Ministry for the Environment
Manatū Mō Te Taiao

Development of

Industrial Allocation Regulations

under the New Zealand Emissions Trading Scheme

Summary of Submissions

New Zealand Government

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Executive Summary

Surrender obligations of the New Zealand Emissions Trading Scheme (NZ ETS) will apply to emissions from stationary energy and industrial processes from 1 July 2010. From this date, obligated firms will be required to surrender emission units to cover their emissions, reflecting New Zealand's obligations under the Kyoto Protocol. A price on emissions will start to be reflected in energy and some product prices.

The Government intends to give some emission units (called 'allocation') to firms most likely to be adversely affected by this price on emissions. This allocation will be targeted at those firms conducting activities that are both emissions intensive (with an emissions intensity over 800 tonnes of CO_2e per $million of revenue) and trade exposed (ie, to international trade which means both imported goods which are made in countries which do not have a price on carbon, and goods exported to countries that have no price on carbon).

In December 2009, the Government launched a consultation on the development of regulations for the allocation of emissions units to industrial sectors under the New Zealand Emissions Trading Scheme. The consultation document, entitled *Development of Industrial Allocation Regulations under the New Zealand Emissions Trading Scheme*:

- sought notification of instances where submitters were undertaking activities likely to be eligible for allocation
- included draft activity descriptions for review and comment
- proposed requirements for data to be submitted under Gazette notices to establish eligibility and allocative baselines.

The Government received 57 submissions in response to the consultation document (by 5 March 2010). A list of organisations and people that responded to the consultation document is included in Annex 1.

Activities proposed in the consultation document

A number of draft activity descriptions were included in the consultation document. These drafts were based on definitions developed in Australia for activities that had either been found to be eligible or were under consideration for eligibility there. Submitters were asked to indicate whether any of these activities were undertaken in New Zealand.

Submitters indicated that the following activities are undertaken in New Zealand:

Aluminium smelting	Carbamide (urea)	Carbon steel	Cartonboard
Caustic soda	Clinker	Ethanol	Glass containers
Hydrogen peroxide	Lime	Market pulp	Methanol
Newsprint	Packaging paper	Tissue	

The Government will take these activities through to the data collection stage to assess eligibility and develop allocative baselines.

Petroleum refining was included as a draft activity definition in the consultation document, and is being undertaken in New Zealand. However, this will not be progressed at this stage because the sole firm involved in the activity (the New Zealand Refining Company) already receives protection from costs from the NZ ETS through the operation of its Negotiated Greenhouse Agreement with the Government.

A number of the submitters who indicated that they were undertaking activities for which draft activity descriptions were included in the consultation paper requested changes to the draft descriptions.

Where changes were proposed, the Minister for Climate Change Issues considered the merits of the proposed changes on a case-by-case basis, referring to the matters he must have regard to in finalising activity descriptions under section 161E(1) of the Climate Change Response Act 2002. On this basis, changes were made to the following activity descriptions:

- **Carbamide (urea) / ammonia –** an integrated activity definition will be developed.
- **Cartonboard** – the activity definition will be extended to include log billets as an input, and uncoated cartonboard and sheets of cartonboard will be added as defined products in the activity definition.
- **Clinker** – will be extended to include the cement milling process and renamed; a clearer definition of 'contiguous' will be added to the description.
- **Lime –** the title of the activity will be changed to 'production of burnt lime'.
- **Market pulp (referred to as 'dry' pulp in the consultation)** – different allocative baselines will be included for the different types of pulp (high / low yield, and high / low freeness). The moisture content range of market pulp will also be extended to reflect that being produced in New Zealand.

A fuller summary of the changes suggested and the Government's analysis and decision for each activity description where changes were suggested is set out in section 2.

Proposed new activities

Twenty-seven new activities were proposed by submitters as potentially eligible for industrial allocation. Of these, preliminary data indicates the following activities meet or are very near the threshold for eligibility:

- production of clay bricks and field tiles
- production of gelatine
- production of reconstituted wood panels
- production of veneer sheets
- production of protein meal (meat by-product rendering)
- production of six new dairy products – lactalbumin, lactose, milk minerals, whey cheese, whey powder, whey protein concentrate/whey protein isolate
- rose production
- fresh capsicum production
- cucumber production
- fresh tomato production
- iron and steel manufacturing from iron sand.

Draft activity definitions will be developed for these activities in consultation with industry, following which formal data collection will be undertaken to establish eligibility and allocative baselines.

Other activities for which data indicates are likely to be far below the eligibility threshold, based on the inclusions and exclusions in the final data rules, will not be progressed further at this time.

At the time of writing, further information is being sought for a number of other activities that may or may not meet the eligibility threshold.

Electricity allocation factor

A number of submitters raised concerns about the electricity allocation factor (EAF) proposed in the consultation document of 0.52 tonnes of CO_2 per megawatt hour of electricity. The proposal in the consultation document reflected modelling work undertaken in 2008 for the Stationary Energy and Industrial Process Technical Advisory Group (SEIP TAG) on the expected increase in electricity price as a result of the introduction of the NZ ETS, and was the median of the range of outcomes. A summary of this work is available on www.climatechange.govt.nz.

Most submitters argued that the factor was too low. To support their contention, many cited analysis commissioned by the Major Electricity Users' Group (MEUG) from Professor Andy Philpott and Tony Downward of Stochastic Optimization Ltd (SOL) which suggests that because of imperfect competition in the electricity market, prices will be higher than short run marginal costs. Others noted that the modelling by SEIP TAG was based on an assumed carbon price of \$40tCO_2, whilst during the transition phase there will be an effective CO_2 price of \$12.5/tCO_2e.

The Parliamentary Commissioner for the Environment (PCE) submitted that the EAF should be lower than 0.52 NZU/MWh. She estimated the impacts on the basis of the emission intensity of the marginal (in a new-build sense) new-entrant generators, rather than by estimating the impacts on the costs of the marginal (in an operational sense) existing generators. The PCE further suggested that the extent of price impact would vary substantially by the different times of day and year. Further work commissioned by the Ministry for the Environment also suggested that the EAF may be too high.

The consultation document proposed to use a different EAF for decisions on eligibility – 1 tonne CO_2 per gigawatt hour. This is the EAF used under the proposed Carbon Pollution Reduction Scheme (CPRS) in Australia and reflects the Australian electricity mix. All submitters supported this approach, with the exception of the PCE.

The Government notes that legitimate arguments have been submitted for both higher and lowers EAFs, but the various arguments provide no clear basis for an alternative number. A number of the suggestions made to alter the EAF raise questions about the approach used, particularly the assumptions regarding perfect competition in the market, and the interaction between the key drivers of electricity prices. To explore fully the implications of these issues would require another considerable modelling exercise, and is likely to require a range of assumptions.

The Government's clear priority is to get the allocation process up and running to give industry certainty as soon as possible.

The Government believes that an EAF of 0.52 is a sufficiently robust approach for determining allocative baselines in the short term. The Government recognises that the EAF will need to be reviewed before the end of 2012, to ascertain its appropriateness beyond 2013. The Government proposes to maintain a factor of 1 NZU/MWh for determining eligibility of activities.

Revenue rules

The main issues raised were on the provision of historical financial data and calculating the market price.

Some submitters raised concerns about the impact of a commodity price 'spike' that results in the average revenues over the three historical years for which data must be submitted being significantly higher than what would be expected in future years. The impact of such a spike could result in some sectors dropping below eligibility thresholds. They argue that the Minister for Climate Change Issues has discretion to ignore data supplied that may be unrepresentative of revenues across a longer period of time. They also contrast the provisions in the Act with the proposed CPRS where firms submit data from across five years, and are able to exclude the impact of one of these years.

There were also comments on the need for certainty over the requirements for the data to be submitted, particularly the need for clarity over the use of an observable market price if sales data is not available or in situations where revenue for the historic years does not provide a realistic projection of revenue in future years.

Whilst noting the commodity price spike has had different impacts on different sectors, the Government recognises that the commodity price spike is a material issue for many sectors.

Determining the appropriate level for revenue weighting in response to the commodity price spike is not straightforward. To inform the appropriate number, officials undertook an analysis of the average commodities price spikes across the ANZ commodities index. This study applied a regression analysis and a time series projection to develop an expected price in a number of the key sectors for New Zealand; and compared the commodities index prices against the expected prices in the three historic years. This analysis provides a guide to the extent to which the price spike deviated from 'normal' prices and therefore suggests an appropriate weighting.

On balance, given the above considerations, the Minister has decided that the revenue rules should be amended to allow the actual sales price or observed market price in the historical year with the highest annual price to be weighted at a lower rate than the other two years.

On balance, it has been decided that a single weighting will apply across all activities. This will avoid risks of inequities, is consistent with the approach taken to the other data rules, ensures that the data rule is as simple to apply as possible for industry, and ensures that it is simple to validate for government. The application of the weighting will be optional. This way no activity will be penalised by a weighting approach.

To assist activities that are likely to be most impacted by the price spike, a more generous weighting of 0.7 for the highest annual price and 1.15 for the lower annual prices will be adopted.

Additionally, following an analysis of issues raised in submissions, the Government intends to revise the revenue rules to:

- clarify that multiple outputs are feasible and how to determine the appropriate treatment of co-products or by-products (Revenue Rule1)
- allow firms to choose which one of two methods to determine the quantity of output (Revenue Rule 2)
- allow firms to choose between actual sales data and an observable market price and provide an accepted list of sources for obtaining an observable market price (Revenue Rule 3).

Emissions rules

Some submitters proposed that liquid fossil fuels (LFF) and upstream emissions from the extraction/transport of coal and natural gas be included as eligible emissions sources. Some, but not all of these proposed additional emissions sources are included in the CPRS.

Submitters noted that the NZ ETS costs imposed through upstream emissions from natural gas and fugitive coal seam methane (FCSM) or LFF are no different in nature from those imposed by the proposed list of eligible emissions sources, eg, coal or natural gas use.

The objective of the industrial allocation regime is to provide transitional assistance for those activities that face the greatest competitiveness risk, by protecting them from a significant portion of the costs imposed by the NZ ETS. This does not necessarily imply compensation for all emissions sources.

As the provision of industrial allocation has a fiscal cost, it is logical for the Government to target assistance at those emissions sources that are likely to be most material for the largest number of companies. In addition, the administrative complexity of providing assistance for particular emissions sources is a relevant consideration, particularly if it is likely to impact on the ease and speed at which activities receive allocations.

Further analysis of these points is included in section 5.

On balance, the Minister intends to keep the eligible emissions sources and exclusions the same as proposed in the consultation paper (ie, excluding LFF, FCSM and upstream natural gas emissions sources). This is because:

- for the vast majority of activities, the exclusion of the proposed emissions source appears unlikely to be very material
- LFFs could be material for some activities at margins of eligibility, but this is only one of a number of factors that could impact on the eligibility of these sectors
- inclusion of LFFs and upstream natural gas would raise significant complexities with implementation regarding decisions relating to activity boundaries and fair treatment across sectors
- the fiscal costs of including LFF, FCSM and upstream natural gas emissions could be significant, potentially $21 million during the transition phase rising to $80 million per annum after 2013.

Additionally, the Government intends to add one additional rule to clarify that only emissions which face an obligation under the NZ ETS may be included. This is necessary to exclude emissions sources for which an exemption under section 60 of the Act is in force.

Some submitters argued against a number of exclusions proposed in the draft activity descriptions, which are based on those listed in section 161E(2)(b) of the Act, and are consistent with the exclusions in the CPRS. The particular exclusions raised most often by submitters were transportation elements and packaging (eg, of food or hazardous substances). The main arguments proposed by submitters were that it was difficult to accurately determine emissions from these minor sources or that the excluded emissions were 'essential' to the activity.

The list of draft exclusions listed in the consultation are consistent with those developed for the Australian CPRS. On balance, for the sake of equity between different parts of the industrial sector, to ensure that implementation of industrial allocation reflects the policy intent and to assist in developing Gazette notices in an efficient manner, the Minister for Climate Change Issues will use their discretion under the Act to consistently apply the exclusions listed in the consultation paper to all activities.

Some submitters have suggested a different interpretation of the meaning of 'direct use' of coal and natural gas from that intended by Emissions Rule 1. In particular, Solid Energy has submitted that the 'direct use' of coal should be interpreted in such a way as would allow them to count the emissions from downstream combustion of coal as direct use of coal during the proposed activity of coal mining. This is discussed in more detail in section 5 of this report.

The Government intends to provide greater clarity over the intended interpretation of this phrase to ensure there are no obstacles to eligibility decisions following the data collection stages. Emissions Rule 1 will be revised accordingly to be clear that 'direct use' means 'direct oxidation or use as a feedstock'.

Materiality

Five submissions raised concerns on materiality (Emissions Rule 11). The main concern was that because of the requirement to produce accurate estimates of emissions, they will be required to spend inordinate amounts of time to assess emissions from small and inconsequential sources. A particular concern noted was the risk that emissions estimates will be audited later and that these might result in changes to eligibility status and/or levels of allocation.

Other concerns raised included that guidance on materiality thresholds over and above which deductions are required should be provided and that reference to accounting standards or tax ruling precedents to develop such thresholds should be considered. Questions were also asked about the degree of auditing certainty required.

The Government intends to use a pragmatic approach and proposes to revise Emissions Rule 11 to reflect this. Whereas best endeavours should be used to estimate emission levels, 'simplified calculation methods' are explicitly allowed for small emission sources.

An additional rule is proposed to require disclosure of uncertainties associated with estimates of emissions and revenues. It is useful for the Government to know the level of uncertainty attached to a number so it can understand whether to spend additional time checking. It is useful for firms to be able to express this uncertainty, especially where there is a risk to them of getting the number 'wrong'.

Data preparation – general comments

Submitters made a number of comments about the data preparation, timescales and verification approach to be applied to data collection as part of the industrial allocation process.

The Minister recognises that firms will need assistance as part of the data collection process, and that this level of assistance will need to vary firm by firm.
Further guidance on data collection will be provided alongside the Gazette Notice call for data. Data will need to be submitted in a specified data form. This will simplify the data collection process for firms and provide greater certainty and consistency. Finally, the Government will provide direct assistance to firms through a major accountancy firm.

Where firms have made a formal request for additional time for data collection, the Government will increase the period above the 30 working day minimum.

The Government will ensure that the validation approach to be applied to data provided under the industrial allocation process is appropriate and reflects the self assessment approach to data and reporting under the NZ ETS. Changes to the data rules noted elsewhere in this summary will clarify the approach to be taken to uncertainty and materiality.

Significant penalties exist in cases where data is provided (or omitted) fraudulently. The Act contains a general requirement for person applying for allocation to keep sufficient records to enable the Ministry to verify that they are entitled to receive an allocation, and the Government retains powers of inquiry to verify this if necessary in future. Further guidance will be provided alongside the Gazette Notice on the record keeping that firms should aim for to ensure they are well prepared for any future verification.

The Government will provide for a secure data storage facility to ensure data submitted to it, as part of the industrial allocation process, is protected. Where firms would rather not provide data over the internet, they will be able to provide it on CD. Commercially sensitive data will be treated as such in a similar manner to which the Official Information Act applies.

Other issues

In addition to the key issues raised in the consultation document, submitters raised a number of other issues, including issues relating to data preparation and verification, and other more generic issues relating to the NZ ETS more broadly. General issues about the NZ ETS are out of scope with this consultation but discussed in further detail in section 6.

1 Overview

The New Zealand Emissions Trading Scheme (NZ ETS) is part of the Government's response to global climate change. It is the primary means by which New Zealand will meet its obligations under international agreements such as the Kyoto Protocol. Under the NZ ETS, some businesses will have a legal obligation to surrender 'emission units'[1] to cover their direct greenhouse gas emissions or the emissions associated with their products. The consequential need to acquire these units will effectively put a price on emissions of these greenhouse gases.

The surrender obligations of the NZ ETS will apply to emissions from stationary energy and industrial processes from 1 July 2010. From this date, obligated firms will be required to surrender emission units to cover their emissions.

The Government intends to give some emission units (called 'free allocation') to the most adversely affected firms. This allocation will be targeted at firms that face a significant increase in costs and have a limited ability to pass these costs on to customers. In other words, it will be targeted at those firms that are conducting activities that are both emissions intensive and trade exposed (ie, to international trade which means both imported goods which are made in countries which do not have a price on carbon, and goods exported to countries that have no price on carbon).

In December 2009, the Government launched a consultation on the development of regulations for the allocation of emissions units to industrial sectors under the New Zealand Emissions Trading Scheme. The consultation document, entitled *Development of Industrial Allocation Regulations under the New Zealand Emissions Trading Scheme*:

- sought notification of instances where submitters were undertaking activities likely to be eligible for allocation
- included draft activity descriptions for review and comment
- proposed requirements for data to be submitted under Gazette notices to establish eligibility and allocative baselines.

The Government received 57 submissions in response to the consultation document (by 5 March 2010). A list of organisations and people that responded to the consultation document is included in Annex 1.

This document summarises the key issues raised by submitters in response to the consultation document. Not every detail raised in submissions is provided in this summary, given that many were points of clarification or addressed other relatively minor aspects. Such details have nevertheless been considered in decision-making (generally with the refinement of the activity definitions with relevant firms).

Given that many submissions covered similar issues, these have been grouped in this summary into the following categories:

- activities
- electricity allocation factor
- revenue rules
- emissions rules
- other issues.

[1] A 'New Zealand Unit' or other unit created under the Kyoto Protocol.

2 Activities

2.1 Introduction

As noted in the consultation document, the allocation of emission units will be awarded on the basis of emissions from activities, rather than on the basis of firms or sites. Each eligible activity will be defined by an 'activity description', which will include a starting point (the input of a specified substance or substances) and an end point (the output of a specified saleable product) that is created by some form of physical, chemical and/or biological transformation.

Activities will be eligible for allocation if their emissions intensity is greater than 800 tCO_2e per $ million revenue.

The activity description details which emissions and revenue should be included for the purposes of determining eligibility and allocation.

The consultation document included draft activity descriptions. These were based on those developed in Australia for the proposed CPRS for activities that had either been found to be eligible or were under consideration for eligibility there. The activity descriptions in these cases were based on the draft Australian activity descriptions.

Submitters were asked if they had comments on the proposed descriptions. In addition, submitters were asked to identify whether there were any other activities they were undertaking in New Zealand that might meet the eligibility threshold, and to provide evidence to show a case for possible eligibility.

This section outlines such comments and changes that are proposed, as well as those activities that were not identified in the consultation document but which have since been identified as potentially qualifying as emissions intensive/trade exposed.

2.2 Activities proposed in the consultation document

2.2.1 Overview – draft Australian activities undertaken in New Zealand

Of the draft activity descriptions included in of the consultation document, submitters indicated that the following activities are undertaken in New Zealand:

Aluminium smelting	Carbamide (urea)	Carbon steel	Cartonboard
Caustic soda	Clinker	Ethanol	Glass containers
Hydrogen peroxide	Lime	Market pulp	Methanol
Newsprint	Packaging paper	Tissue	

The Government will take these activities through to the data collection stage to assess eligibility and develop allocative baselines.

Petroleum refining was included as a draft activity in the consultation document, and is undertaken in New Zealand. However, this will not be progressed at this stage because the sole firm involved in the activity (the New Zealand Refining Company) already receives protection from a cost of CO_2 through the operation of its Negotiated Greenhouse Agreement with the Government. This is discussed further below.

Other draft activity descriptions included in Annex 1 of the consultation document will not be progressed further because there do not appear to be any New Zealand companies undertaking these activities. These include:

Bulk flat glass	Carbon black	White titanium dioxide	Silicon
Zinc smelting	Alumina refining	Fused alumina	Fused zircon
Printing and writing paper	Iron ore pellets	Magnesia	Production of pig iron
Integrated production of lead and zinc	Sodium carbonate and sodium bicarbonate	Synthetic rutile	Integrated iron and steel[2]

2.2.2 Proposed changes to draft Australian activity descriptions

A number of the submitters who indicated that they were undertaking activities for which draft activity descriptions were included in the consultation document requested changes to the draft descriptions. Where changes were not proposed to the draft activity description adopted from Australia, no substantive changes are being made, on the basis that the Australian activity definitions are broadly consistent with the matters that the Minister must have regard to in finalising activity descriptions under section 161E(1) of the Climate Change Response Act 2002.

Where changes were proposed, the Minister considered the merits of the proposed changes on a case-by-case basis, referring to the matters he must have regard to in finalising activity descriptions under section 161E(1) of the Climate Change Response Act. A summary of the changes suggested and the Government's analysis and decision for each activity description is set out below.

- **Aluminium smelting** – One submission was received on this activity. This submission related to the inclusion of liquid fossil fuels in data collection, and further comment is provided on that aspect in this summary of submissions.
- **Carbamide (urea) / ammonia** – Ballance Agri-Nutrients, the sole manufacturer of urea and sole submitter on this activity, suggested that instead of separate activity definitions for the production of ammonia and the production of urea (the approach adopted in Australia), an integrated ammonia-and-urea activity definition should be developed. They argued that, unlike in Australia where ammonia can be and is traded as an intermediate product, there are operational and infrastructure barriers to ammonia being imported to or exported from the existing Ballance Kapuni site.

[2] No participants undertake the activity of integrated iron and steel production as set out in the consultation. However, a new activity is being developed being the manufacture of iron and steel from iron sands.

Analysis commissioned by the Ministry indicated that it is unlikely that bulk ammonia would be traded in New Zealand in the next 10 years at least. Therefore, an integrated ammonia-and-urea activity definition would be neutral in terms of technology likely in New Zealand in the foreseeable future; an integrated definition would not have an inequitable impact between different firms carrying out ammonia production; and ammonia should not be regarded as an intermediate product when considering the principle set out in 161E(1)(c)(iii) of the Act. Accordingly, given the substantive difference in nature between the Australian and New Zealand situations, the Minister has decided that an integrated activity definition will be developed. This will be reviewed before 2016.

- **Carbon steel** – Three submissions were received around carbon steel. Two submitters identified that the production of cast iron is similar to that of carbon steel. Carbon steel is defined as having <2% carbon content, whereas cast iron has a >2% carbon content. Analysis into the distinction between the two outputs has determined that they are distinct products whose characteristics mean they are not close substitutes. Whilst they have similar inputs (being various types of cold ferrous feeds), there are also some minor distinctions in the process as well. This led to the recommendation to consider cast iron (>2% carbon content) as a separate activity from carbon steel. There were no further suggested changes to the activity definition.

  A further suggestion was to remove the term 'continuously' from the definition, to reflect that the casting process can be done in different ways (for example in a batching process). Also the inclusion of the term ingots as being distinct from a cast carbon steel product could be seen to limit other shapes of cast products. To provide clarity, the activity definition has been updated accordingly.

- **Cartonboard** – Carter Holt Harvey (CHH), the sole manufacturer of cartonboard and sole submitter on this activity, suggested a number of changes to the activity definition.

  The most significant was extending the activity definition to include log billets as an input. This suggestion was accepted because log billets are an input to the pulp production element of cartonboard production in the same way that wood chips are an input to other types of pulp production. Log billets are not chipped on site, but 'stone-ground' to produce the pulp. Thus, no intermediate product such as chips is produced as part of this process, and inclusion of the emissions associated with converting log billets to pulp is not inconsistent with the principles set out in the Act.

  CHH also suggested adding uncoated cartonboard and sheets of cartonboard as defined products in the activity definition. This was accepted as this better reflected the New Zealand situation.

- **Caustic soda –** Carter Holt Harvey (CHH), the sole manufacturer of caustic soda and sole submitter on this activity, did not raise substantive issues with the activity definition.

- **Clinker** – Two submissions were received on the proposed activity of clinker, both of which requested an extended definition which also included the cement milling process. The basis for these requests were that a) clinker is an intermediate product in the manufacture of cement and is not a tradable product in its own right; and b) a non-integrated activity definition does not reflect the structure of the New Zealand cement industry where clinker and cement are fully integrated.

  The Minister has considered the submissions of the cement industry alongside the matters to which he must have regard, as set out in section 161E (1). Analysis of the cement industry in New Zealand[3] and advice received by the Ministry on clinker imports indicates that trade in clinker that has occurred in New Zealand over the past 20 years was only as a

[3] http://www.med.govt.nz/templates/MultipageDocumentTOC____42169.aspx

result of unexpected plan outages, unlike in Australia where clinker is regularly traded as an intermediate product.

The Minister has therefore decided that an integrated activity definition is most appropriate given the structure and operational practice of the New Zealand cement industry.

- **Ethanol –** Fonterra submitted that emissions associated with packaging should be included if that packaging operation is necessary to produce a tradable product. They went on to state that for most perishable food products the act of putting the product in packaging is an integral part of the process for making the saleable product.

  Packaging has been consistently excluded from all sectors' activity definitions as it does not make up part of the transformation of inputs into outputs – the principle set out in section 161E(1)(a) of the Act – plus it has been deemed to be a complementary activity, and thus excluded on grounds of consistency and equity across activities – the principle set out in section 161E(1)(c)(i) of the Act.

  This approach has also been adopted for the proposed Australian CPRS.

  Accordingly, the Minister has decided not to change the draft activity definition.

- **Glass containers** – One submission was received from the sole glass manufacturer in New Zealand. They were happy with the proposed activity definition. They also raised issues around the data rules and use of the Australian Track with regard to eligibility (comment on this is provided elsewhere in this summary).

- **Hydrogen peroxide –** Evonik Degussa Peroxide Ltd, the sole manufacturer of hydrogen peroxide and sole submitter on this activity, did not raise substantive issues with the activity definition.

- **Lime –** Three submissions were received from firms undertaking the manufacture of lime in New Zealand. None of the submitters suggested any substantive change to the activity definition. One submitter recommended that the title of the activity be changed to 'production of burnt lime' to differentiate from the production of agricultural lime. This proposal was put to the other submitters who agreed that this would be a useful change. Any reference to the output of lime has now been changed to 'burnt lime'.

- **Market pulp (referred to as 'dry' pulp in the consultation)** – Three submissions were received regarding the activity definition for market pulp manufacturing, with the main issue raised in all the submissions being whether a single activity definition covering all types of pulp should be used, or multiple definitions to cover the different types of market pulp (high/low yield, and high/low freeness).

  The issue is that the different types of pulp have very different emissions intensities. Accordingly, a single activity definition for both eligibility and allocation (the approach adopted in Australia) would have a significant negative financial impact on the most emissions intensive type of pulp (high-yield, low-freeness), and result in a net gain for the least emissions intensive type of pulp (low-yield).

  The key consideration in the analysis was the extent to which the different types of pulp were sufficiently distinct that they should be treated as separate products. In this respect, both the Government and the different sections of the pulp industry agreed that the different types of pulp are distinct and have very different quality characteristics, and may therefore need to be differentiated. It was also determined that the market pulp situation in New Zealand is materially different to Australia.[4]

[4] It is understood that the Australian pulp producers generally don't produce market pulp because almost all pulp production in Australia is fully integrated with paper production. Plus, what market pulp is produced is all of one type.

Because of this, the Minister has decided on a single activity definition for eligibility purposes, but different allocative baselines for the different types of pulp. It is thought that this approach reflects the differences between the different types of pulp (and between the New Zealand and Australian situations), and aims to provide each type of pulp with an allocation that reflects their emissions intensity, without significantly disadvantaging any type of New Zealand pulp producer relative to the proposed position in Australia. Separate activity descriptions for each type of pulp would be a second best option.

All three companies also proposed extending the moisture content range of market pulp, as it appears that the moisture content of the pulp produced in Australia differs to that being produced in New Zealand. This proposal is accepted by the Minister.

Some of the submitters also proposed that on-site chipping of logs be included within the activity definition. However, the Minister has decided that this process should continue to be excluded in the activity definition. This is primarily because:

a) wood chips are a tradable product. As such, exclusion of on-site chipping is consistent with the general principles and approaches adopted for other industry sectors. In particular, the splitting of vertically integrated processes into component activities where intermediate outputs could be traded in New Zealand

b) based on information provided by one pulp manufacturer, it is understood that the amount of emissions associated with on-site chipping is relatively small compared with other processes. Thus exclusion of on-site chipping is consistent with the purpose of allocation to ensure that allocation is targeted only at the most emissions-intensive activities

c) it is consistent with the approach adopted in the proposed Australian CPRS.

- **Methanol** – Methanex, the sole manufacturer of methanol and sole submitter on this activity, made the following suggested changes to the draft activity definition:

  a) the transportation of finished product to the point of export should be added as an inclusion, because methanol is predominantly exported and transportation is an integral part of the activity

  b) the transportation of inputs, outputs and intermediate products within the activity boundary should be included as these processes are integral to manufacturing

  c) the exclusion of electricity consumption from complementary activities should be removed as it is immaterial and difficult to calculate

  d) gas users should be compensated for increased gas prices arising from use of gas and other emissions occurring upstream. Such compensation should occur via the use of a natural gas feedstock allocation factor.

  With respect to point a), the Government has determined it would be inconsistent and inequitable for transportation emissions to, from or between locations conducting an activity to be included for emissions intensive trade exposed (EITE) activities. When considering the general situation applying to all industrial sectors, there are considerable differences in who transports various products and how much transportation takes place among entities conducting a given EITE activity. This depends on business decisions that are quite separate from the EITE activity itself. Accordingly, the Government has decided that the transportation of inputs and outputs to and from storage at the same location of the activity is excluded from all activity definitions. To include them for methanol production would thus be inconsistent, and run contrary to principle 161E(1)(c)(i) of the Act.

  However, with respect to point b), emissions associated with the movement of products at the location and within the boundary of the EITE activity are included for all EITE activities, because that transport is properly regarded as integral and essential to the defined transformation taking place. However, this inclusion only applies to eligible emissions. In

this respect, if the transportation is being undertaken using liquid fossil fuels, the emissions would not be eligible.

With respect to point c), any emissions associated with complementary activities have been consistently excluded from all activities. This is to ensure the integrity and equity of the Industrial Allocation programme, as per principle 161E(1)(c)(i) of the Act.[5] However, Methanex's point appears to relate more to materiality. Such materiality issues are being addressed through data collection methodologies, and are addressed later in this summary.

With respect to point d), this relates to a broader more generic issue of eligible emissions. As such it is addressed later in this summary.

- **Newsprint manufacture** – Norske Skog, the only newsprint manufacturer in New Zealand and sole submitter on this activity, did not raise any issues specifically relating to the production of newsprint.

- **Packaging and industrial paper manufacture** – Carter Holt Harvey (the sole manufacturer of packaging and industrial paper and sole submitter on this activity) proposed that on-site chipping should be included in the activity definition. This was not accepted for the same reasons as set out for market pulp.

- **Tissue paper manufacture** – In Australia, the tissue paper manufacturing process is a two-stage integrated process, with the first stage being the conversion of chips and sawdust into pulp, and the second stage being the conversion of this pulp to produce tissue. Further, because it is possible for a manufacturer of tissue paper to 'miss-out' stage one and use market pulp as an input, the Australian activity definition allowed for two allocative baselines: one for each of these two stages. This is the approach used in the other paper producing activities.

  Presently, the production of tissue paper in New Zealand only involves the use of purchased market pulp to produce tissue paper. That is, they do not carry out the stage one process of integrated on-site pulp production. SCA Hygiene (the sole manufacturer of tissue paper in New Zealand, and the only submitter on this activity) therefore initially suggested that references to the first stage of the integrated process in Australia are not relevant to the New Zealand context and could be removed from the activity definition.

  Subsequently it has been determined that until 2007 SCA Hygiene used to carry out an integrated production process, and therefore it is appropriate to keep the production of pulp within the activity definition.

- **Integrated iron and steel** – There were no submissions on the integrated iron and steel activity. One submitter proposed a new activity definition for the manufacture of iron and steel from iron sands, and this will be treated as a new activity (commented on in the following).

- **Petroleum refining** – NZRC has sought a number of amendments to the proposed activity definition for petroleum refining relating to inputs, transformation, output, inclusions and exclusions for petroleum refining. Refining is protected by a Negotiated Greenhouse Agreement (NGA) which applies until 31 December 2022. The NGA means that NZRC will be compensated for costs arising from the NZ ETS regardless of whether petroleum

[5] For example, it would be inequitable for assistance to be provided for emissions from head office and administrative operations when they are associated with an EITE activity, but not in other situations. Similarly, it would be inequitable for the emissions from such operations to be included within the activity boundary when they are co-located with the EITE activity, but not otherwise. The Government has determined that head office and administrative operations are activities which all firms in the economy must undertake, irrespective of whether they are conducting an EITE activity, and has decided that emissions from such activities will not be included within any EITE activity boundaries.

refining is an eligible industrial activity. The Government does not propose to take forward this activity at this stage, but aims to give certainty well before NZRC faces any NZ ETS costs. Eligibility and allocative baselines for petroleum refining are dependent on the emission sources being included in the calculation for emissions, eg, refinery asphalt, refinery fuel oil, refinery fuel gas, refinery flare gas, other intermediate crude oil products and carbon dioxide vented from manufacturing hydrogen. It is planned that the Government will revisit this during the review of the NZ ETS in 2011.

2.3 New activities identified through the consultation process

Twenty-seven new activities were proposed by submitters as potentially eligible for industrial allocation.

Of these, preliminary data was provided for the following activities which indicates that they meet or are very near the threshold for eligibility:

- production of clay bricks and field tiles
- production of gelatine
- production of reconstituted wood panels
- production of veneer sheets
- production of protein meal (meat by-product rendering)
- production of six new dairy products – lactalbumin, lactose, milk minerals, whey cheese, whey powder, whey protein concentrate/whey protein isolate
- rose production
- fresh capsicum production
- cucumber production
- fresh tomato production
- iron and steel manufacturing from iron sand.

Draft activity definitions will be developed for these activities in consultation with industry, following which formal data collection will be undertaken to establish eligibility and allocative baselines.

Many submitters made comments and expressed preferences on the design of these new activity descriptions. These comments will be considered and discussed directly with industry representatives in the process of finalising descriptions.

Other activities for which data indicates are likely to be far below the eligibility threshold, based on the inclusions and exclusions in the final data rules, will not be progressed further at this time.

At the time of writing, further information is being sought from a number of other activities that may or may not meet the eligibility threshold.

Submitters will be informed directly of the status of proposed new activities.

3 Electricity Allocation Factor

3.1 Introduction

The NZ ETS will increase the costs of generating electricity from fossil fuels and geothermal sources. Although fossil fuels make up a relatively small proportion of total electricity generation in New Zealand (34 per cent of the total in 2008), they have a larger impact on the average wholesale price under New Zealand's competitive electricity market.

A number of energy-intensive firms will face higher costs of production because of the electricity used in their production. Work was undertaken in 2008 by the Stationary Energy and Industrial Process Technical Advisory Group (SEIP TAG) on the expected increase in electricity price as a result of the introduction of the NZ ETS. This was used to derive an emission factor that would take account of this price increase. The factor they proposed was 0.52 tonnes of CO_2/MWh.

This estimate was based on modelling to estimate the price impact of a range of plausible emissions prices. The proposed factor is the median of the range of outcomes. A summary of this analysis is available on www.climatechange.govt.nz.

The consultation document proposed that the same approach be used regardless of whether the electricity is generated on site, via distributed generation or purchased from the grid. The only exception will be for very large users (greater than 2000 gigawatt hours per annum at a single facility) where a specific contract price for electricity will have a different impact. In this instance, the Government retains the option to set a specific electricity allocation factor (EAF).

The consultation document also proposed to use a different EAF for decisions on eligibility – 1 tonne CO_2 per gigawatt hour. This is the EAF used under the proposed CPRS in Australia and reflects the Australian electricity mix. Using this EAF will help to ensure equivalence in eligibility decisions between the New Zealand track and the Australian track, if used in the future.

Question 3 in the consultation document asked about the EAF and Question 4 asked about activities with high electricity use. Eighteen submissions raised issues on the EAF and activities with high electricity use. Submissions on the EAF were received from Canterbury Woolscourers, Carter Holt Harvey Woodproducts, Parliamentary Commissioner for the Environment, Pan Pac Forest Products, The New Zealand Refining Company, Ballance Agri-Nutrients, Evonik Degussa Peroxide, Norske Skog Tasman, Meat Industry Association, Winstone Pulp, Westland Milk Products, SCA Hygiene, Fonterra, Fletcher Building, Rio Tinto Alcan NZ, Holcim, Carter Holt Harvey Pulp and Paper, and Business NZ.

3.1.1 Summary of issues

Holcim, Meat Industry Association, Norske Skog Tasman, Evonik Degussa Peroxide, Fletcher Building, Westland Milk Products, and Business NZ proposed that the EAF be higher than 0.52 NZU/MWh. To support their contention, many cited the analysis commissioned by the Major Electricity Users' Group (MEUG) from Professor Andy Philpott and Tony Downward of Stochastic Optimization Ltd (SOL) which suggests that because of imperfect competition in the electricity market, prices will be higher than short run marginal costs. SOL explicitly modelled uncompetitive behaviour using data from 2008 to suggest that the price impact would be equivalent to an electricity emission factor of between 0.61 and 0.69 NZU/MWh.

The PCE submitted that the EAF should be lower than 0.52 NZU/MWh. It estimated the impacts on the basis of the emission intensity of the marginal (in a new-build sense) new-entrant generators, rather than by estimating the impacts on the costs of the marginal (in an operational sense) existing generators. PCE further suggested that the extent of the price impact would vary substantially by the different times of day and year.

Norske Skog Tasman also submitted that the modelling behind the 0.52 factor chosen by SEIP TAG was based on modelling with an assumed carbon price of $\$40tCO_2$ but that the same modelling exercise identified that for lower carbon prices, the effective emissions factor would be greater. During the transition phase, the price of carbon is effectively capped at $\$25tCO_2e$ and users will be subject to a 2:1 surrender obligation until the end of 2012 – ie, giving an effective CO_2 price cap of $\$12.5/tCO_2e$. Norske thus argue that during the transition phase the 0.52 factor is too low.

The EAF of 0.52 tonnes of CO_2/MWh does not affect whether an activity will receive 0%, 60% or 90% allocation. For determining the eligibility of an activity, a factor of 1 tCO_2/MWh was proposed based on the factor used in the CPRS (Emissions Rule 9). This was supported by all submitters who commented on it, except for the Parliamentary Commissioner for the Environment.

3.1.2 Analysis

The proposed EAF was based on extensive modelling work on the impacts of emissions prices on electricity prices undertaken for the SEIP TAG during 2008.

The group agreed to a modelling framework involving both long-run and short-run approaches to provide a recommendation for the period to the end of 2012, when it should be reviewed. The group recommended the use of an electricity allocation factor of 0.52 tCO_2/MWh until 2013 based on modelling the impacts on future electricity prices by Tom Halliburton of Energy Modeling Consultants (EMC).

The EAF analysis for beyond 2013 will need to be reviewed before the end of 2012. It is possible further analysis could be undertaken as part of the review of the NZ ETS in 2011.

Suggestions to alter the EAF raise questions about the approach used, particularly the assumptions regarding perfect competition in the market, and the interaction between the key drivers of electricity prices (ie, new-entrant long-run marginal costs versus existing producers' short-run marginal costs). The answers to these questions are IN PART a judgement call and will involve a range of assumptions that will need to be taken into account in any future analysis.

The new analysis provided by MEUG and others results in a higher EAF, but is based on data for an historical year. The analysts that undertook the work do not know whether an analysis using their model, but for the historical period used to derive the 0.52 factor, would lead to a number higher or lower than 0.52. At the same time, others have suggested that the 0.52 allocation factor may be too high, and this includes the results of recent work by Concept Consulting to examine the impact of electricity contracts on the pass through of emission costs.[6]

Together this means there is no clear basis for adopting an alternative number to that recommended by the SEIP TAG.

3.1.3 Decision

The Government recognises that a number of legitimate arguments have been submitted for both higher and lowers EAFs, but notes that no clear basis for an alternative number has been proposed. To explore fully the implications of the issues raised would require another considerable modelling exercise, and is likely to require a range of assumptions.

The Government's clear priority is to get the allocation process up and running to give industry certainty as soon as possible. The proposed EAF was based on extensive modelling work on the impacts of emissions prices on electricity prices undertaken for the Stationary Energy and Industrial Processes Technical Advisory Group (SEIP TAG) during 2008.

Therefore, the Government believes that an EAF of 0.52 is a sufficiently robust approach for determining allocative baselines in the short term. The Government recognises that the EAF will need to be reviewed before the end of 2012, to ascertain its appropriateness beyond 2013. In making this decision, the Government notes that the transition phase, which will run to the end of 2012, will substantially reduce the impact of the emissions price pass-through in electricity prices.

The Government proposes to maintain a factor of 1 tCO_2/MWh for determining eligibility of activities. This will also need to be reviewed before the end of 2012.

[6] Concept's conclusions were based largely on (1) the assumption that contract prices reflected long run marginal costs and that, irrespective of the price of CO_2, these would be likely to reflect the costs of geothermal generation over the period in question—we note that this was an issue that the SEIP TAG debated at length and that Concept Consulting is taking a particular stance on this issue that is not shared by many on the SEIP TAG and (2) that the 0.52 factor was based on the average shape of demand for NZ as a whole, as opposed to that which applied to the industrial users.

4 Revenue Rules

4.1 Introduction

Revenue data is required for calculating the emissions intensity of an activity. It is important for considering whether an activity meets thresholds that will define it as moderately or highly emissions intensive. The Government will estimate emissions intensity using the total sum of emissions and the total revenue over the three years specified in the Act (2006/07, 2007/08 and 2009/10). Emissions intensity is calculated by the quantity of emissions per million dollars of revenue using the following formula:

Emissions intensity (tCO_2e/NZ$1m) = total emissions ($tCO_2e$) ÷ total revenue (NZ$ million)

Four rules were proposed in the consultation document to provide guidance on how firms should calculate their revenue. These rules address issues such as how revenue is to be matched to the output of the particular activity rather than total revenue for the firm, how quantities of output and output prices are to be determined, and how to treat foreign currencies and GST.

Question 5 in the consultation document asked about revenue and financial data requirements. Eleven submissions raised issues on the revenue rules. Submissions were received from Meat Industry Association, New Zealand Steel, Pan Pac Forest Products, Carter Holt Harvey Pulp and Paper, Ballance Agri-Nutrients, Fonterra, Holcim, Fletcher Building, Nelson Pine Industries, Evonik Degussa Peroxide, and Rio Tinto Alcan NZ.

The main issues raised were on the provision of historical financial data and calculating the market price.

4.2 Revenue Rules 1–3

4.2.1 Summary of issues

Revenue Rule 1 refers to the three historical years for which data must be submitted. Some submitters, including Oceana Gold, Winstone Pulp International Methanex and the Meat Industry Association raised concerns about the impact of a commodity price 'spike' that results in average revenues over these years being significantly higher than what would be expected in future years. They argue that the Minister for Climate Change Issues has discretion to ignore data supplied that may be unrepresentative of revenues across a longer period of time. They also contrast the provisions in the Act with the proposed CPRS where firms submit data from across five years, and are able to exclude the impact of one of these years.

A number of firms, including O-I, Rio Tinto Alcan NZ and Fletcher Building, commented on the need for certainty over the requirements for the data to be submitted. Particular issues raised were the need for clarity over the use of an observable market price if sales data is not available or in situations where revenue for the historic years does not provide a realistic projection of revenue in future years.

Whilst out of the scope of the consultation (as it is a matter established in legislation), a number of submitters also noted that the lack of an alternative 'value added' test, which is included under the proposed Australian CPRS, and would negatively affect prospects for eligibility for some firms.

4.2.2 Analysis

Whilst noting the commodity price spike has had different impacts on different sectors, the Government recognises that the commodity price spike is a material issue for many sectors.

Under the NZ ETS, the years for which data must be supplied are legislated in section 161E(3) of the Act. The only situation in which different years may be specified are if no-one carried out the activity in all three of the years.

However, the Minister could use the data rules to allow for the revenue from individual years to be weighted differently depending on whether the price in that year was particularly high or low. For example, one year of the three might be given half as much weight as the other two in estimating total revenues. This could be possible without adding significant complexity.

Such a rule would adjust the actual sales price or observed market price used to calculate revenue by applying a lower weighting to the highest annual price provided and a higher weighting to the two lower annual prices provided. Applying the weighting to the price used rather than to the final calculated revenue ensures that a weighting approach is targeted at the price distortions credited by global commodity price spike, rather than any increases or decreases in the level of production by firms in these years, which may result in more arbitrary and inequitable results.

Determining the appropriate level for revenue weighting in response to the commodity price spike is not straightforward. To inform the appropriate number, officials undertook an analysis of the average commodities price spikes across the ANZ commodities index. This study applied a regression analysis and a time series projection to develop an expected price in a number of the key sectors for New Zealand; and compared the commodities index prices against the expected prices in the three historic years. The numbers in the table below represent the 'expected price' as an indexed percentage of the actual. This provides a guide to the extent to which the price spike deviated from 'normal' prices and therefore suggests an appropriate weighting.

Price spikes in the historic revenue years

Financial year	Aggregate index	Meat, skins and wool	Dairy products	Horticultural products	Forestry products	Seafood	Aluminium
2006/07	1.02	1.06	1.00	0.96	1.02	1.11	0.78
2007/08	0.89	1.06	0.68	0.99	1.02	1.12	0.89
2008/09	0.91	0.94	0.95	0.76	1.06	0.85	1.06

Using the commodities index in this way as the basis for the weighting is an equitable approach that enables identification of a number which reflects the average impact across all potential activities.

The analysis suggest two options:

1. If the weighting was to reflect the average effects of the commodities price spike across all commodities, the aggregate effect would suggest a modest weighting of 0.9 for the highest annual price and 1.05 for the lowest. This may not be sufficient to assist those firms most impacted by the price spike.

2. If the weighting was to reflect the highest impact the commodities spike has had on any one sector, a more generous weighting of 0.7 for the highest annual price and 1.15 for the lower annual prices would be appropriate (reflecting the price spike in the dairy products sector in particular). This may be more material for firms who were most impacted. However, this approach would carry a higher risk of over allocation, since the weighting would reflect the highest impact on any sector, which means that other sectors would be overcompensated. This risk of over allocation may be mitigated to the extent that the weighting would only affect eligibility, rather than levels of allocation. The main impact would be on those activities currently at the margins of eligibility for 60% allocation, though there may also be an impact on some sectors that are currently relatively close to the threshold for 90%.

Additionally, the Government accepts there is a need to provide greater clarity and certainty over the requirements for revenue data in a range of areas, including on whether firms should have freedom of choice to select a market price if they have access to actual sales data.

4.2.3 Decision

On balance, given the above considerations, the Minister has decided that the revenue rules should be amended to allow the actual sales price or observed market price in the historical year with the highest annual price to be weighted at a lower rate than the other two years.

It has been decided that a single weighting will apply across all activities. This will avoid risks of inequities, is consistent with the approach taken to the other data rules, ensures that the data rule is as simple to apply as possible for industry, and ensures that it is simple to validate for government. The application of the weighting will be optional. This way no activity will be penalised by a weighting approach – weighting will either benefit firms, by lowering calculated revenue, or have no impact, where the price spike is not relevant. Activities that were most adversely affected from the price spike will benefit most from a weighting approach. As it affects only eligibility, weighting has a consistent benefit across all firms conducting the same activity.

To assist activities that are likely to be most impacted by the price spike, a weighting of 0.7 for the highest annual price and 1.15 for the lower annual prices will be adopted.

Additionally, following an analysis of issues raised in submissions, the Government intends to revise the revenue rules to:

- clarify that multiple outputs are feasible and how to determine the appropriate treatment of co-products or by-products (Revenue Rule1)
- allow firms to choose which one of two methods to determine the quantity of output (Revenue Rule 2)
- allow firms to choose between actual sales data and an observable market price and provide an accepted list of sources for obtaining an observable market price (Revenue Rule 3).

These revisions provide both greater certainty for firms over the Government's interpretation of data they submit, and greater flexibility to apply a rule that is appropriate to the firm's needs.

5 Emissions Rules

5.1 Introduction

The key issues that were raised on the proposed data rules relating to the calculation of emissions during the consultation process were:

- eligible emission sources
- interpretation of 'direct use'
- materiality
- co-generation
- other issues and comments on emissions rules.

A number of submissions raised issues on the electricity allocation factor, which formed part of the emissions rules. This is discussed in section 3.

5.2 Eligible emissions sources

5.2.1 Summary of issues

During consultation, some submitters, including New Zealand Coal and Carbon, Methanex, Kenroll Industrial Coal & Canterbury Coal, Horticulture NZ, Oceana Gold, Meat Industry Association, Rio Tinto Alcan NZ, and the Coal Association proposed that liquid fossil fuels (LFF) and upstream emissions from the extraction/transport of coal and natural gas be included as eligible emissions sources. For coal, such upstream extraction-related emissions includes fugitive coal seam methane (FCSM). Some, but not all of these proposed additional emissions sources are included in the CPRS.[7]

Submitters noted that the NZ ETS costs imposed through upstream emissions from natural gas and FCSM or LFF are no different in nature from the proposed list of eligible emissions sources, eg, coal or natural gas use.

5.2.2 Analysis

The objective of the industrial allocation regime is to provide transitional assistance for those activities that face the greatest competitiveness risk, by protecting them from a significant portion of the costs imposed by the NZ ETS.

[7] LFF are included in the CPRS. Upstream emissions from extraction of natural gas are included for some uses of natural gas in the CPRS (principally where it is used as a feedstock rather than a fuel), but not all. Fugitive coal seam methane is not included in the CPRS; separate assistance is to be provided to the coal industry in Australia through the $1.23 billion Coal Sector Adjustment Scheme which allocates permits for the next five years to the most emissions-intensive coal mines each year on the basis of their proportion of emissions above a fixed threshold.

However, the objective of the industrial allocation regime does not necessarily imply compensation for all emissions sources. As the provision of industrial allocation has a fiscal cost, it is logical for the Government to target assistance at those emissions sources that are likely to be most material for the largest number of companies. In addition, the administrative complexity of providing assistance for particular emissions sources is a relevant consideration, particularly if it is likely to impact on the ease and speed at which sectors receive allocations.

Therefore, it is necessary to consider, in relation to each additional proposed emissions source:

- whether including the new emissions source would make a material difference to the eligibility of most activities likely to receive industrial allocation
- the complexity of including each proposed emissions source and implications for timelines and administration of industrial allocation
- equity and consistency across all sectors
- the cost and fiscal implications of including each proposed emissions source.

It has been estimated that the NZ ETS costs incorporated in LFF are likely to represent less than 1% of the product price for the majority of activities being considered for eligibility. For some activities the costs might be around 1–2% during the transition phase and higher thereafter.

Providing for upstream natural gas emissions in the calculation of emissions for industrial allocation is not likely to be material for the majority of activities. In the case of methanol, the potential impacts are more material.

The fiscal impact of including liquid fossil fuels, fugitive coal seam methane and allowing for upstream natural gas emissions, could be around $21 million per annum through to the end of 2012 (assuming an allocation at 50% of normal levels during the transition phase, and a carbon price of $25/t$CO_2$e) and around $78 million per annum from 2013 (assuming a carbon price of $50/t$CO_2$e).

Including LFF emissions would significantly complicate the activity-based approach because it heightens the importance of determining the edges of an activity. In Australia, the process of defining activities took between 3 and 12 months for each activity, in large partly because of prolonged discussions over activity boundaries.

Including FCSM emissions, whilst relatively straightforward, is likely to significantly benefit only one activity. It is also not in line with the situation in Australia, where FCSM emissions are not included in the calculation of assistance under the EITE programme.

In the case of upstream natural gas, inclusion of this emissions source raises questions about whether other downstream emissions sources should be included. This would result in significant complexities. Fairness and consistent treatment of all uses of natural gas, not just as a feedstock, are also significant concerns.

5.2.3 Decision

The decision about whether to include additional eligible emissions sources is a carefully balanced choice. However, the Minister has decided that the list of eligible emissions sources will remain the same as those proposed in the consultation document (ie, excluding LFF, FCSM and upstream natural gas emissions sources). This is because:

- for the vast majority of activities, the exclusion of the proposed emissions source appears unlikely to be very material
- LFFs could be material for some activities at margins of eligibility, but this is only one of a number of factors that could impact on the eligibility of these sectors
- inclusion of LFFs and upstream natural gas would raise significant complexities with implementation regarding decisions relating to activity boundaries and fair treatment across sectors
- the fiscal costs of including LFF, FCSM and upstream natural gas emissions could be significant; $21 million per annum during the transition phase, potentially rising to $80 million after 2013.

The 2011 review is an opportunity to revisit eligible emissions sources in the context of a wider review of the NZ ETS and allocation, before the end of the transition phase.

The Minister intends to add one additional rule to clarify that only emissions which face an obligation under the NZ ETS may be included. This is necessary to exclude emissions sources for which an exemption under section 60 of the Act is in force. This is likely to be relevant to the proposed new activities of gold, animal by-product rendering, production of tomatoes, capsicums, cucumbers and roses where less than 1500 tonnes of used oil or waste oil may be combusted by individual firms. As these emissions are exempt from NZ ETS obligations under section 60, the rule ensures these cannot be counted for allocation.

5.3 Excluded emissions sources

5.3.1 Summary of issues

Submitters, including Business NZ, Fonterra, Methanex, and Evonik amongst others, argued against a number of exclusions proposed in the draft activity description, which are based on those listed in section 161E(2)(b) of the Act, and are consistent with the exclusions in the CPRS.

The particular exclusions raised most often by submitters were transportation elements and packaging (eg, of food or hazardous substances). The main arguments proposed by submitters were that it was difficult to accurately determine emissions from these minor sources or that the excluded emissions were ‘essential’ to the activity (eg, that packaging of hydrogen peroxide was essential to its production because it could not be sold without packaging).

5.3.2 Analysis

The exclusion of transportation to/from activities, and 'complementary' activities such as packaging has been consistently applied across all activities based on consideration of the principles set out in the Act, particularly section 161E(1)(c)(i) requiring activities be defined consistently and equitably across industries.

In general, anything excluded from the activity description lowers the total amount that a firm will be allocated. However, it is not clear that the exclusions will have a significantly material impact on any activities that are being considered for an allocation under the NZ ETS. For the most part, they represent a very small part of overall emissions and are not emissions-intensive activities in themselves. In many instances, submitters concerns relating to the inclusion of such emissions were around materiality, in that such emissions were so small that it would not be worth the effort to include them. Materiality issues are discussed later in this summary.

As already discussed with reference to whether or not liquid fossil fuels should be an eligible emissions source, there is considerable scope for firms to attempt to push out activity boundaries if exceptions are made to the generic list of exclusions. If these exceptions are made on a case-by-case basis, treating activities differently, this will raise significant issues for equity and consistency.

5.3.3 Decision

The list of draft exclusions listed in the consultation document are consistent with those developed for the CPRS and the principles set out in the Act. On balance, for the sake of equity between different parts of the industrial sector, to ensure that implementation of industrial allocation reflects the policy intent, and to assist in developing Gazette notices in an efficient manner, the Minister for Climate Change Issues will use his discretion under the Act to consistently apply the exclusions listed in the consultation document to all activities.

5.4 Interpretation of 'direct use'

5.4.1 Summary of issues

Some submissions raised concerns on the interpretation of 'direct use' in Emissions Rule 1.

Some submitters have suggested a different interpretation of the meaning of 'direct use' of coal and natural gas from that intended by Emissions Rule 1. In particular, Solid Energy has submitted that the 'direct use' of coal should be interpreted in such a way as would allow them to count the emissions from downstream combustion of coal as direct use of coal during the proposed activity of coal mining.

The joint venture partners producing oil at Maari have proposed oil extraction as a new activity. The potential eligibility of this activity may depend on whether or not flaring of natural gas fits within in the definition of 'direct use'.

5.4.2 Analysis

The phrase 'direct use' is not defined in the Act and there is scope for different interpretations of this.

In relation to the issue raised by Solid Energy, the fundamental question is who is able to receive allocation for burning coal, eg, the coal miner or the person purchasing coal who faces the additional cost passed through from miners.

The approach being followed to date for industrial allocation strongly suggests the latter, which would be consistent with the approach being taken for electricity and liquid fossil fuels. As with other fossil fuels, in terms of the carbon embedded in the coal, miners and importers face the same costs and obligations, indicating that there is no difference in their ability to pass-through these costs. Taking a different approach to 'direct use' of coal would therefore raise significant consistency and equity issues.

In addition, allowing this interpretation of 'direct use' and providing an allocation to coal miners would have significant implications for other activities and create considerable complexity. To avoid double-counting, actual coal use would need to be carved out from the downstream user. This could result in the coal user failing to meet the eligibility threshold. As with electricity and other fossil fuel producers who can pass through costs, there would also be a risk of windfall profits for coal mining.

5.4.3 Decision

The Government intends to provide greater clarity over the intended interpretation of this phrase to ensure there are no obstacles to eligibility decisions following the data collection stages. Given the arguments above, Emissions Rule 1 will be revised accordingly to be clear that 'direct use' means 'direct oxidation or use as a feedstock'.

5.5 Materiality

5.5.1 Summary of issues

Emissions Rule 11 is about materiality and states that:

> Best endeavours should be used in calculating emissions from small sources that are part of an activity.

In collecting emissions data for an activity, all emissions should be calculated unless they are explicitly excluded. However, it is recognised that some emissions sources will be small, and the effort required to accurately calculate these emissions may be out of proportion to their size. The consultation document proposed that in all cases, best endeavours should be used to calculate the emissions, but it is recognised that efforts may be less for some small sources.

Five submissions raise concerns on Emissions Rule 11 (Ballance Agri-Nutrients, Rio Tinto Alcan NZ, Methanex, Holcim, Coal Association, and Business NZ). The main concern was that because of the requirement to produce accurate estimates of emissions, they will be required to spend inordinate amounts of time to assess emissions from small and inconsequential sources. A particular concern noted was of the risk that emissions estimates will be audited later and that these might result in changes to eligibility status and/or levels of allocation.

Other concerns raised included that guidance on materiality thresholds over and above which deductions are required should be provided and that reference to accounting standards or tax ruling precedents to develop such thresholds should be considered. Questions were also asked about the degree of auditing certainty required.

5.5.2 Analysis

Firms require certainty on the approach the Government will take when checking data on small sources of emissions. The Government intends to use a pragmatic approach and proposes to revise Emissions Rule 11 to reflect this. Whereas best endeavours should be used to estimate emission levels, 'simplified calculation methods' are explicitly allowed for small emission sources.

The Government considers it important that firms make an attempt to quantify the emissions from excluded sources, but consider the amount of effort required should be proportionate to the materiality of the emissions source. To avoid the possibility of gaming from this increased flexibility of allowing for 'simplified calculation methods' a materiality threshold is proposed, which should give firms greater certainty over whether they are meeting the requirements or not.

5.5.3 Decision

The Government proposes an additional rule to require disclosure of uncertainties associated with estimates of emissions and revenues. It is useful for the Government to know the level of uncertainty attached to a number so that it can understand whether to spend additional time checking. It is useful for firms to be able to express this uncertainty, especially where there is a risk to them of getting the number 'wrong'.

5.6 Co-generation

5.6.1 Summary of issues

Emissions Rule 5 sets out a methodology for allocating emissions from co-generation plants to the individual outputs of heat and electricity. Because all emissions associated with electricity are counted on the basis of consumption rather than generation, any emissions that come from on-site generation of electricity need to be subtracted. This rule provides a consistent way of doing this. The submission from Fonterra discussed this. The issues raised are that the co-generation efficiency method should not apply to the eligibility assessment or that site-specific efficiency values should be allowed.

Some submitters, such as Fonterra, suggested firms be allowed to estimate their own efficiency values for steam and electricity production.

5.6.2 Analysis

While it is likely that different plants will have different efficiencies, it is unlikely that different efficiency values will have a significantly material impact on the eligibility of the majority of

activities. Where it is likely to be a factor, other factors (such as the activity boundary and emissions intensity of all companies undertaking the activity) are likely to be more material.

The proposed values of 80% efficiency for steam and 35% for electricity are based on the World Resources Institute / World Business Council on Sustainable Development protocol.[8] These are relatively conservative values and maintain incentives to improve efficiencies over and above these values. When obligations and allocations are taken into account, it is highly unlikely that use of these values will reduce the economic incentive for firms to invest in co-generation as a potentially efficient response to the emissions price created by the NZ ETS.

Allowing firms to choose their own efficiency values would introduce additional uncertainty and complexity into the process, as it would require site-specific values and assumptions to be validated.

5.6.3 Decision

On balance, considering the benefits for individual activities against the impacts on the process as a whole, the Government considers the benefits of simplicity and certainty outweigh the need to allow for individual efficiency values.

5.7 Other issues and comments on the emissions rules

5.7.1 Summary of issues

A number of submitters requested more guidance on the emissions rules. In addition to those issues discussed above, more guidance was sought on the requirements around electricity generated on-site and the treatment of Other Removal Activities. Methanex submitted that the CO_2 content in natural gas supplies in New Zealand has been increasing due to the relative decline of Maui gas production and corresponding increase in supply from other gas fields with higher CO_2. Methanex suggest Emissions Rule 8 should be amended so that they can weight historic emissions to account for this in the same way as the EAF and revenue can be weighted.

5.7.2 Analysis and decision

To cater for these points and other detailed issues of clarification, the Government will publish, alongside the Gazette Notice calling for data, guidance notes to assist interpretation of the rules by firms. In some cases, issues of clarification will be generic to all activities, in some cases specific to some or one. Direct support will also be provided to help individual companies interpret the rules in their particular circumstances.

The discussion above in section 4 on which financial years revenue data must be submitted also addresses the issues pertinent to the financial years for which emissions data must be submitted. No change has been made to Emissions Rule 8.

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[8] Allocation of GHG Emissions from a Combined Heat and Power (CHP) Plant. Guide to calculation worksheets (September 2006) v1.0. A WRI/WBCSD GHG Protocol Initiative calculation tool. Available at: www.ghgprotocol.org/calculation-tools/all-tools

6 Other Issues

6.1 Introduction

In addition to the key issues raised in the consultation document, submitters raised a number of other issues, including those relating to data preparation and verification, and other more generic issues relating to the NZ ETS more broadly.

6.2 Data preparation – general comments

As stated in the consultation document, data called for must be submitted in accordance with the requirements (Rules) specified in a Gazette Notice. If data is not provided within the prescribed period specified in the Gazette Notice, firms will not be eligible for an allocation. The minimum period for data collection that can be specified in the Gazette Notice is 30 days, and this is the default period that the Government expects to apply to most activities, to ensure firms can be given certainty over allocation as soon as possible.

6.2.1 Summary of issues

Submitters made a number of comments about the data preparation, timescales and verification approach to be applied to data collection.

Responses from firms on the amount of time needed to collect data necessary for decisions on eligibility and allocative baselines varied widely. Some firms indicated that they could prepare the necessary data quickly, others stated that they would need more time than the minimum 30 working days specified in legislation, up to four months.

A number of submitters asked officials to create specific spreadsheets for each activity (or allow applications to customise generic spreadsheets used for data collection in Australia) to make data collection as easy as possible for potential firms.

Some submitters noted that verification requirements needed to reflect information firms do not have or that would be onerous to collect.

Submitters including Pan Pac Forest and O-I New Zealand noted that clear guidelines should be provided by the Government on the type of records that should be kept to enable future verification. Others noted that records kept for financial audits should be sufficient for data collection under industrial allocation, and that requirements for record keeping should not duplicate or override existing record-keeping requirements that exist for tax purposes.

Finally, a number of firms sought assurances that commercially sensitive information will be identified and appropriately protected.

6.2.2 Analysis and decisions

The Minister recognises that firms will need assistance as part of the data collection process, and that this level of assistance will need to vary firm by firm.

Further guidance on data collection will be provided alongside the Gazette Notice call for data. Data will need to be submitted in a specified data form. This will simplify the data collection process for firms and provide greater certainty and consistency. Finally, the Government will provide for direct assistance to firms through a major accountancy firm.

Where firms have made a formal request for additional time for data collection, the Government will increase the period above the 30 working days minimum.

The Government will ensure that the validation approach to be applied to data provided under the industrial allocation process is appropriate and reflects the self assessment approach to data and reporting under the NZ ETS. Changes to the data rules noted elsewhere in this summary will clarify the approach to be taken to uncertainty and materiality.

Significant penalties exist in cases where data is provided (or omitted) fraudulently. The Act contains a general requirement for persons applying for allocation to keep sufficient records to enable the Ministry to verify that they are entitled to receive an allocation, and the Government retains powers of inquiry to verify this if necessary in future. Further guidance will be provided alongside the Gazette Notice on the record keeping that firms should aim for to ensure they are well prepared for any future verification.

The Government will provide for a secure data storage facility to ensure data submitted to it, as part of the industrial allocation process, is protected. Where firms would rather not provide data over the internet, they will be able to provide it on CD. Commercially sensitive data will be treated as such in a similar manner with which the Official Information Act applies.

6.3 Comments about the ETS more broadly

6.3.1 Summary of issues

A number of comments were made and issues raised outside the scope of the consultation. Examples of these comments include:

- that small and medium enterprises (SMEs) that are intensely trade exposed may be excluded on the emissions intensity threshold (A&G Price)
- that aviation is being excluded from eligibility and allocation when the domestic industry cannot pass their costs on to customers (Aviation Industry Association)
- that the NZ ETS will penalise those who have already made attempts to reduce their energy requirements, and that proactive investment should get recognition (Nelson Pine Industries, Wood Processors Association, Max Hill)
- that, in some countries incentives have been provided to firms to switch to renewable energy sources (Carter Holt Harvey Pulp and Paper)
- questioning if allocation should include labour used and alternative energy sources available (Qualityarns)

- asking if further information can be provided for projecting budgets when the NZ ETS comes into effect (SCA Hygiene)
- that an industry-wide survey should be undertaken to assess the impact on business (Qualityarns).

General comments on how the NZ ETS will operate were made by Max Hill, Fonterra, Business NZ and Methanex. These comments included that:

- agriculture should not be subject to the NZ ETS
- units should be transferred quarterly and in advance
- the allocation of moderately intensive activities is insufficient
- the eligibility thresholds do not reflect competitiveness-at-risk
- New Zealand's current net position surplus under the Kyoto Protocol affords more generous allocations
- the planned five-year review of the NZ ETS be brought forward.

Some submissions, including SCA Hygiene, Methanex, Coal Association, Nelson Pine Industries, and Fletcher Building commented on the alignment with the Australian CPRS. Comments focused on ensuring alignment between the Australian and New Zealand schemes to ensure the same activities are recognised under both schemes and that activities receive the same assistance under both schemes. One submission commented that the focus should be on achieving the overarching objectives of free allocation, not matching with Australian scheme.

A number of submitters commented that the fact that the CPRS has not come into effect in Australia has material impacts which should be taken into consideration. In particular, as long as the CPRS is not enacted:

- the Australian track for eligibility will not be available for New Zealand industry
- New Zealand companies will be at even greater competitive disadvantage through facing a cost of CO_2 whilst their Australian counterparts will not.

Some submissions (New Zealand Flower Growers, Westland Milk Products, Business NZ) noted disappointment in the communication and stakeholder engagement that has occurred. Comments were made on the consequences of this in terms of the amount of time available to respond to the consultation.

6.3.2 Analysis

The Government remains committed to implanting the NZ ETS as New Zealand's most efficient and effective response to climate change. The NZ ETS is a flexible scheme, subject to regular reviews, which can be adjusted as necessary to reflect different international and national circumstances. Industrial allocation will provide assistance to the firms most at risk from the introduction of an NZ ETS, those who are emissions intensive and trade exposed.

The transition phase to the end of 2012 will significantly reduce the costs of the scheme for all firms. The 2011 review will provide an opportunity to review the scheme, and allocations in particular, in light of progress towards a post 2012 international agreement, reflecting developments in Australia and other factors. The issues raised by submitters above are relevant to that review, even if they are out of the scope of this consultation.

The Minister has decided that it is not possible to use the Australian track for eligibility whilst it is unclear whether the CPRS will be enacted. This is because it is not possible to demonstrate whether an activity is or 'is likely to be' eligible under the CPRS in such circumstances.

Whilst firms will not be able to take advantage of the Australian track for eligibility, initial evidence provided for this consultation indicates that this is unlikely to have a significant impact on the vast majority of eligible industry sectors. This is because the proposed New Zealand activity definitions are substantially identical to those developed in draft for the Australian CPRS. Accordingly, the outcomes for most sectors in terms of eligibility and allocative baselines are not likely to be substantially different between the New Zealand and Australian tracks in most cases. In addition, a number of activities not eligible in Australia will benefit by becoming eligible for allocation here under the New Zealand track.

Annex 1: List of Submitters

Number	Submitter name
001	TCI New Zealand Ltd
002	Masport Foundries Ltd (MFL)
003	Qualityarns Ltd
004	Shipherd Nurseries Ltd
005	New Zealand Dairies Ltd
006	Perry Resources (2008) Ltd
007	A&G Price Ltd
008	Homestead Produce
009	Southland Veneers Ltd
010	Horticulture NZ
011	Canterbury Woolscourers
012	Major Electricity Energy Users Group
013	Carter Holt Harvey Woodproducts New Zealand
014	Solid Energy NZ Ltd
015	Greenhouse Policy Coalition
016	Parliamentary Commissioner for the Environment
017	Oceana Gold
018	Nelson Pine Industries Ltd
019	Pan Pac Forest Products Ltd
020	Winstone Pulp International Ltd
021	The New Zealand Refining Company Ltd
022	(Kapuni) Ltd
023	Max Hill
024	Wood Processors Association of New Zealand
025	New Zealand Steel
025A	New Zealand Steel
026	Evonik Degussa Peroxide Ltd
027	Norske Skog Tasman Ltd
028	Meat Industry Association
029	SCA Hygiene Australasia
030	Fonterra Co-operative Group Ltd
031	Fletcher Building
032	Synlait Milk Ltd
033	Rio Tinto Alcan New Zealand
034	Westland Milk Products
035	Shell (Petroleum Mining Company) Ltd
036	New Zealand Coal and Carbon Ltd
037	Southtile Ltd
038	New Zealand Flower Growers
039	Webster's Hydrated Lime Ltd
040	Methanex New Zealand Ltd
041	Holcim (New Zealand) Ltd
042	Coal Association of NZ
043	Kenroll Industrial Coal Ltd and Canterbury Coal Ltd
044	Birchfield Coal Mines
045	O-I New Zealand
046	Kai Point Coal
047	Carter Holt Harvey Pulp and Paper
048	Roxdale Foods Ltd
049	QuickCircuit Ltd

Number	Submitter name
050	Van Lier Nurseries Ltd
051	Gelita (NZ) Ltd
052	Graeme Lowe Christchurch
053	Summit Wool Spinners Ltd
054	Maari Joint Venture
055	Aviation Industry Association
056	Business NZ
057	New Zealand Export Growers Orchid Association