



**Submission to the
Ministry for the Environment
on the draft Climate Change
(Stationary Energy and Industrial Processes)
Regulations 2009**

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A BlueScope Steel Company

**Submission to the
Ministry for Environment on
the draft Climate Change
(Stationary Energy and Industrial Processes)
Regulations 2009**

by

**New Zealand Steel Limited
29 June 2009**

Introduction

New Zealand Steel Limited operates a fully integrated steel mill at Glenbrook, South Auckland, producing a large range of steel products for the local and export markets. It is a wholly owned subsidiary of BlueScope Steel Limited of Australia.

New Zealand Steel (NZ Steel) recognises and supports the objectives of the Climate Change Response Amendment Act, and that greenhouse gas (GHG) emissions are an important global issue.

New Zealand has been internally monitoring its emissions for 20 years and has been reporting these within the BlueScope Steel network. BlueScope Steel is voluntarily reporting emissions to the World Steel Association, of which it is a member.

New Zealand Steel has been voluntarily reporting its emissions, to the New Zealand government, for nearly 15 years as part of the Voluntary Agreement on reduction of Carbon Dioxide gases agreed between NZ Steel and the Government in 1995.

New Zealand Steel wishes to represent its submission in discussion with the appropriate authority. Matters relating to the Company's submission should be directed to Mr Paul van Brakel or telephone 09 375 8111 ext 7357.

Section 1: Executive Summary

New Zealand Steel submits:

1. That given both the considerable changes which have been made to the *Climate Change (Stationary Energy and Industrial Processes) Regulations 2008 (Draft for Consultation)*, and the limited time available for review of the revised regulations following their release further time is provided to resolve the issues manifest in the draft *Climate Change (Stationary Energy and Industrial Processes) Regulations 2009*, and accompanying explanatory Emissions Trading Bulletin No.10. To ensure the integrity of the Scheme entry to the SEIP sector should be delayed for at least 12 months.
2. A firm should be allowed to opt-in irrespective of whether purchasing directly from the miner or not.
3. Participants should be allowed to opt-in for natural gas on the basis that carbon content and quantity can be measured
4. The threshold quantity for natural gas and coal opt-in is lowered to 1.75 petajoules, and 50,000 tonnes respectively.
5. Natural gas is reported on a volumetric basis and not a mass basis in any emissions returns and reporting procedures.
6. Participants should be able to opt in using consumption data instead of purchases' data for coal providing there is data validating the claim
7. Verification of coal calorific value is determined 3 times per year.
8. The threshold for the use of a unique emission factor for coal is removed.
9. A threshold is created for low level greenhouse gas materials of 5000 tonnes for an activity, equal to the removals threshold.
10. References to reducing agents are changed to carbon inputs under the iron and steel sector.
11. The carbon content for coke and Melter electrodes is determined from the material data sheet supplied with the material.
12. The effective date of registration or deregistration as a participant by purchasers of coal or natural gas be changed.
13. That it reserves the right to make further submissions on any further new guidelines or standards.
14. That it should be provided with feedback on each of its submission points and be heard in support of this submission.

Section 2: Detailed Submission on the collection of data and information and calculation of emissions

1. Submission deadline

Given that

- i) considerable changes have been made to the *Climate Change (Stationary Energy and Industrial Processes) Regulations 2008 (Draft for Consultation)* to produce the revised set of regulations, and
- ii) some of the changes are significant and require considerable deliberation e.g. the removal of default emission factors (DEFs) for natural gas, Schedule 2, Table 5 Part D from the 1st set of regulations, and
- iii) only 29 working days were given to firms with limited resources to review the revised regulations, whereas it took 6 months for numerous officials to revise the regulations, and
- iv) the Ministry for Environment (MfE), by its own admission, recognises the regulations are incomplete in so much as they have indicated that further work is required to ensure the regulations are robust as indicated in the Emissions trading Bulletin 10, June 2009 at the following references
 - on pp 2, “Further consultation on the development of thresholds will be undertaken with interested people.”,
 - on p 5 “Further feedback is sought from coal miners on the treatment of coal seam methane in the NZ ETS, and how this can be best measured and reported.”
 - on p 9 “However, further information is required to identify what specific proportion of limestone use results in emissions before a more accurate emissions factor can be included in the regulations.”
 - on p 9 under Cable production , “Further consultation with participants will be undertaken to progress this issue.”,and
 - as stated on pp 10 under “Further Engagement” for the development of thresholds and exemptions.

NZ Steel submits that further time is provided to review and resolve the issues manifest in the *Climate Change (Stationary Energy and Industrial Processes) Regulations 2009 (Draft for Consultation)*, and in the accompanying explanatory *Emissions Trading Bulletin Draft climate change regulations for stationary energy, industrial processes and liquid fossil fuels No.10 June 2009*, In deed to ensure the integrity of the regulations is maximised, we believe entry of the SEIP sector to the Scheme should be delayed for at least 12 months.

2. Opt-in Requirements - whether purchased directly from a miner or not

Under Regulations 44 and 47 of the *Climate Change (Stationary Energy and Industrial Processes) Regulations 2009 (Draft for Consultation* , Schedule 4 part 4 of the Climate Change Response(Emissions Trading) Amendment Act 2008 (p223) and in the Emissions trading Bulletin 10, June 2009, “draft climate change regulations for stationary energy (p4), industrial processes and liquid fossil fuels, activities with respect to which persons may be participants, opt-in is not allowed unless coal or gas, respectively, is purchased directly from a miner.

New Zealand Steel submits that providing the quantity, which may be used to demonstrate that an entry threshold has been met for the use of any materials where carbon emissions may arise, can be verified and the level of carbon can be ascertained which may contribute to carbon emissions then a firm should be allowed to opt-in as a participant irrespective of whether the material was purchased from a miner or not.

3. Natural Gas Opt-in – entry requirements

Under Regulation 47 of the *Climate Change (Stationary Energy and Industrial Processes) Regulations 2009 (Draft for Consultation* or Schedule 4 part 4 of the Climate Change Response(Emissions Trading) Amendment Act 2008 (p223) and in the Emissions trading Bulletin 10, June 2009, “draft climate change regulations for stationary energy (p4), activities with respect to which persons may be participants, opt-in is not allowed unless gas is purchased directly from a miner.

NZ Steel believes from its recent discussions with Ministry for Environment officials, on June 16th 2009, that their primary reason for disallowing opt-in participants whom are unable to directly purchase their natural gas from a miner is because they consider that determining the carbon content at the point at which the party took the gas i.e. at point of sale, from the gas pipeline was uncertain.

Daily analyses of natural gas, however, are available for a firm to be able determine the composition of the gas hence the carbon content should it wish to do so from its gas supplier. While this is measured at the closest welded point upstream of a firm, and therefore upstream of the point of sale, there is no alteration to the gas purchased and this analysis or measurement should be allowed to be applied to the gas purchased for consumption. NZ Steel submits that a change to the relevant sections of the regulations and an amendment to the relevant sections of the act is made to allow opt-in for purchasers of natural gas not directly from the miner are allowed providing the carbon content of the purchased natural gas can be determined and verified.

NZ Steel has attached information obtained from its gas supplier which may be used to verify carbon content of the gas it purchases. See Appendix 1.

The other metric which needs consideration is the quantity of gas purchased to ensure the consumption of natural gas and hence the subsequent emissions are fully accounted for. Providing a certified meter is used to determine the quantity of gas at point of sale and these quantities are available for scrutiny this should satisfy any requirement for demonstrating quantity at point of sale. It should be noted such meters are of high standard as is the requirement for any revenue meter. Furthermore it should be emphasised that under the current draft regulations the metered quantity which would be used for determining carbon pass through by a shipper to a customer costs would be the very same meter used, therefore it is logical this should be allowed.

4. Opt-in participants– threshold quantity

New Zealand Steel submits that firms who purchase quantities of natural gas or coal in excess of 1.75 petajoules, or 50,000 tonnes respectively should be allowed to opt-in as a participant.. In discussions with the MfE, viz in a meeting with officials at New Zealand Steel on the 16th June, New Zealand Steel attempted to ascertain the reasoning behind the setting the threshold levels for coal and natural gas from officials. Officials could not provide any reasoning to substantiate the levels were set correctly other that they were in the right order of magnitude.

NZ Steel submits that the threshold level for natural gas be lowered from 2 to 1.75 petajoules. It does so on the basis that NZ Steel is one of the largest integrated industrial natural gas users in New Zealand with numerous gas appliances and with an average consumption between 1.9 to 2.1 PJ and that not allowing entry on the current level would be ill conceived. In re-defining these levels it would also roughly align them in terms of emissions around an order of magnitude of 100,000 tonnes of CO_{2-e} for both materials.

5. Reporting of natural gas consumption on a volumetric basis

New Zealand Steel submits for the sake of continuity both for emissions' returns and for reporting purposes the reporting of natural gas consumption should be on a volumetric basis and not as per Regulation 48(1)b i.e. on a mass basis. While mass may be determined, consumption on a volumetric or energy equivalent basis has been an industry standard and is used in the suppliers' calculations for energy content which sales delivery is based upon. To back calculate mass using molar composition is not the current practice and would impose an unnecessary compliance burden.

6. Coal opt-in participant – liability basis on consumption

New Zealand Steel appreciates the New Zealand government has certain obligations to report its national inventory under the Kyoto Protocol. Under the Climate Change Response (Emissions Trading) Amendment Act 2008 and the draft *Climate Change (Stationary Energy and Industrial Processes) Regulations 2009* the New Zealand government has provided the opportunity for opt in participants to be responsible for their liability for emissions from coal purchased from the miner. In doing so there is a) a requirement for the participant to purchase New Zealand Units to cover the emissions associated with all the coal that has been purchased, and b) to report on the emissions associated with all the coal that has been purchased. In doing so, if there is any discrepancy between the amount purchased and the amount used a stockpile adjustment is the only provision to account for such a discrepancy.

New Zealand Steel submits¹ that for an opt in participant there should be a) a requirement for the participant to purchase New Zealand Units to cover the emissions associated with all the coal that has been consumed, and b) to report on the emissions associated with all the coal that has been consumed.

7. Verification of calorific value for coal

The regulations currently do not require any coal analyses, such as required for a unique emission factor, if a default emission factor is adopted by an opt-in participant. Regulation 45(1) b, however, is in contradiction with this as it requires sampling and analyses to determine the calorific value of coal which is to be supplied by the participant as part of the emissions returns, and reporting process. New Zealand Steel submits that the calorific value is determined via sampling over 3 periods such as required for a default emission factor, *Climate Change (Unique Emissions Factors) Regulations 2009* Regulation 10.

¹ NZ Steel submitted in December 2008 that coal consumption is a more appropriate measure than the amount received or purchased. NZ Steel submission to Ministry for Environment on the draft Climate Change (Stationary Energy and Industrial Processes) Regulations Sect2. point 6.

8. Unique Emission Factors – Threshold

The Ministry's reasoning for the setting of an emission threshold for coal was meant to be stated on p10 or in Appendix 4 of the bulletin headed "The rationale for thresholds in each sector is as follows.." is flawed as no reasoning is provided, and the level is just set at arbitrary levels of either averages or standard deviations. This is unreasonable and there should be no threshold for a UEF on the proviso that the methodology for determining a emission factor is followed as already provided in the regulations.

9. Introduction of a materiality threshold for carbon inputs

New Zealand Steel submits that a materiality threshold for carbon inputs generating minimal emissions is established. It is proposed that this is set at 5000 t CO_{2-e} per firm . This provision would exclude any liability for, including the reporting requirements for those emissions. This provision would also align with the provision of a threshold level set for removals in the revised regulations.

Owing to the variety of industrial processes in New Zealand, carbon is embedded in a number of product and waste streams. The regulations must recognize and allow for this, and not repudiate this. Therefore an allowance must be provided, within the regulations, such that a firm can ignore the minimal quantity of embedded carbon. This is agreed in principle by the MfE's commissioned report :Review of Draft Climate Change Legislation, April 2009, 2.3h, and Bulletin 10 p8 Section "Steel" An example of this is, at the end of the iron and steelmaking process the steel has carbon alloys added to it which are not lost in any downstream processes.

In addition in steelmaking there are materials such as "Heatraiser" which provide little emissions and materials which are difficult to analyse for carbon content. See Appendix 2 for consumption data of carbon inputs, including those which result in minimal emissions i.e. Heatraiser and Recarburiser.

10. Reference to reducing agents to be changed under the iron and steel sector

New Zealand Steel submits that references to reducing agents where relevant i.e. in the guidance manual, calculation forms, regulations, and act are changed to carbon inputs for the iron and steelmaking sector. The reason for this change is that carbon inputs to the processes are not necessarily for the purposes of reduction, and can be for the purposes of oxidation, or alloying. The inclusion of reference to carbon inputs is referenced in Sect 2.5 Review of Draft Climate Change Legislation, April 2009, Aurecon. The review however opted to retain the reference to reducing agents. This would be acceptable if the distinction was correctly made for each input. As it is expected that this would not be done and for the sake of overall simplicity referencing would be preferable to be termed as “carbon inputs” for all carbon containing materials which are consumed by the iron and steelmaking process excluding coal.

11. Verification of carbon content of carbon inputs

The New Zealand Government has proposed in the revised regulations that DEFs are not available for carbon inputs for iron or steel. Instead there has been a proposal that the level of carbon is converted to carbon dioxide emissions by the stoichiometric conversion of 3.67. There is a distinct absence of any methodology or policy of what will be an accepted standard for verifying the carbon content a firm may provide, and the frequency that will need to be re-verify this on an ongoing basis. New Zealand Steel submits that it uses the carbon content in the material data sheet provided by the suppliers of the materials as i) testing is not practical for electrode paste , and ii) additional analysis for the carbon content of coke downstream of the supplier is unnecessary duplication.

12. Effective date of registration or deregistration as a participant by purchasers of coal or natural gas

Currently a firm may register or deregister under section 209(2b) and 209 (3b) of the Act, with the effective date of registration or deregistration for a participant being 12 months or 48 months, respectively.

NZ Steel submits that this is reduced to a minimum of 3 months providing registration or deregistration is signified prior to October 1 of any given year, and the upstream affected party is in agreement. Should the upstream affected party not be in agreement the time frame should be extended to a minimum of 12 months providing registration or deregistration is signified prior to December 31 of any given year. This is considered to provide sufficient time for any discussion between affected parties and for the processing of any associated documentation. While we appreciate this requires an amendment to the act we urge officials to recommend this for discussion in the amendment process, as is in their power to do so.

13. Further guidelines or standards – right to submit on

Regulation 4 states the “*chief executive may... issue guidelines or standards in relation to the information required to be collected by these regulations*”. New Zealand Steel submits that any firm subject to the regulations should be provided with the right to be able to submit on any such guidelines or standards.

14. Submission – feedback

In a recent teleconference with MfE officials, on the 30th June 2009 there was an indication that individual feedback would not be provided to individuals or firm’s submissions. NZ Steel submits that as a potential major participant in the Scheme, it should be provided with feedback on each of its submission points.

Section 3: Appendices

Appendix 1 – Gas Analyses of Natural Gas Supplied to New Zealand Steel May 1st to 15th 2009

DATE:	1/05/2009	2/05/2009	3/05/2009	4/05/2009	5/05/2009	6/05/2009	7/05/2009	8/05/2009	9/05/2009	10/05/09	11/05/09	12/05/09	13/05/09	14/05/09
SG	0.7185	0.7189	0.7127	0.7082	0.7122	0.7154	0.7093	0.7111	0.7105	0.7066	0.7146	0.7111	0.7176	0.7205
CV	41.4933	41.4672	41.2523	41.0068	41.0978	41.2860	40.9331	41.0722	41.1019	40.8597	41.2925	41.0264	41.3186	41.1088
PROPANE C3	3.8394	3.8323	3.6595	3.5105	3.6059	3.7262	3.4902	3.5721	3.5735	3.5241	3.7172	3.5505	3.7434	3.7093
I-BUTANE IC4	0.6917	0.6870	0.6492	0.6171	0.6354	0.6705	0.6124	0.6331	0.6312	0.6274	0.6504	0.6214	0.6748	0.6807
N-BUTANE NC4	0.7780	0.7667	0.7263	0.6976	0.7122	0.7429	0.6823	0.7068	0.7149	0.7104	0.7251	0.6918	0.7589	0.7633
I-PENTANE IC5	0.1592	0.1584	0.1518	0.1382	0.1435	0.1499	0.1374	0.1401	0.1422	0.1378	0.1503	0.1403	0.1550	0.1510
N-PENTANES NC5	0.1193	0.1192	0.1128	0.1025	0.1064	0.1126	0.1008	0.1041	0.1065	0.1025	0.1136	0.1043	0.1149	0.1119
NITROGEN N2	0.1776	0.1786	0.4698	0.6960	0.5326	0.3610	0.7136	0.5886	0.5596	0.8298	0.3673	0.6390	0.3149	0.3563
METHANE C1	80.3701	80.3346	80.8222	81.1083	80.7938	80.5980	80.9777	80.8790	80.9824	80.9940	80.7042	80.8631	80.3792	80.0548
CO2	6.0587	6.1074	5.7613	5.5980	5.8570	5.9644	5.7305	5.7797	5.7268	5.5654	5.9015	5.7915	6.0941	6.4726
ETHANE C2	7.7282	7.7222	7.5583	7.4797	7.5443	7.6014	7.4891	7.5245	7.4935	7.4246	7.5576	7.5054	7.6868	7.6439
HEXANES C6+	0.0829	0.0821	0.0742	0.0664	0.0689	0.0783	0.0660	0.0720	0.0695	0.0678	0.0777	0.0665	0.0781	0.0745
TOTAL	100.0051	99.9885	99.9854	100.0143	100.0000	100.0052	100.0000	100.0000	100.0001	99.9838	99.9649	99.9738	100.0001	100.0183
Daily Averages														
SG	0.7186	0.7191	0.7154	0.7088	0.7058	0.7154	0.7093	0.7111	0.7105	0.7066	0.7142	0.7145	0.7156	0.7205
CV	41.4932	41.4402	41.3887	41.0480	40.7988	41.2860	40.9319	41.0722	41.1019	40.8597	41.2673	41.2408	41.1966	41.1088
N2 %	0.1800	0.1840	0.3110	0.6670	0.8690	0.3610	0.7170	0.5890	0.5600	0.8300	0.3900	0.4220	0.4190	0.3560
CO2 %	6.0626	6.1434	5.8822	5.6146	5.5585	5.9644	5.7325	5.7797	5.7268	5.5654	5.8939	5.9144	6.0350	6.4726

Appendix 2 - Steelmaking additions - contribution to carbon emission levels
at New Zealand Steel

Coke consumption	Coke t	C Content @ 93.9%	CO _{2-e} t
2008	5154	4840	17,733
2007	5232	4913	18,003
2006	5059	4750	17,405

Heat raiser Consumption	Heat raiser t	C Content @ 20%	CO _{2-e} t
2008	1,834	367	1,344
2007	1,412	282	1,035
2006	189	38	138

Recarburiser Consumption	Recarburiser t	C Content @ 94%	CO _{2-e} t
2008	228	214	784
2007	274	257	943
2006	250	235	863

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