Guidelines on Net TQ adjustments for the New Zealand Gas Exchange

Purpose

Curtailments at the Trading Hub may lead to differences between Participants' Net TQ and Approved Nominations at the Trading Hub. These differences will be cashed out under the Participant Variance Agreement, but Participants can take action in some circumstances to modify their Net TQs and therefore reduce their Participant Variances. This document outlines the principles Gas Industry Co will use in determining Participants' Net TQ and provides examples of representative scenarios.

Introduction

The Trading Hub of the New Zealand Gas Exchange is made up of two co-located Welded Points, Trading Hub Delivery (TH Delivery) and Trading Hub Receipt (TH Receipt)¹. It is the treatment of these two points in the OATIS system that creates the need for the calculation of Participant Variance.

On any given day, the amount of gas delivered to TH Delivery by sellers should equal the amount of gas uplifted by buyers from TH Receipt. That is, the Trading Hub should be in balance, as depicted in the diagram below.



However, there are no mechanisms available in OATIS to ensure that the Scheduled Quantity at TH Delivery equals the Scheduled Quantity at TH Receipt. As far as OATIS is concerned, gas leaves the pipeline at TH Delivery (as it does at other delivery points on the Maui pipeline), and gas enters the system at TH Receipt (as it does at other receipt points). This inability of OATIS to "see" through the Trading Hub gives rise to two potential situations at the Trading Hub that need to be worked around:

¹ Unless indicated otherwise, capitalised terms in this document have the same meanings as in the Rules of the New Zealand Gas Exchange and the Maui Pipeline Operating Code (MPOC).

1. Imbalances caused by improper participant nominations to and away from the Trading Hub.

Under Gas Industry Co's interconnection agreement with MDL, any imbalances at the Trading Hub will be cashed out by MDL at the end of each transmission day. Gas Industry Co, in turn, will cash out the trader(s) responsible for the imbalances. This process is provided for under the provisions of the Participant Variance Agreement and will not be addressed further in this document.

2. Instances where MDL curtails Approved Nominations at the Trading Hub.

Under section 15.1 of MPOC, MDL can curtail Approved Nominations to prevent imbalances occurring at the Trading Hub. Potential imbalances can arise from incorrect or omitted Trading Hub nominations or from contingencies elsewhere on the Maui pipeline that affect Trading Hub nominations. If such a situation arises, MDL may take action by reducing the Scheduled Quantity at the opposing side of the Trading Hub and scaling the associated Approved Nominations. Examples of such situations are depicted below.

Upstream curtailment example



Downstream curtailment example



If such curtailment at the Trading Hub occurs, the Trading Hub will be in balance, but the scaled Approved Nominations will no longer be equal to participants' Net TQs. As a result, some participants may get title to less gas than they should, while others may get more, as shown in the examples above.

These differences between Net TQ and Approved Nominations will, as a default, be settled via the Participant Variance Agreement. However, in some situations, Gas Industry Co may exercise its ability to adjust Net TQ as per clause 3.3 of the Participant Variance Agreement.

In essence, responsibility for participant variance rests with the party whose inability to deliver (or uptake) caused the variance, but this responsibility can be relieved at the point, and the extent to which, the party's counterparty can take action to avoid its own participant variance. The following principles will be used by Gas Industry Co in determining any adjustments to Net TQ.

Principles:

- These principles relate solely to the adjustment of Participants' Net TQ for the purposes of calculating Participant Variance. Neither the occurrence of curtailments at the Trading Hub nor the undertaking of any actions outlined in this document relieves Participants of any obligations they are required to perform under Contracts they have entered into (except as permitted by those Contracts; for example, a force majeure provision).
- 2. A Curtailed Position occurs where a Participant:
 - (a) has an Approved Nomination curtailed under MPOC; and
 - (b) cannot fully effect trades under one or more of its Contracts on that Transmission Day as a result of that curtailment; and
 - (c) does not avoid the resulting Participant Variance by sourcing an alternate supply of gas or reprioritising a pooled nomination under MPOC (where the Participant has a Net TQ sell position) or by using an alternate delivery location (where the Participant has a Net TQ buy position).
- 3. A Notification Process means:
 - (a) determining the extent to which there is a difference between the Participant's Approved Nominations and its Net TQ as a result of a curtailment (Reduction), and calculating the effect of the Reduction on the volume of gas to be sold to, or purchased from, other Participants under its affected Contracts (Counterparties), by pro-rating the Reduction across all Counterparties; and
 - (b) notifying each Counterparty prior to the next Nomination Cycle of the relevant Transmission Day of the existence of its Curtailed Position and the effect the Reduction will have on the volume of gas to be sold to, or purchased from, that

Counterparty, so as to give the Counterparty opportunity to take action to avoid or reduce its Participant Variance.

- 4. A Participant with a Curtailed Position may, in order to mitigate exposure to Participant Variance, follow the Notification Process.
- 5. Each Counterparty notified under the Notification Process may in turn follow the Notification Process in respect of its affected Contracts.
- 6. The extent to which a Participant has followed the Notification Process may be taken into account by the Industry Body in determining whether or not it will adjust the relevant Participant's Net TQ under clause 3.3 of the relevant Participant Variance Agreement.
- 7. Participants who wish to have their Notification Process actions taken into account by the Industry Body in determining whether or not it will adjust that Participant's Net TQ under clause 3.3 of the relevant Participant Variance Agreement must provide evidence of their actions to the Industry Body within one business day after such action is taken.
- 8. Counterparties whose Approved Nominations at the Hub are curtailed under MPOC, but who have not been notified by a Participant through the Notification Process, may endeavour to contact the relevant Participant to determine whether trades can still be fully effected under that Counterparties' Contracts. For trades that can still be fully effected under its Contracts, that Counterparty may endeavour to re-nominate and obtain Approved Nominations to match its Net TQ.
- 9. Outlined below are a number of possible balancing scenarios. Gas Industry Co will use the closest applicable scenario in determining Participants' Net TQ following one or more curtailments at the Trading Hub. Attached as an appendix is an Excel spreadsheet with similar examples that include consideration of deemed flow in the variance calculations.

Variance Definitions:

Participant Variance (section 5 of PVA): difference, in GJ, between a Participant's Approved Nomination at the Trading Hub and Net TQ, calculated as follows:

For nominations <u>at the TH Delivery Point</u>: Participant Variance = Approved Nomination – Net TQ

For nominations <u>at the TH Receipt Point</u>: Participant Variance = Net TQ – Approved Nomination **Forced Variance** (section 7 of PVA): exists for a Participant if, on a Transmission Day, that Participant has had its Approved Nomination at the Trading Hub curtailed through an action taken under section 15 of MPOC to balance the Trading Hub; and there are no Intra Day Cycles remaining for that Transmission Day. Forced Variance is calculated as follows:

For nominations <u>at the TH Delivery Point</u>: Forced Variance = [curtailed nominations as above] – Net TQ

For nominations <u>at the TH Receipt Point</u>: Forced Variance = Net TQ – [curtailed nominations as above]

Curtailment Scenarios

Scenario	Upstream curtailments	Downstream curtailments
No nomination cycles left	1	8
With notification but not renomination	2	9
With notification and partial renomination	3	10
With notification and partial renomination; further curtailment	4	
With notification and full renomination	5	
Intermediate trades, no nomination cycles left	6	11
Intermediate trades, partial notification	7	12
Intermediate trades with notification and renomination		13

In the scenarios below:

- black quantities represent the Net TQs and Approved Nominations of Participants prior to any curtailment;
- red quantities represent curtailed nomination quantities;
- blue text represents Adjusted Net TQs; and
- green text represents subsequent Approved Nominations.

Upstream Curtailments



Scenario 1: Upstream curtailment, no nomination cycles left

No nomination cycles remain after curtailment, so A, B, and C have no opportunity to mitigate their variance. This is a situation where the Forced Variance provisions apply: A, B, and C are cashed out at the higher Negative Cash Out price.

Upstream curtailments with notification

Scenario 2: Y notifies B/C, neither B nor C re-nominates; A does not renominate (A, B, and C all have opportunity to renominate but do not)



Scenario 3: Y notifies B/C, neither B nor C re-nominates; A does renominate

Hub is out of balance: SQ = 4000 at THD; SQ = 5500 at THR



Scenario 4: Y notifies B/C, neither B nor C re-nominates; A renominates; second balancing action is run (no more nomination periods)



Scenario 5: Y notifies B/C and both B & C re-nominate



Cash-outs depend on whether A re-nominates or not:

If A re-nominates 3000 and it is approved, then A's AN = Net TQ and there is no participant variance.

If A <u>fails</u> to re-nominate and its previous (curtailed) nomination is carried through, then A will have a positive participant variance of 3000 – 1500 = 1500. In this case the TH will be out of balance and MDL will cash-out GIC for 1500 at the positive mismatch price. GIC, in turn, will cash A out for its positive participant variance under the PVA.

Upstream curtailments with intermediate trades





Scenario 7: Y notifies B & C, B does not notify D (intermediate trade)



Downstream curtailments

Scenario 8: Downstream curtailment, no nomination cycles left



Downstream curtailments with notification

Scenario 9: Y notifies B and C, but B and C don't renominate



Scenario 10: Y notifies B and C, and B and C renominate - A doesn't



Downstream curtailment with intermediate trades

Scenario 11: Downstream curtailment, intermediate trade, no nomination cycles left



Scenario 12: Y notifies B, C, and D, who do nothing (intermediate trade)





Scenario 13: Y notifies B, C, and D; D notifies B; B and C renominate (intermediate trade)

If A has renominated its Net TQ of 3000 (as it hasn't heard from its counterparty), then the hub is in balance. If A has not renominated, then it has PV of 1500-3000= -1500, which would be cashed out at the negative cash out price.