from full NZ ETS emissions obligations in the medium-to-long term. Projections indicate that New Zealand's current policy measures, of which the NZ ETS is the main instrument, will have little impact on gross emissions in the future if current settings continue.

¹ Carbon prices in the NZ ETS were as high as \$20 in 2010/11, dropped to around \$0.20 in 2013/14, and are now around \$7.

2.2 Preparing for a more carbon-constrained future

The Government considers the NZ ETS should help firms prepare for the future by encouraging long-term plans that take into account full responsibility for emissions and potentially higher future carbon prices.

New Zealand's new 2030 target is more ambitious than previous obligations. There will be costs achieving it, and as far as possible, these costs should fall on those responsible for the emissions rather than the general taxpayer. A key role of the NZ ETS is to transfer these costs to emitters.

Meeting the 2030 target will require a mixture of domestic emissions reductions, carbon removals from existing and new forests, and the purchase of international carbon credits. Given New Zealand's relatively costly domestic abatement options, international carbon credits are likely to play an important role, and it is likely that the NZ ETS will re-open to international units in the 2020s.

The nature and stability of international carbon markets in the future is uncertain. Prices may remain low if technological developments and broad international participation promote stable, well-functioning carbon markets with relatively low priced and liquid units. It appears more likely that prices for international emission reduction units will be higher than to date. Increased global ambition, with all countries taking action on climate change, is likely to increase demand for these units, and could exhaust the cheaper abatement options. A third possibility is that if most countries prioritise domestic efforts to reduce emissions, international carbon markets could suffer from limited buyers and sellers, resulting in a thin, illiquid market with volatile prices.

It is very difficult to predict by how much and at what rate international carbon prices might increase in future, and it is likely that carbon prices will continue to vary by country, due to different abatement opportunities and policies. Nevertheless, market commentators and experts are expecting carbon prices to increase up to and throughout the 2020s.² For example, Thomson Reuters estimates that the price of carbon in the European Union (EU) will reach around NZ\$25 per tonne by the end of 2020.³ The International Energy Agency is using increased carbon prices of NZ\$57 per tonne for the EU in 2030 and NZ\$35 per tonne for China in 2030 in its most recent scenarios of energy markets and climate policies based on countries' current and announced policies, including intended post-2020 targets.⁴ Modelling collated by the Intergovernmental Panel on Climate Change (IPCC) also estimates that to meet the global goal of limiting temperature increases to within 2 degrees, average global carbon prices are required to be in the range of around NZ\$90–\$178 per tonne over the 2020s.⁵

² All figures have been converted to year-2014 New Zealand dollars.

³ Estimate sourced from Carbon Pulse. Retrieved from www.carbon-pulse.com/poll-analysts-raise-eu-carbon-price-estimates-big-jump-for-2018-2020/ (26 October 2015).

⁴ IEA. 2015. *World Energy Outlook 2015*. Retrieved from www.worldenergyoutlook.org/ (13 November 2015).

⁵ IPCC. 2014. *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Retrieved from www.ipcc.ch/report/ar5/ (26 October 2015).

Firms and households need to prepare for the possibility of these increasing prices, especially when making decisions that will be affected by the cost of emissions far into the future. For instance, the pros and cons for planting forests or investing in some types of electricity generation depend on the cost of emissions after 2020. If these decisions are made without taking into account reasonable predictions about the future cost of emissions, firms and households may face unexpectedly high costs in the 2020s.

Firms should already be planning for this future. Some firms certainly have robust plans to manage carbon risks in their businesses. For example, some companies have set emissions reduction goals and actively identify opportunities to use less carbon-intensive fuels. It is also encouraging that no new fossil fuel electricity generation is currently planned.

On the other hand, there are indications that some other businesses are investing in emission-intensive assets that will be more vulnerable to increasing carbon prices. This could be because firms and households are not able to make informed choices about long-term issues due to the uncertainty of future carbon prices, or of what their future emissions obligations may be. 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.

2.3 Increasing certainty about future policy settings

Increasing certainty around future policy settings in the NZ ETS could make it easier for firms and households to plan for the future. In the short term, the most important thing that the Government can do to improve certainty around the NZ ETS is to make clear decisions on if, when, and how, transitional measures will be phased out, and whether selling New Zealand Units (NZUs) by auctioning will be introduced.

Over the medium-to-long term, decisions on a number of other NZ ETS policy settings may be needed once the rules of the new climate change agreement have been agreed. While the agreement is expected to be signed this year, much of the detail underpinning it may be agreed over the next few years. This is especially the case for the land sector, where different rules may apply forestry emissions accounting. If the rules after 2020 are different to those in place currently, whether to devolve them into the NZ ETS would need to be carefully considered and assessed. Developing a plan for how to do this over the coming years will be important.

2.4 Managing banked emission units

There is a substantial number of banked NZUs owned by market participants, which combine with current ETS settings to weaken the effectiveness of the NZ ETS to assist New Zealand to meet its international obligations. It also presents a fiscal risk that the Government wants to mitigate, as units carried forward by participants into the 2020s will be eligible for use in the NZ ETS, but will not count towards meeting New Zealand's 2030 target. This presents a fiscal risk as the Government and taxpayers may have to bear the cost of purchasing international units to meet the target, rather than emitters.

This stockpile of banked NZUs amounts to around 140 million units. This is several times the total number of units surrendered under current NZ ETS settings each year, which typically

amounts to less than 30 million units. Some of these units are held by foresters, who banked the NZUs they received as their trees grew. Other participants banked units they received via one-off allocations when the NZ ETS was first put in place, or accumulated NZUs by surrendering cheaper international units to meet their obligations and banking NZUs they purchased or received from the Government.

These banked units will be a source of supply for participants over the next few years, given:

- international units are no longer accepted for surrender
- the annual supply of new NZUs from removal activities (such as forestry) and freely allocated NZUs is smaller than participants' annual demand for units.

Given the large volume of these units in the market, they may also reduce market volatility.

Carrying forward some banked units is necessary and to be expected, given foresters' need to manage NZ ETS obligations over long forestry harvest cycles. However, if too many of these units remain in circulation and current NZ ETS settings continue, they will hinder the ability of the NZ ETS to pass on the responsibility for reducing emissions or purchasing international credits to the firms or individuals generating the emissions.

Questions

1. Do you agree with the drivers for the review? **Yes/No/Unsure**
2. What other factors should the Government be considering in this NZ ETS review?

3 Priority issues

This section covers two linked issues that we have identified as priorities for consideration:

- moving to full surrender obligations
- managing the costs of moving to full surrender obligations.

Submissions on these matters close on 19 February 2016.

These issues have an earlier deadline as they may be candidates for legislative change in 2016.

3.1 Moving to full surrender obligations

The one-for-two surrender obligation allows participants from the liquid fossil fuels, industrial processes, stationary energy and waste sectors to surrender one unit for every two tonnes of emissions (ie, a 50 per cent surrender obligation). This means that these participants do not face a full obligation for their emissions. As a result, the effective carbon price they pay is half the unit price. For example, with a New Zealand Unit (NZU) price of \$7, these emitters pay an effective carbon price of \$3.50 for each tonne of emissions, with a maximum effective carbon price set at \$12.50 due to the \$25 fixed price surrender option.

The one-for-two surrender obligation was introduced in 2009. It was designed as a transitional measure, to moderate the initial impacts of the New Zealand Emissions Trading Scheme (NZ ETS) on businesses and households during the economic downturn in New Zealand. In 2011, the one-for-two surrender obligation was considered as part of the NZ ETS Review, and the Review Panel recommended that it be phased out over three years. However, the Government chose to maintain the one-for-two surrender obligation, due to the ongoing impacts of the global financial crisis on New Zealand businesses and households.

Why is change being considered?

There is now a strong rationale for participants from the liquid fossil fuels, industrial processes, stationary energy and waste sectors to take full responsibility for their emissions, as circumstances have now changed. The NZ ETS has been in place since 2008 and most sectors have been in the scheme since 2010. The New Zealand economy has made a solid recovery since the 2008/09 recession, which was shallow compared to other advanced economies, and there has been moderate but sustained growth over recent years.⁶

Moving to full surrender obligations would increase the incentive to reduce emissions, and give businesses greater certainty when making investment decisions. This could promote better planning, especially for decisions related to long-lived assets that will be affected by potentially higher costs of emissions in future. It would also improve the scheme's ability to transfer costs to emitters and help New Zealand efficiently meet its international obligations in the 2020s by increasing demand for banked units.

⁶ As noted in the Treasury's [New Zealand Economic and Financial Overview 2015](http://www.treasury.govt.nz/economy/overview/2015) (published in April 2015), www.treasury.govt.nz/economy/overview/2015

Options

We want to assess whether the liquid fossil fuels, industrial processes, stationary energy and waste sectors should move to full surrender obligations. There are two broad options when considering the one-for-two measure:

- 1 maintaining a 50 per cent surrender obligation indefinitely, or until a specified future time when it will be reviewed
- 2 moving to full surrender obligations by removing the one-for-two transitional measure. The timing for this would have to be considered, and at the earliest could occur from mid-2016.

Implications

If the status quo is maintained, the one-for-two surrender obligation will continue to protect firms from facing obligations for all their emissions. The effective carbon price would continue to be half the NZU price, and demand for units within the NZ ETS would remain relatively unchanged. The NZU price would be likely to increase gradually over time as the amount of banked units reduces to a maximum effective carbon price of \$12.50.

If the NZ ETS moved to a full surrender obligation, demand for units would double. Costs to NZ ETS participants would increase through two effects:

- 1 The effective carbon price faced by non-forestry participants would double as a result of a doubling of their surrender obligations
- 2 NZU prices would rise more quickly than they would otherwise, because increased demand for units would use up the stockpile of banked NZUs more quickly.

This would result in:

- increased incentives to reduce emissions now and in the future
- greater incentives to invest in removals from forestry
- increased costs to participants, with flow-on implications for non-participating firms, households and the wider economy
- a faster decrease in the number of banked NZUs, mitigating the Government's potential fiscal risk in the 2020s.

The scale of these impacts depends partly on the carbon price, but it is very difficult to predict future carbon prices. A sense of potential impacts on participants and households is provided in Appendix 2. Modelling is also being undertaken to assess impacts on emissions and on the wider economy. We expect this modelling to be completed and released in early 2016.

It should be noted that if the one-for-two surrender obligation is removed, the amount of free allocation provided to emissions-intensive and trade-exposed activities will automatically be increased to correspond with the increased surrender obligation.

3.2 Managing the costs of full surrender obligations

If the liquid fossil fuels, industrial processes, stationary energy and waste sectors move to full surrender obligations, there will be increased costs to participants and the wider economy.

The Government wants to ensure the benefits from moving to a full surrender obligation are balanced with keeping the costs from this change manageable in the short term. There are two avenues to manage costs:

- gradually moving to a full surrender obligation
- adjusting the existing \$25 fixed price surrender option.

The \$25 fixed price surrender option allows businesses to surrender an NZU by paying the Government \$25 per unit. It was established as a transition measure in 2009 to protect firms and the economy from price spikes or excessive costs. It acts to cap the maximum carbon price in the NZ ETS, and in combination with the one-for-two surrender obligation, it currently ensures that the maximum effective carbon price any non-forestry participant will face is \$12.50 per tonne.

The \$25 fixed price surrender option was considered in the last review of the NZ ETS in 2011. At that time the Review Panel recommended that it be retained, but increased in steps up to \$50 by 2017 to incentivise emissions reductions. Given uncertainties about the future of international carbon markets, the Government decided in 2012 to keep the fixed price surrender option at \$25.

Managing price stability over the medium-to-long term is also important. See section 4.4 for further discussion of this issue.

Options

There are three broad options when considering how to manage costs if the NZ ETS moves to the full surrender obligations for the liquid fossil fuels, industrial processes, stationary energy and waste sectors:

- 1 maintain the \$25 fixed price surrender option, which limits the extent of possible NZU price rises from removing one-for-two surrender obligation
- 2 lower the \$25 value if the potential costs of keeping it at \$25 are considered too high
- 3 gradually move to full surrender obligations, whereby the surrender obligation faced by participants increases incrementally over time.⁷

Any option related to the \$25 fixed price surrender option could be combined with a plan to increase the fixed price value in future.

⁷ The 2011 Review Panel recommended scale up to full surrender obligations progressively over three years, increasing at equal intervals per annum. The recommended increases were to 67 per cent in year one, which would require participants to surrender two eligible emission units for every three tonnes of emissions; then to 83 per cent or five eligible emission units for every six tonnes of emission in year two; and to 100 per cent in year three.

Implications

When considering these options, the following factors will need to be taken into account:

- the increased cost of emissions from moving to full surrender obligations would increase incentives to invest in emissions reductions
- the increased NZ ETS costs to firms, households and the wider economy resulting from the doubling of surrender obligations and increasing NZU prices
- whether and to what extent lowering the \$25 fixed price surrender option may:
 - decrease incentives to invest in removals from forestry and emissions reductions
 - decrease demand for banked NZUs
 - align carbon prices in New Zealand towards international carbon prices in the 2020s.

Appendix 2 contains information on the potential impacts on participants and households of increasing carbon prices. Modelling is also being undertaken to assess impacts on emissions and on the wider economy. We expect this modelling to be completed and released in early 2016.

Questions

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**
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.
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.

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**

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.

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

4 Other issues

Input from New Zealand Emissions Trading Scheme (NZ ETS) participants, other stakeholders and the public on the matters in this section will help determine the future direction of the NZ ETS. These matters include:

- business responses to the NZ ETS
- protecting competitiveness through free allocation
- managing unit supply, including issues related to forestry, international units and selling New Zealand Units (NZUs) by auction
- managing price stability
- operational and technical matters
- addressing barriers to the uptake of low emissions technologies.

These issues need further analysis to identify potential solutions or approaches for consideration. On some issues, the review may need to consider developments connected with the new international climate change agreement.

Submissions on these matters close on 30 April 2016.

4.1 Business responses to the NZ ETS

As outlined in section two on the context and drivers for this review, the NZ ETS may not be encouraging businesses enough to plan for a more carbon-constrained future. Uncertainty about future carbon prices and about NZ ETS policy settings may also be contributing to this. There is currently limited information available to the Government on how businesses are making plans and decisions.

Many businesses and groups have interests across NZ ETS sectors, and are also affected by pass-through costs. For example, an iwi organisation may have to balance a forestry portfolio with other business interests, while still considering the impacts the NZ ETS will have on households and individual iwi members. These groups must make trade-offs between their different needs and the desired economic, environmental, social and cultural outcomes when planning.

Because of this, we are seeking views from a range of New Zealand businesses and sector interests, including iwi and Māori organisations. We are interested in your thoughts on how businesses incorporate the NZ ETS and carbon prices into their planning, and will use this information to inform the Government's thinking on the future direction for the NZ ETS.

Questions

9. Do you consider the future cost of emissions in your business planning? **Yes/No**
If yes, how do you do this?
10. What would improve your ability to take into account the future cost of emissions in your business planning?

4.2 Protecting competitiveness through free allocation

The Government allocates NZUs to particular activities to prevent NZ ETS costs from affecting international competitiveness, and to prevent the relocation of production to countries that do not have carbon pricing (this is sometimes called ‘carbon leakage’). The Government supports keeping the free allocation regime in place until at least 2020. Carbon pricing is still not widely applied in economies that New Zealand competes with internationally, so some competitiveness risks may remain. However, a lack of clarity about the future of the free allocation regime may be a source of regulatory uncertainty. As a result, we are interested in views on:

- what future conditions would warrant reducing the rates of free allocation
- when these circumstances are likely to arise.

The free allocation of NZUs is designed to protect the competitiveness of firms engaged in activities that are both emissions intensive and trade exposed (EITE). These firms faced cost increases as a result of the introduction of the NZ ETS, but are unable to pass those costs on without risking their international competitiveness. Examples of highly EITE activities that qualify for free allocation include the production of lime, aluminium, iron and steel. Moderately EITE activities also receive an allocation, such as production of capsicums, cucumbers, protein meal and whey powder. Allocation rates are set to compensate firms for most, but not all, of their expected costs from the NZ ETS.⁸

Firms receiving a free allocation still face an incentive to reduce their emissions. They still have NZ ETS costs for a proportion of the emissions stemming from the EITE activities, and reducing their emissions may allow them to benefit from selling NZUs allocated to them.⁹

Allocation rates are tied to the one-for-two surrender obligation, so the number of units recipients receive would increase proportionately if this was removed or phased out. Free allocation each year amounts to around five million NZUs, which is relatively low compared to total annual unit surrenders (which are typically around 30 million) and to the amount of free allocation in some overseas emissions trading schemes¹⁰.

⁸ Current allocation rates are 90 per cent for highly EITE activities and 60 per cent for moderately EITE activities.

⁹ The number of NZUs allocated is calculated on production rates, with recipients allocated a fixed number of NZUs based on average levels of emissions for an activity. If these firms reduce their emissions while maintaining production levels, they will have extra NZUs, which they can sell.

¹⁰ For example, as of 2013 around 60 per cent of units in the EU ETS were allocated, and the Korean ETS provides 100 per cent free allocation to all participants in its first implementation phase over 2015-2017.

Questions

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

4.3 Managing unit supply

We seek your views on how the supply of units into the NZ ETS should be managed up to and beyond 2020.

The NZ ETS was designed to be linked to international carbon markets, particularly to the Kyoto Protocol flexibility mechanisms. However, The NZ ETS stopped accepting international units from June 2015, transitioning it to a domestic-only scheme.

This means that new unit supply to the NZ ETS comes from two main sources:

- NZUs transferred to forest owners for carbon removal activities
- the Government's annual free allocations for EITE industry activities.

The quantity of NZUs provided each year through these sources is less than the amount participants need to meet emissions obligations each year. As discussed earlier, there are a large number of NZUs banked in private accounts that can make up the shortfall, at least in the short term. These banked units will eventually deplete, particularly if the one-for-two surrender obligation is removed. This means that how the NZ ETS should be supplied with units in the medium-to-long term needs to be considered, including the relationship among potential sources of supply such as forestry, international units, and selling NZUs by auction.

Forestry

Carbon removals from forestry are one of New Zealand's largest and most cost-effective domestic abatement options. The Government wants to identify any changes to the NZ ETS that could help increase the rate of forest planting.

Forestry is a significant industry in New Zealand, and an important part of the Māori economy. The NZ ETS is intended to encourage carbon removals through forestry by incentivising afforestation and re-planting, and discouraging deforestation. The forestry sector has played a key role in New Zealand meeting its past international obligations, and will continue to do so into the future.

Forests are classified differently under the NZ ETS depending on when they were first established. Owners of forests established after 1989 can voluntarily choose to participate in the NZ ETS and receive NZUs for the carbon removed by their trees. Owners of forests established prior to 1990, on the other hand, must participate in the NZ ETS and surrender emission units, but only if they deforest their land.¹¹

¹¹ For more information on how forestry works in the NZ ETS, visit www.climatechange.govt.nz

The impact of the NZ ETS on the forestry sector has varied over time. Between 2008 and 2011, when NZU prices were higher (in the range of \$15–\$20), post-1989 forestry participation in the NZ ETS reached a high of around 60 per cent of the estimated area of eligible forest. Participation is currently lower, at about 45 per cent. This reduced participation rate is likely to be due to a fall in NZU prices, regulatory uncertainty and, until May 2014, a number of participants choosing to deregister from the NZ ETS using low cost international units.

Afforestation in New Zealand peaked in the 1990s, and then declined to 2008 due to perceptions of low forestry profitability, the cost of purchasing land, and returns from competing land uses. The introduction of the NZ ETS and an NZU price of \$15–\$20 temporarily (until 2012) created an increased incentive for afforestation. However, the carbon price has since fallen and present afforestation rates are lower.¹² For pre-1990 forests, ongoing deforestation of approximately 3000–5000 hectares per year is expected to continue if the carbon price remains at current levels, all other things being equal.¹³

NZ ETS incentives to afforest or to avoid deforestation are partially linked to the price of emission units. Any changes to demand in the NZ ETS will affect NZU prices. Aspects of the NZ ETS other than NZU prices are also important in incentivising forestry activities and encouraging foresters' participation in the scheme. These include regulatory certainty and confidence in the stability of the NZ ETS.

Questions

13. How does the carbon price impact your forestry investment decision-making?

In your answer, we are interested in the:

- a) extent to which the NZU price impacts decisions, compared to other factors
- b) impacts of the current price, and of your expectations for future prices.

14. Are there opportunities for the NZ ETS to increase incentives for forestry investments, outside of NZU price? **Yes/No/Unsure**

15. What are your reasons for the above answer? If you answered yes, we would be interested in comments on:

- a) any barriers to participating in the NZ ETS that could be reduced
- b) other factors.

¹² Afforestation was 4,500 hectares in 2013, as reported in New Zealand's Greenhouse Gas Inventory 1990–2013 www.mfe.govt.nz/climate-change/reporting-greenhouse-gas-emissions/nzs-greenhouse-gas-inventory

¹³ From MPI's 2013 and 2014 Deforestation Surveys www.mpi.govt.nz/news-and-resources/statistics-and-forecasting/forestry

International units

Due to our national circumstances, New Zealand has fewer low-cost options to reduce our domestic emissions compared with other developed countries. Access to international abatement through the opportunity purchasing international emission reduction units and counting them towards our target allows New Zealand to take more ambitious emission reduction targets. From the perspective of mitigating climate change, emission reductions achieved anywhere in the world will ultimately benefit all countries. Linking the NZ ETS with international carbon markets means New Zealand businesses face similar costs for emission reductions to those faced in other countries. This is why the NZ ETS has accepted international units in the past, and will likely accept international units in future.

While international units are of critical importance for New Zealand meeting its international climate targets, they have also contributed to challenges in the NZ ETS. Until June 2015, NZ ETS participants had no limit on the number of international units they could import and surrender. This contributed to a significant drop in the value of NZUs, as the majority of units available on the international market were available at much lower cost, and reduced incentives for carbon abatement in New Zealand. The high number of international unit surrenders contributed to the creation of the stockpile of banked NZUs, and was one of the reasons why the Government decided that from June 2015 the NZ ETS would only accept NZUs for surrender, becoming a domestic-only scheme.

Given the importance of international abatement for meeting our 2030 target, the Government is likely to consider making international units eligible in the NZ ETS once again. This will require assessment of whether to place any limits on the use of international units, and of whether and how to balance the tension between providing access to lower cost abatement while promoting stable development of the carbon market in New Zealand, particularly given that international carbon markets may remain volatile for some time.

Question

16. If international units are eligible for NZ ETS compliance in the 2020s, should any of the following restrictions be placed on their use?
- restrictions on where units can be sourced from (location of and/or types of projects)
 - restrictions on how many units can be surrendered
 - others (please explain).

Auctioning

We are interested in your views on whether selling NZUs by auction should be introduced and what the role or purpose of auctioning should be. Auctioning mechanisms are part of several overseas emissions trading schemes, and there are provisions in the NZ ETS legislation that allow for the introduction of an auctioning mechanism.

In emissions trading schemes overseas, auctioning mechanisms are primarily used as a way to efficiently distribute units to participants and ensure the number of units circulating reflects the emissions cap on the scheme and/or the national emissions reduction target. They can also be used to influence unit prices by controlling the supply of units.

Auctioning was not part of the original NZ ETS design. In 2012 the NZ ETS legislation was amended to allow the Government to make regulations to sell NZUs by auction, within an overall limit on NZUs that would determine how many units could be auctioned each year. This limit could be used to align the supply of non-forestry NZUs in the NZ ETS more closely with our international target. Auctioning could also be used to influence NZU prices, by providing more units to the market or through using features such as reserve prices.

The large number of banked NZUs means that there is enough unit supply to allow participants to meet NZ ETS surrender obligations in the near future. This weakens the case for the Government selling NZUs by auction in the short term, particularly as it could risk increasing the stockpile of banked units. However, in the medium-to-long term it could be used to better align the NZ ETS with our climate change targets.

Implementing a mechanism to sell NZUs by auction would be a major design change to the NZ ETS. Determining the role or purpose of auctioning is the first step for deciding whether, and how, to introduce auctioning of NZUs to the NZ ETS. This includes clarifying the role of auctioning NZUs as a source of units, taking into account other sources such as forestry, banked units, and international units, both now and post-2020.

There are other issues that also need to be considered, including how to set the NZU limit that determines the amount of units that can be auctioned each year, and detailed auction design settings. If a decision to introduce auctioning is made, we would consult on these issues before implementation. Developing an auctioning mechanism would take at least 18 months, meaning that it is a medium- to-long term prospect, rather than a short-term option.

Questions

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).

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).

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?

4.4 Managing price stability

We are interested in views on whether and how the Government should influence carbon prices in the NZ ETS over the medium-to-long term.

To limit price increases or spikes, the NZ ETS has a \$25 fixed price surrender option but it does not have a mechanism to limit price decreases. However, as seen since 2012 significant price drops are possible. This potential for price instability may reduce the effectiveness of the NZ ETS in driving investment decisions to reduce or remove emissions. An NZU price floor would protect against significant price drops, and provide businesses with more clarity on the carbon prices they may face in future. It could also:

- provide benefits to foresters, if it provides a minimum guaranteed price for forestry units at a level that incentivises afforestation
- increase the costs of participants' surrender obligations by keeping carbon prices above a certain level.

With the current design of the NZ ETS, implementing a price floor would be challenging and expensive for the Government. The simplest way to establish a price floor would be for the Government to have a standing offer to buy NZUs at the floor price. This would require the Government to purchase units.

If the Government decides to take a more active role in managing the supply of NZUs through auctioning, it may have more scope to influence the price of units. Some other emissions trading schemes have price floors implemented through reserve prices for units auctioned into the market. In New Zealand, this approach would not provide a fixed price floor for all NZUs, as there are other sources of NZU supply such as forestry, but it would ensure no auctioned NZUs are provided to the market below a certain price. It could be combined with a price cap to provide a 'price corridor' to help limit price volatility in both directions. In some other emission trading schemes, these price caps and floors are scheduled to step up over time to provide a gradually increasing range of carbon prices.

Questions

20. What impact has carbon price volatility in the NZ ETS had on your business?
 - a) minor
 - b) moderate
 - c) significant.
21. Do you think measures should be in place to manage price stability? **Yes/No/Unsure**
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).
23. What should the Government consider when managing price stability?

4.5 Operational and technical matters

The NZ ETS has now been in operation since 2008, and we continue to identify areas for improvement from an operational and technical perspective. Participants are asked to give their views on how the operational and administrative efficiency of the NZ ETS could be improved. We anticipate providing a technical note at a later stage that describes operational and technical issues that have been identified through the operation of the NZ ETS to date.

Questions

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

4.6 Addressing barriers to the uptake of low emissions technologies

The Government's main policy response to reducing emissions is the NZ ETS. However the NZ ETS alone will not drive New Zealand towards a low emissions economy. The carbon price incentive from the NZ ETS will generally encourage the efficient uptake of opportunities and technologies for reducing emissions. However in some sectors or cases, there may be other barriers or market failures that also need to be addressed. For example:

- lack of information
- high upfront costs of new technologies
- lack of infrastructure to support new technologies
- unnecessary regulatory barriers to new technologies.

Ultimately the transition to a low emissions economy will require changes that come from all sectors of the economy. Where the Government can play a useful role it has implemented policies, targets and programmes outside of the NZ ETS that will contribute to reducing emissions. These other policies are needed where there are additional barriers to adopting low carbon technology, or where the Government has a role in encouraging innovation. Key initiatives include:

- **Energy efficiency**, through investment in programmes run by the Energy Efficiency and Conservation Authority aimed at improving energy and fuel efficiency in industry and households.
- **Public and active transport**, with over \$1 billion allocated to public transport through the National Land Transport Fund, and \$100 million for cycling through the Urban Cycleways Fund.

- **Electric vehicles**, by exempting electric vehicles from road user charges until 2020.
- **Science and research**, for example, investing approximately \$10 million annually in research for new agricultural mitigation technologies through the Pastoral Greenhouse Gas Research Consortium and the New Zealand Agricultural Greenhouse Gas Research Centre.
- **Renewable energy**, through the New Zealand Energy Strategy 2011–21 and target for 90 per cent of our electricity to be from renewable resources by 2025.
- **New forest planting**, through the Government’s afforestation grant initiatives, such as the Afforestation Grant Scheme and the Erosion Control Funding Programme in the Gisborne District.

There may still be other areas where the NZ ETS will not drive the uptake of emissions reduction opportunities, even if carbon prices increase significantly. We would like your help to identify these, and on whether there is a role for Government in addressing any barriers that exist.

Please note that while this NZ ETS review may identify issues or opportunities to support emissions reductions in sectors where the impact of the NZ ETS is limited, they may need to be addressed through other processes.

Questions

26. Are there any barriers or market failures that will prevent the efficient uptake of opportunities and technologies for reducing emissions?
27. If so, is there a role for the Government in addressing these barriers or market failures and how should it do this?

5 How to make a submission

Preparing your submission

The Government welcomes your feedback on how the NZ ETS is working, and how it might work better in future. Your submissions may address any aspect of the questions outlined in this document, and you may answer some or all of the questions. To ensure your point of view is clearly understood, you should explain your rationale and provide supporting evidence where appropriate.

There are three ways you can make a submission:

- use our online submission tool, available at www.mfe.govt.nz/more/consultations.
- download a copy of the submission form to complete and return to us. This is available at www.mfe.govt.nz. If you do not have access to a computer we can post a copy of the submission form to you.
- type up or write out your own submission. With this option, we would appreciate you paying attention to the questions posed throughout this document, and clearly indicate which questions your response addresses.

Please ensure your submission addresses those questions from this document that are relevant to you, and that it contains the following contact details:

- a) the title of the consultation NZ ETS Review Consultation
- b) your name or organisation name
- c) your postal address
- d) your telephone number
- e) your email address.

If you are emailing your submission, please send it to nzetsreview@mfe.govt.nz as a:

- PDF or
- Microsoft Word document (2003 or later version).

If you are posting your submission, please send it to NZ ETS Review Consultation, Ministry for the Environment, PO Box 10362, Wellington 6143.

There are two timeframes for submissions on the issues in this document. Submissions on priority issues close on 19 February 2016, as they may be candidates for legislative change in 2016. You are welcome to make a separate submission for each of the timeframes provided. If you prefer, you may make only one submission covering both priority issues and other matters, however, for questions relating to the priority issues to be considered your submission must be received by 19 February 2016.

Submissions on **Priority issues** close 5.00 pm 19 February 2016

Submissions on **Other matters** close 5.00 pm 30 April 2016

Request for evidence-based submissions

Advice to the Government on any policy change will be based on the evidence available. Please provide evidence, analysis or data to support the points made in your submission. More weight is likely to be given to submissions that provide evidence.

Meetings with stakeholders

Officials intend to meet with stakeholders representing a range of interests (such as iwi, the forestry sector, energy users, businesses, and non-governmental organisations), both during the consultation period and after the deadline for written submissions. Officials will notify relevant stakeholders about the meeting programme directly.

Contact for queries

Please direct any queries to:

Phone: +64 4 4397400

Email: nzetsreview@mfe.govt.nz

Postal: NZ ETS Review Consultation, Ministry for the Environment, PO Box 10362, Wellington 6143

Publishing and releasing submissions

All or part of any written submission (including names of submitters), may be published on the Ministry for the Environment's website, www.mfe.govt.nz. Unless you clearly specify otherwise in your submission, the Ministry will consider that you have consented to website posting of both your submission and your name.

Contents of submissions may be released to the public under the Official Information Act 1982 following requests to the Ministry for the Environment (including via email). Please advise if you have any objection to the release of any information contained in a submission, including commercially sensitive information, and in particular which part(s) you consider should be withheld, together with the reason(s) for withholding the information.

We will take into account all such objections when responding to requests for copies of, and information on, submissions to this document under the Official Information Act.

The Privacy Act 1993 applies certain principles about the collection, use and disclosure of information about individuals by various agencies, including the Ministry for the Environment. It governs access by individuals to information about themselves held by agencies. Any personal information you supply to the Ministry in the course of making a submission will be used by the Ministry only in relation to the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry may publish.

What happens next?

After receiving submissions, the Ministry will evaluate them and may, where necessary, seek further comments. Your submission will contribute to advice to Ministers.

6 Summary of consultation questions

Context and drivers for the review

1. Do you agree with the drivers for the review? **Yes/No/Unsure**
2. What other factors should the Government be considering in this NZ ETS review?

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**
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.
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.

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

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?

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

Other issues: protecting competitiveness through free allocation

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

Other issues: managing unit supply - forestry

13. How does the carbon price impact your forestry investment decision-making?
- In your answer, we are interested in the:
- a) extent to which the NZU price impacts decisions, compared to other factors
 - b) impacts of the current price, and of your expectations for future prices.
14. Are there opportunities for the NZ ETS to increase incentives for forestry investments, outside of NZU price? **Yes/No/Unsure**
15. What are your reasons for the above answer? If you answered yes, we would be interested in comments on:
- a) any barriers to participating in the NZ ETS that could be reduced
 - b) other factors.

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).

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).
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).
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?

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.
21. Do you think measures should be in place to manage price stability? **Yes/No/Unsure**
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).
23. What should the Government consider when managing price stability?

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
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.

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

Appendix 1: Terms of Reference – New Zealand Emissions Trading Scheme Review 2015/16

Context

- 1 The Climate Change Response Act 2002 (the Act) allows the Minister for Climate Change Issues (the Minister) to initiate a review of the New Zealand Emission Trading Scheme (NZ ETS). In 2012 Cabinet agreed that the first discretionary review will occur in 2015. The Act requires the Minister to specify the terms of reference for the review.
- 2 The context for New Zealand's climate policies is changing. Several key trading partners are taking, or have announced plans to take, increased domestic action on climate change. Countries are meeting in Paris in December 2015 to establish a new international climate change agreement, under which New Zealand will be required to meet an emissions reduction target set for the period 2021-2030. New Zealand has committed to an emissions reduction target that is more stringent than past obligations. As New Zealand's main policy tool for reducing emissions, the NZ ETS will play a key part in achieving this new target.
- 3 Alongside this, the Government's Business Growth Agenda includes a commitment to improve over the next 12 months energy efficiency and use of renewable energy to raise productivity, reduce carbon emissions and promote consumer choice.
- 4 The review provides an opportunity to engage with and seek comment from the public and stakeholders to assess the performance of the NZ ETS, and consider steps necessary to ensure the scheme is fit-for-purpose. For the review to be successful, the review process will need to be robust, transparent and credible.

Objective of review

- 5 The review will assess the operation and effectiveness of the NZ ETS to 2020 and beyond to:
 - a) ensure that the NZ ETS helps New Zealand to meet its international obligations cost effectively in the 2020s
 - b) ensure the New Zealand economy is well-prepared in the context of a strengthening international response to climate change and potentially higher carbon prices in the 2020s
 - c) allow the NZ ETS to evolve with changing circumstances, particularly with respect to the framework provided by the new climate agreement that will apply after 2020.

Scope

- 6 The review will focus on the operation and design of the NZ ETS, giving particular attention to the following issues:
 - a) Transitional arrangements:

- i. Whether to maintain or adjust the ‘one-for-two’ surrender obligation.¹⁴
 - ii. Whether to maintain or adjust the \$25 fixed price option.
 - iii. Conditions and timeframes for the continuation of free allocation of NZUs to emissions intensive and trade exposed activities.
 - b) Evolution of the NZ ETS:
 - i. Whether and how the supply of units should be managed up to and beyond 2020, including the role of forestry, auctioned and international units, as well as consideration of price stability mechanisms such as price ceilings or floors.
 - ii. How the NZ ETS should adjust to the changing international framework and operating environment, including with respect to accounting approaches and international carbon markets.
 - c) Operational and technical changes to improve NZ ETS effectiveness.
- 7 The review may identify issues or opportunities that would support emissions reductions in sectors where the impact of the NZ ETS is limited. In these cases, the review may highlight other policy measures or solutions that could support the climate change mitigation potential of the NZ ETS. These measures may need to be progressed through other processes.
- 8 The review will not focus on:
- a) whether an emissions trading scheme is the most appropriate response to climate change for New Zealand
 - b) whether New Zealand should be taking action on climate change.
- 9 While there has been progress, the Government’s two conditions¹⁵ for the inclusion of surrender obligations for biological emission from agriculture have not yet been met. Therefore this issue will not be considered as part of this review of the NZ ETS. The Government continues to explore ways to enable and incentivise the agricultural sector to reduce its emissions, including by researching and developing new mitigation technologies.

Factors to be considered

- 10 In assessing the NZ ETS, the review will take into account the need to balance trade-offs associated with the following factors:
- a) achieving legislated objectives, while managing costs including competitiveness and fiscal risks

¹⁴ Under current transitional arrangements, for sectors other than forestry a full obligation does not apply as only one unit needs to be surrendered in respect of each two tonnes of emissions.

¹⁵ The Government has indicated that biological emissions from agriculture will have surrender obligations in the NZ ETS only if

- there are economically viable and practical technologies available to reduce emissions
- New Zealand’s trading partners make more progress on tackling their emissions in general.

- b) ensuring the NZ ETS drives real emissions reductions domestically and/or internationally
- c) the long-term risks and opportunities for New Zealand's economic resilience
- d) the need to balance the efficient design of the NZ ETS with the potential for it to be connected to international carbon markets;
- e) the distribution of impacts (both positive and negative) within and between sectors and groups, including Iwi/Māori
- f) administrative efficiency including transaction costs;
- g) providing increased regulatory certainty to assist with businesses' short- and long-term decision making
- h) coherence with the intent and objectives of existing New Zealand climate change policy (including the NZ ETS), and with New Zealand's international obligations.

Method

- 11 The review will be undertaken by officials from the Ministry for the Environment, with assistance from other departments, and especially the Ministry for Primary Industries; The Treasury; the Ministry of Foreign Affairs and Trade; and the Ministry of Business, Innovation and Employment. This will be underpinned by appropriate research, analysis and stakeholder engagement.

Procedure and timing for the Review

- 12 The review will begin following the announcement of these Terms of Reference. As part of the review, a public discussion document will be released on 24 November 2015. The consultation process will be conducted in two stages. Prioritised policy issues, such as the transitional arrangements, will be considered first, followed by consideration of other matters. The review will ensure that there are strong linkages between any potential short term and long term changes.
- 13 The consultation process for priority issues will run until 19 February 2016. Taking into account submissions received, initial advice will be provided to Ministers in the first half of 2016 on any short-term policy changes.
- 14 The consultation process for other issues will run until 30 April 2016. Analysis of these issues will incorporate any NZ ETS policy matters arising from the new international climate change agreement. Technical notes on specific issues may be developed and published as the review consultation progresses. Advice on these issues will be provided to Ministers in the second half of 2016, concluding the review.
- 15 The procedure and timing for the review can be varied by the Minister if the Minister is satisfied that it is appropriate, fair in the circumstances, and in accordance with these Terms of Reference.

Consultation

- 16 The input of stakeholders is important for the review's success. Public consultation will occur over December 2015 to 30 April 2016. Consultation will entail both general and targeted processes. In addition, officials will identify and involve relevant stakeholders including: iwi/Māori, local authorities, the business community, environmental groups, and the forestry and agricultural sectors.
- 17 Consultation processes will be centred on a discussion document published at the beginning of the review and technical notes published as the review progresses.

Reporting

- 18 Officials will report at appropriate intervals to the Minister on the progress of the review. The feedback from the stakeholder consultation process, and analysis produced by officials, will form the basis of advice to the Minister in the second half of 2016.
- 19 The Government may publish a report on key findings of the review and the future direction of the NZ ETS.

Alignment with other Government work

The review will be aligned with other Government work programmes, particularly the Business Growth Agenda priorities for the natural resources sector, and will take account of developments in respect of the new international climate change agreement.

Appendix 2: Potential impacts of moving to full surrender obligations

This appendix provides information about the possible impacts of moving to full surrender obligations for the liquid fossil fuels, industrial processes, stationary energy and waste sectors. It is designed to inform your feedback on the review's priority issues. It provides estimates of the impacts of increasing surrender obligations and New Zealand Unit (NZU) prices on participants, firms and households. It also provides information to illustrate how the one-for-two surrender obligation could affect supply and demand in the New Zealand Emissions Trading Scheme (NZ ETS).

NZU price impacts on NZ ETS participant costs

The price of NZUs directly impacts the NZ ETS costs faced by participants. Increases in NZU prices impact participants differently, as participants have a range of obligation sizes and strategies for how they meet their obligations. Factors influencing how participants are impacted by NZU prices include:

- 1 the size and rate of increases in NZU prices
- 2 the size of a participant's surrender obligation
- 3 a participant's ability to pass costs on to consumers
- 4 whether a participant receives a free allocation of NZUs, and the size of any allocation
- 5 a participant's emission reduction investments to date and opportunities for further emissions reductions.

Examples of how NZU price impacts on the direct NZ ETS costs faced by participants are shown in Table 1. It is important to note that participants may also face indirect NZ ETS costs as pass-through costs. This is described in the next section.

Table 1: Price impacts on participants with varying surrender obligation sizes¹⁶

Direct NZ ETS cost to participant reporting:	Effective carbon price \$5	Effective carbon price \$10	Effective carbon price \$20	Effective carbon price \$50
10,000 tonnes of emissions¹⁷	\$50,000	\$100,000	\$200,000	\$500,000
100,000 tonnes of emissions¹⁸	\$500,000	\$1,000,000	\$2,000,000	\$5,000,000
1 million tonnes of emissions¹⁹	\$5,000,000	\$10,000,000	\$20,000,000	\$50,000,000

¹⁶ In 2014, there were 119 non-forestry participants that faced surrender obligations.

¹⁷ Around 30 per cent of non-forestry participants report less than 10,000 tonnes of emissions.

¹⁸ Around 40 per cent of non-forestry participants report between 10,000 and 100,000 tonnes of emissions. Around 30 per cent of non-forestry participants report more than 100,000 tonnes of emissions.

¹⁹ Almost 10 per cent of non-forestry participants report more than 1 million tonnes of emissions.

NZU price impacts on NZ ETS pass-through costs

NZ ETS participants may pass their emissions costs on to consumers. This is primarily seen as an increased NZ ETS cost for fuel, electricity, natural gas and coal. This indirect NZ ETS cost is referred to as a 'pass-through cost'.

Actual NZ ETS pass-through costs depend on several factors, including:

- contracts between firms
- the specific type of energy consumed
- the choices of the energy producer for passing costs onto households and consumers
- whether a firm receives an allocation for emissions-intensive trade-exposed (EITE) activities.²⁰

Table 2 outlines estimated NZ ETS pass-through costs at effective carbon prices per unit of fuel, electricity, natural gas or coal used.

Table 2: Estimated NZ ETS costs passed through to energy users

Vehicle fuel users, including household consumers								
NZ ETS cost	Effective price \$5	carbon	Effective price \$10	carbon	Effective price \$20	carbon	Effective price \$50	carbon
per litre of premium 95 fuel	\$0.01		\$0.02		\$0.05		\$0.12	
per litre of regular 91 fuel	\$0.01		\$0.02		\$0.05		\$0.12	
per litre of diesel fuel	\$0.01		\$0.03		\$0.05		\$0.13	
Consumers, including households								
NZ ETS cost	Effective price \$5	carbon	Effective price \$10	carbon	Effective price \$20	carbon	Effective price \$50	carbon
per kWh of electricity ²¹	\$0.00 (< 1 cent)		\$0.00 (< 1 cent)		\$0.01		\$0.02	
per kWh of natural gas	\$0.00 (< 1 cent)		\$0.00 (< 1 cent)		\$0.00 (< 1 cent)		\$0.01	

²⁰ Firms undertaking EITE activities are protected from some of the direct and indirect NZ ETS costs. Activities that are highly EITE are protected from 90 per cent of these NZ ETS costs, while activities that are moderately EITE are protected from 60 per cent of the NZ ETS costs.

²¹ The NZ ETS pass-through cost for electricity is based on an emissions factor of 0.44t CO₂-e/MWh, which is a modification of an electricity factor included in allocation regulations. The modification is based on an assumption of short run marginal costs being fully reflected in electricity prices, reflecting changes in electricity supply expected by the Ministry of Business, Innovation and Employment and the Ministry for the Environment.

Industrial users

	Effective price \$5	carbon	Effective price \$10	carbon	Effective price \$20	carbon	Effective price \$50	carbon
NZ ETS cost								
per GJ of natural gas	\$0.27		\$0.54		\$1.07		\$2.68	
per GJ of sub-bituminous coal	\$0.45		\$0.90		\$1.81		\$4.52	
per GJ of lignite	\$0.46		\$0.92		\$1.83		\$4.58	

Table 3 provides estimates of the annual NZ ETS costs passed through to New Zealand households. The estimates are based on the annual amount of petrol, electricity and natural gas an average New Zealand household uses each year.

Table 3: Estimated annual NZ ETS costs passed through to households

Annual NZ ETS cost for an average NZ household:	Effective price \$5	carbon	Effective price \$10	carbon	Effective price \$20	carbon	Effective price \$50	carbon
Petrol ²²	\$14		\$29		\$58		\$145	
Electricity ²³	\$16		\$32		\$64		\$161	
Natural gas ²⁴ (if used)	\$7		\$14		\$28		\$70	

To provide context to the figures in Table 3, the NZ ETS currently has an effective carbon price of around \$3.50 per tonne of emissions. For the average New Zealand household this imposes an estimated annual cost of \$10 for petrol and \$11 for electricity.

The impacts of full surrender obligations on supply and demand in the NZ ETS

Removing the one-for-two surrender obligation will impact on the supply and demand of NZUs, depleting the stockpile more quickly than under current settings. Table 4 provides estimates of the number of banked NZUs remaining at the end of 2020 under two scenarios. Scenario 1 is based on 50 per cent surrender obligations continuing for liquid fossil fuels, industrial processes, stationary energy and waste sector participants. Scenario 2 is based on the introduction of full surrender obligations for these sectors from 1 January 2017. To show the impacts on future supply and demand, the figures include financial year forecasts of participant surrenders and allocations or entitlements.

This information is illustrative only, because it could be significantly affected by several factors, including the level of forestry participation in the NZ ETS, changes in surrender and allocation volumes, and the willingness of market participants to sell banked NZUs.

²² The annual NZ ETS costs for petrol for an average New Zealand household is based on a travel distance of 14,000km per year in a medium-sized car (2000–3500cc engine), using Regular 91 petrol.

²³ The annual NZ ETS costs for electricity are based on a medium-sized household using 7,300kWh per year.

²⁴ The annual NZ ETS costs for natural gas are based on average household use of 7,300kWh per year.

Table 4: Illustrative impacts on NZ ETS supply demand and banked NZUs

	Scenario 1 Continuation of 50% surrender obligation	Scenario 2 Full surrender obligation from 1 Jan 2017
Banked NZUs as of 1 July 2015	140 million NZUs	140 million NZUs
Forecasted allocations and entitlements (2015–20)²⁵	115 million NZUs	145 million NZUs
Forecasted surrenders (2015–20)²⁶	– 155 million NZUs	– 240 million NZUs
Banked units remaining end of 2020	100 million NZUs	45 million NZUs

²⁵ This is the sum of forecasted allocations and entitlements made between the 2015/16 and 2020/21 financial years. Allocations and entitlements are added to the bank of NZUs as they are supplied to the market.

²⁶ This is the sum of forecasted surrenders between the 2015/16 and 2020/21 financial years. This is the expected demand for NZUs over this period.