

MEMORANDUM

TO: GTAC Stakeholders
FROM: First Gas
DATE: 03 September 2018
RE: Supplementary Documents Workshop – Metering Requirements

The purpose of this memorandum is to provide an overview of First Gas' approach to the following metering related issues:

1. Treatment of Existing Metering Systems;
2. Upgrade of material component within an Existing Metering System;
3. Mandatory metering-related processes, information flows or requirements;
4. How are Low Flows addressed?
5. Change Control Process for Metering Requirements;
6. Special Testing of Metering Systems;
7. Availability of Metering Test Results.

Where relevant references will be made to the following documents:

- Draft Metering Requirements Document;
- Template Receipt Point & Delivery Point Interconnection Agreements (ICA's); and
- Draft Gas Transmission Access Code (GTAC).

First Gas personnel met with the technical representatives from GTAC stakeholders during July to discuss metering requirements generally. Material pertaining to that session is available on the GIC website. First Gas did seek feedback from that meeting and specifically raised some of the points above for stakeholder comment. First Gas has considered that feedback and where relevant has incorporated it into the draft Metering Requirements document.

1. How does First Gas intend to treat existing metering systems?

Metering Systems in existence as at the GTAC commencement date (Existing Metering Systems) will be initially excluded from compliance with the revised Metering Requirements Document, except as expressly provided for in a TSA or ICA.

However, First Gas intends to adopt an approach whereby all Metering Owners will need to ensure that by 2 years from the commencement of GTAC (the Sunset Date) their Metering Systems comply with the Metering Requirements. This requirement is also reflected in section 7.13(g) of the GTAC.

The Existing Metering System owners are to continue to maintain their compliance with the technical standards and testing requirements that applied immediately prior to GTAC commencement until the Sunset Date.

Existing Metering System owners can "opt in" to the revised Metering Requirements prior to the Sunset Date. This will need to be reflected in their ICA with First Gas.

First Gas intends to operate its ~120 Metering Systems in accordance with the new Metering Requirements due to the economic and operational efficiencies we consider the new arrangements will bring.

The purpose of including the Sunset Date is not to compel asset upgrades to the physical Metering Systems and impose a capital cost on Existing Metering System Owners. In fact, we consider that Existing Metering System owners will be able to comply without incurring any capital expenditure. We

believe that that various assets and equipment that comprise a metering system tend to be regularly updated as a matter of course when previous components become obsolete or as more preferable options become available. Rather, our intention with introducing the Sunset Date is to move Metering Owners in New Zealand towards a consistent governing framework and one that ultimately gives them more flexibility in design and maintenance of their systems.

For Existing ICAs under the VTC, any amendments to the Metering Requirements (including the Sunset Date) will only apply to the extent permitted by the ICA. Those parties will be required to comply with the revised Metering Requirements when they enter into a new ICA with First Gas.

2. Will an upgrade to a material component within an existing Metering system prior to the Sunset Date trigger a need to comply with the new metering requirements?

First Gas considers a material component within a metering system to include the following:

- a meter;
- a flow computer;
- a gas analyser (gas chromatograph);

Once one of these material components is replaced or materially upgraded then the metering system will no longer be an Existing Metering System. Consequently, the Metering Owner will be expected to comply with the parts of the new Metering Requirements applicable to that component. An upgrade of this nature will require discussion with First Gas prior to design, construction and commissioning. First Gas considers this would be the appropriate time for the Existing Metering System Owner to make a full transition to the new Metering Requirements. Any necessary amendments to the Metering Owner's ICA and Metering Manual would be made to accommodate the upgrade and compliance with the new Metering Requirements.

3. Are there certain mandatory metering-related processes, information flows or requirements that should apply to every metering system?

Yes. These are contained in both the GTAC and the ICA's that First Gas holds with Interconnected Parties. For example (noting this is not intended to be an exhaustive list):

- The GTAC requires that that there shall be Metering for every Receipt Point, Delivery Point and Bi-directional Point, which shall measure Gas quantities by direct measurement only and not by difference;
- ICAs require:
 - determination of gas quantities by direct measurement only and not by difference;
 - the Metering Owner to use reasonable endeavours, including by means of periodic testing, to ensure that Metering is accurate;
 - the availability of metering test results;
 - access to certain information including (but not limited to):
 - uncorrected and corrected volume flow rates;
 - mass and energy flow rates;
 - pressure and temperature at the meter;
 - density at flowing conditions;
 - Specific Gravity of Relative Density;
 - Gross and Nett Calorific Value;
 - Other gas composition information.
 - the production and making available of daily delivery reports (DDR's) and hourly delivery reports (HDR's) based upon the information listed above.

- rights and obligations with respect to excessive or low flows through a meter.
- compliance with the Metering Requirements.
- Both the GTAC and ICAs
 - allow for the special testing of Metering on a periodic basis (discussed further below); and
 - metering corrections where any Metering is found to be Inaccurate.

4. How are “Low Flows” addressed under an ICA?

Section 3.4 of the template Receipt Point ICA and section 3.5 of the template Delivery Point ICA address the issue of low flows through a meter.

Where gas is injected at a Receipt Point or Delivery Point at rates less than the minimum design flow rate to the extent that, in First Gas’ reasonable opinion, the accuracy of the metered quantities at that point is adversely affected, First Gas will notify the Interconnected Party. Unless the Interconnected Party can reasonably demonstrate to First Gas that those low Gas injection rates occurred during plant start-up and shut-down or were extraordinary occurrences and are unlikely to occur again, or that the Metering is Accurate even at those low Gas injection rates, First Gas may require the Interconnected Party at its cost to modify the Metering to improve the accuracy of metered quantities at low flow rates.

The Metering Owner will provide a correction for these low flows.

5. What “change” process should apply to the Metering Requirements?

First Gas has incorporated a change process into the Metering Requirements. The key points from that change process include:

- First Gas can make changes to the Metering Requirements at any time;
- When First Gas elects to make a change to the Metering Requirements it will publish the following information on OATIS:
 - a description of the proposed change to the Metering Requirements;
 - the reasons for the proposed change;
 - a marked-up version of the Metering Requirements showing any proposed amendments;
 - the provisional date on which the amended Metering Requirements would take effect.
- First Gas will consult with industry on all potential changes to the Metering Requirements and will consider stakeholder feedback including any potential impacts on businesses or operations.
- First Gas is willing to receive suggestions for changes to the Metering Requirements from Shippers and Interconnected Parties. However, the decision whether to progress such changes will be at the sole discretion of First Gas. If First Gas elects to not proceed with the suggested amendment(s) proposed by the Affected Parties, it will publish its reasoning on OATIS.

6. How does First Gas intend to approach rights for the special testing of metering?

The GIC’s Final Assessment Paper noted that the minimum 9-month interval between special metering tests proposed in the GTAC is worse than under the existing codes.

First Gas has agreed to change this timeframe in both the GTAC and ICA to align with the 3-month timeframe currently set out in the VTC.

7. What are parties' rights to receive the results of metering testing?

We propose to require that metering test records are retained and made available on request to:

- (a) a party to an ICA or TSA in respect of a Receipt Point or Delivery Point for which such Metering is used to derive the gas quantities either received into First Gas' pipeline for, or taken from First Gas pipeline by, such party; and;
- (b) the Gas Transfer Agent or the Allocation Agent, where such Metering is used to derive the gas quantities either received into First Gas' pipeline for, or taken from First Gas' pipeline by, more than one party.

The exchange of testing-related information between interconnected parties (Receipt or Delivery) will be addressed in the ICA between the parties.

Metering test records will be retained for a period of 7 years.