**Submission by New Zealand Steel Limited on**
**The Gas Industry Company's**
**Statement of Proposal Transmission Pipeline Balancing Paper**

**by**

**New Zealand Steel Limited**
**October 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 wishes to make a submission on the Gas Industry Company Limited's October 2009 paper "Statement of Proposal Transmission Pipeline Balancing Paper"

## Company Profile

New Zealand Steel is a subsidiary of an Australian publicly listed company, BlueScope Steel Limited. It produces a range of iron and steel products from raw materials at its single site mill at Glenbrook on the southern shores of the Manukau Harbour. It lies in the Franklin District near the town of Waiuku. It began production in 1968 and major expansions completed in 1987 created an integrated steel mill.

New Zealand Steel produces a range of flat steel products for both domestic and export markets. Slabs are rolled into hot and cold rolled products, which are then on-sold or further-processed into products like hollow sections, galvanised steel, ZINCALUME® steel and COLORSTEEL® steel.

**Background:**

Natural gas is consumed at the New Zealand Steel Glenbrook site in a variety of processes associated with iron and steel making, and steel rolling and finishing operations. Site consumption ranges from 1.8PJ to 2.2PJ per year. The predominant use of natural gas is in the Hot Strip Mill Slab Reheat Furnace, which consumes approximately 50 % of the gas delivered to site, or approximately 1PJ per year. Other uses are of considerably less volume and distributed widely across site. Usage patterns are volatile with a high degree of variability both on an inter and intra day basis.

While the predominant use of natural gas at NZ Steel is as an energy source, natural gas is also used for specialist purposes such as a coolant in the steelmaking process, and for influencing the ironmaking chemical process if required.

**Submission:**

New Zealand Steel (NZS) has reviewed the Gas Industry Company's (GIC) Statement of Proposal Paper published in October 2009, participated in the GIC Industrial Code Development process for a Natural Gas Balancing Policy, and is in general agreement with the recommendation made by the GIC to adopt the Participative Regulation Option as described in the paper.

Following the changes to the Maui Pipeline Operating Code (MPOC) since they came into effect on the 12th December 2008 it has been clearly apparent that the mechanics and outcomes of pipeline balancing are misaligned with the primary goals as defined by the GIC in their 1st Transmission Balancing Options paper as criteria for assessment of balancing options. These are:-

- the relevant service standard is that pipeline pressures should be maintained within an appropriate band, both for safety and so that transmission services are not interrupted; and
- the relevant aspect of 'economic efficiency' is that balancing is achieved at least cost

This submission will not necessarily restate previous assertions made in NZS Submissions addressing the GIC's various published papers, addressing the shortfall in current pipeline balancing, instead it will briefly attempt to reiterate these and illustrate the requirements and framework necessary for an industrial end user to responsibly perform balancing actions in the following section followed by a section responding to the questions posed by the GIC.

**Transmission Pipeline Self Balancing – Role of nomination cycle timing**

NZ Steel makes its submission from the perspective of an integrated industrial end user of natural gas with a unique profile of gas usage. Initially, we detail our concerns, as such, where we believe we may best contribute to the development of an improved balancing policy.
While we have opinions regarding the higher level architectural change of a unified balancing regime and the necessary requirements to augment such a regime we believe this is more a consideration for Transmission System Operators and shippers who have, respectively, greater sway over the outcome to such a move.
While NZ Steel has an average daily natural gas consumption of approximately 5.5 TJ, the daily profile, however, ranges from being mildly variable to erratic, reflecting the batch and episodic processes associated with its use.
This can result with a daily upper and lower limit of 2 and 10 TJ respectively. Changes in rates of consumption can occur anytime during the day for numerous reasons all of which are not necessarily predictable and can result in significant mismatches between nominated scheduled quantities and actual consumption.
While we endorse that the principle of attributing balancing costs to causers should be firmly incorporated in Balancing Policy there needs to be consideration on how to accommodate end users with a high degree of variability within their consumption profile. While we are open to suggestions on this matter we consider the best possible way to accommodate users with such high degree of variability is to provide them with the ability to change their scheduled quantity of gas take, in line with this variability i.e. via the nomination process. This gives them the opportunity to participate in "self balancing", and thereby provide other pipeline users the benefits of performing this action. Realistically, this brings into focus the role the intra-day nomination process has to play, which currently, NZS generally only uses the ID3 and ID4 intraday nomination cycles.
Little opportunity currently exists for personnel, assigned to this task, to update and improve their accuracy of the predicted schedule quantity as the day progresses. The last opportunity of the day, (to update the daily nomination to the shipper), is at 1600 hrs, for gas flows for the effective period from 1900 – 2359 hrs. This is severely limiting for an industry subject to variations of the type and nature previously outlined.
If the timing of intraday cycles were readily accessible and usable, pipeline users would provide additional adjustments to their scheduled quantities to match their consumption resulting in better self balancing of the pipeline.
We acknowledge there is a cost inherent by incorporating an additional cycle within OATIS and therefore we consider that if this proves an unviable option (cost/benefit) the issue can still be significantly mitigated by moving the effective timings across the working day to facilitate additional balancing flexibility.
For example the effective cycle timings could be as follows:

| Proposed | vs | Original |
|---|---|---|
| ID 1 0700 | | 2359 |
| ID 2 1200 | | 0700 |
| ID 3 1600 | | 1300 |
| ID 4 2000 | | 1900 |
| CP 2100 | | 1800 |

If the above changes were accepted (without deducting the 2 hours required for confirmation or

any additional requirement shippers may have on their end users to confirm their re-nominations this change may effectively provide) an additional usable cycle i.e. the ID2 cycle.

**Compression of the confirmation process**
An additional enhancement to the nomination process is proposed, which is the reduction of the existing 2 hour confirmation and approval process period. MDL had raised this before when attempting to address the limitation of the timing of the nomination process. Similarly compression of any additional notification period shippers place on the end users should be encouraged.
We believe the above options should be explored, discussed with pipeline TSO's, shippers and users alike with some iteration being adopted.

**Tolerances**
While on principle it is recognised that the existing tolerances at welded points are too large and allow for the cost of balancing actions to be socialised rather than recovered we believe that while change is necessary it needs to be made progressively. We believe that monitoring of balancing performance should take place to assess the effects of any implemented changes with the changes taking place in a staged manner if practicable.

**Participation in Balancing Actions**
New Zealand Steel believes that all end users capable of taking part in transactions with a balancing agent should be allowed to do so.

**Answers to Questions as posed in the Consultation Document**

| QUESTION | COMMENT |
|---|---|
| Q1: Do you agree with Gas Industry Co's decision to pursue the ICD process? If not, why? | Yes, as we believe although compromise will be necessary this process will, by and large, produce a balancing policy commensurate with the needs of all parties. Albeit, if the process fails we will work with GIC to validate any proposal to the Minister to meet both the intent to apply downward pressure (costs) and which facilitates GIC in the application of there overall terms of reference/mandate |
| Q2 Do you agree with Gas Industry Co's proposal to pursue the participative regulation option? If not, why? | Yes, the outcome has greater possibilities for having more flexible arrangements which could result in achieving better "self – balancing" of the pipeline with less intervention required by a balancing agent, with the caveat that if outcomes do not meet the intent for downward pressure regulations will become a preferred option as a growth stimulus |
| Q3: Do you agree that the draft rules adequately address issues with respect to residual pipeline imbalance? If not, why? | Yes, in the majority we believe that this approach addresses the core issues. However we believe that adjustment to nomination cycle timing needed to be included within the scope of work as this enhances users ability to self balance. |
| Q4: Do you have any comments on the major operational provisions? | Generally no. The specific methodology for ensuring balancing actions are kept to a minimum and hence costs are kept to a minimum needs to be carefully crafted. |
| Q5: Do you agree with Gas Industry Co's decision not to include curtailment, damages and tolerances? If not, why? | Yes, CCO rules adequately cover these components. |

| QUESTION | COMMENT |
|---|---|
| Q6: Do you agree with the details of the balancing plan? If not, why? | Yes, once again, provided it has incorporated changes to the timing of the nomination cycles to ensure the nomination process is more flexible. |
| Q7: Do you have any other comments on any aspects of the proposal? | On the subject of improving the information to assist in improved balancing there needs to be consideration given to the quality of shippers' data. Variance in quality needs to be scrutinised with consideration given to implementing a standard such that accuracy is improved to allow for less changes between unvalidated and validated data. Some end users have experienced problems with errors in mismatch correction as a result of the gas analysis not being validated on weekends resulting in a significant difference which can affect mismatch correction. |
| Q8: Do you agree with the proposed next steps? If not, why? | Yes, although should the ICD process not deliver an outcome to satisfy the GIC's requirement we trust the ideas generated within the forum (which have merit) are incorporated in any recommendation to the minister. |