

31 July 2019

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Uploaded to the Gas Industry Company website

Dear Ian

Update of the gas measurement requirements and procedures document 2019

First Gas welcomes the opportunity to provide comments on the proposed update to the “Gas Measurement Requirements and Procedures” document (the document).

We understand the purpose of the update is to:

- Anticipate the Gas Transmission Access Code (GTAC) coming into effect; and
- Update any other areas of the document to improve accuracy and clarity.

Whilst we consider the proposed amendments reflect the GTAC requirements for gas measurement, we believe further work is required to improve the clarity and accuracy of the document. We would welcome the opportunity to meet with the Gas Industry Company (GIC) to discuss our concerns prior to finalising the proposed update of the document.

Our submission focuses on two areas:

- Clarifying the scope of document to focus on only natural gas; and
- Clarifying the interpretation of a “GMS” and the terminology used within the document.

We have provided minor comments and suggestions in **Attachment 1** to improve the accuracy or clarity of the document. We have also provided a marked- up copy of the document that highlights the points raised in our submission.

Clarifying that the document refers to the measurement of only natural gas

We consider that the scope of the document may be unclear as it does not specify which type of gas the document refers to. “Gas” as defined in the Gas Act 1992 means:

“any fuel that is supplied through pipes or in containers and is a gas at a temperature of 15°C and an absolute pressure of 101.325 kilopascals; and includes—

- (a) biogas, coal gas, liquefied petroleum gas, natural gas, oil gas, producer gas, refinery gas, reformed natural gas, and tempered liquefied petroleum gas;*
- (b) any gaseous substance that the Governor-General declares by Order in Council to be a gas for the purposes of this Act;*
- (c) any mixture of gases”*

As New Zealand’s energy industry continues to evolve, it is important that readers accessing the GIC documents are clear on what forms of gas the document refers to.

We understand the scope of the *Gas measurement requirements and procedures* document is the measurement of natural gas only. We recommend that this be made clear in the document to remove any possibility of confusion. References to “gas” in the title and introduction, for instance, should be amended to “natural gas”. We also recommend defining “gas” in the glossary to mean only “natural gas” for the purpose of this document.

Whilst possibly outside the scope of this review, we encourage the GIC to consider what would occur if other gases were blended with natural gas. Would we expect these measurement regulations to apply in such an instance or would we expect to see further consultation with the industry? As the

energy industry evolves, we should keep in mind the various requirements that will need to be reviewed and considered.

Clarifying the interpretation of a GMS

We are concerned that narrative of the document may blur the delineation between the meter and ancillary equipment. This may inadvertently extend the purpose of a gas measurement system (GMS), as described in the document, from that defined in the Gas Act 1992.

The Gas Act defines a GMS as:

... a system for measuring the quantity of any gas or the energy content of any gas, whether by actual measurement or estimation; and includes any equipment that forms part of, or is ancillary to, any such system.

This definition allows for quantity **or** energy to be measured by the GMS. However, the paper appears to interpret the definition as being a system for measuring the quantity of any gas **and** the energy content of any gas, rather than the more accurate “or” used in the Gas Act.

For mass-market consumers on networks, our understanding is that the measurement of quantity is conducted by the GMS and the retailers convert this quantity to energy to meet the reconciliation requirements. This aligns with the definition in the Gas Act that allows for quantity of gas or the energy content to be measured by the GMS. The subsequent conversion to energy by the retailers is not part of the GMS per se.

The delineation between the meter and the ancillary components is especially important for our distribution network, as the GMS assumes a metering owner not owners for a single GMS. The document consistently refers to a GMS in the manner of a single system. However, the metering installation as described in the document¹ is owned by a meter owner, while ancillary items are owned by the distributor or transmission system owner.

Consistency in terminology

We suggest that the mix of metering and ancillary equipment used interchangeably with GMS adds to confusion. There are several instances this appears to occur, and we mention two here by way of example:

- A metering station is referred to as being at each point of fiscal measurement.² In the same paragraph refers to a GMS at these points. We suggest the terms may not be interchangeable; and
- The document refers to a GMS including a gas chromatograph. In the same section, the language turns back to referencing a GMS. The requirements for the GMS/chromatograph appear to be the same in the document as a CVDD.³ If this is so, and gas chromatograph are the same, it would be useful to use the same terminology to avoid doubt. If they are not the same, this should be explained in the document narrative or in the glossary.

Contact details

As mentioned, we would welcome the opportunity to meet with the GIC to discuss our concerns prior to the finalisation of the document. To discuss any points raised in this submission or the attached marked up document, please contact Lyn Taylor in the first instance on 027 405 5634 or via email at lynette.taylor@firstgas.co.nz.

Yours faithfully



Lyn Taylor
Regulatory Advisor

¹ Refer page 24 of the attached marked-up version of the document

² Refer page 13 of the attached marked-up version of the document

³ Refer pages 31 and 34 of the attached marked-up version of the document

Attachment 1: Suggestions to improve the accuracy / clarity of the *Gas Measurement Requirements and Procedures* document

Discussion point	Comment/suggestion	Area of the First Gas marked up document
<p>Accuracy: Components of a GMS – Not all GMS/metering stations include a pressure regulator.</p>	<p>In section 3.1, the document notes that “where fiscal measurement is required, a metering station comprising at least a pressure regulator, a meter and a set of isolation valves is present.”</p> <p>On our transmission network, metering stations at receipt points and some delivery points do not include a pressure regulators.</p> <p>Recommendation: Remove reference to the pressure regulator.</p>	<p>Page 13</p>
<p>Accuracy: Components of a GMS</p>	<p>In section 3.2, the document notes “The equipment components of a GMS include...” Not all GMS include all the components mentioned. For example, temperature and pressure measurement is not generally carried out on smaller GMS and as mentioned above, not all GMS include regulators.</p> <p>Recommendation: Change the opening sentence from “The equipment components of a GMS include:” to “The equipment components of a GMS can include:”</p>	<p>Page 14</p>
<p>Accuracy: Coriolis meters</p>	<p>Section 3.3 discusses Coriolis meters. The narrative states that “Although generally more expensive, they are often considered as an alternative to ultrasonic meters for large sites.”</p> <p>We understand that Coriolis meters are less expensive than ultrasonic meters, and that there are several factors to be considered when selecting a meter type.</p> <p>Recommendation: Remove the reference to cost and change the statement to “Coriolis meters are often considered as an alternative to ultrasonic meters for large sites.”</p>	<p>Page 17</p>
<p>Clarity: Photo of residential meter</p>	<p>The document includes a photo of a generic residential gas meter installation extracted from Wikipedia... We consider it would be more useful to readers if the photo was of a typical residential meter installation you would find in New Zealand.</p> <p>Recommendation: Replace the existing photo with a photo of an installation you could expect to see in New Zealand. We have provided a photo that could be used in the absence of other options.</p>	<p>Figure 5, Page 18</p>
<p>Clarity: Section 4</p>	<p>Section 4 is headed as the “legal framework”. It includes information on the legal framework and information on GMS design and installation. As the GMS design and installation information does not fit easily into the section on the legal framework, we suggest it should be under its own section (section 5).</p> <p>Recommendation: “GMS design and Installation” is separated from the “legal framework” and becomes its own section.</p>	<p>Page 30</p>
<p>Clarity: Self-diagnostic capability</p>	<p>Section 4.5 states that “Coriolis meters must have a self-diagnostic capability.” Ultrasonic meters must also have a self-diagnostic capability as specified in BS 1775 s11.3.</p> <p>Recommendation: Extend the sentence to include ultrasonic meters.</p>	<p>Page 31</p>

Discussion point	Comment/suggestion	Area of the First Gas marked up document
<p>Accuracy: MPOC and Vector metering requirements should be replaced with GTAC</p>	<p>The reference to the MPOC and Vector metering requirements included in section 7.1 should be amended to reference the GTAC</p> <p>Recommendation: Replace the current sentence under 7.1 – “The basic provisions of MPOC Schedule 1 and the Vector Metering Requirements relating to GMS documentation are:” with - “The basic provisions of the GTAC relating to GMS documentation are:”</p>	<p>Page 39</p>
<p>Clarity: OATIS</p>	<p>The document refers to OATIS. TACOS will replace OATIS as the information system supporting the GTAC.</p> <p>Recommendation: The first reference to OATIS be footnoted explaining OATIS will be replaced with TACOS. The glossary be updated to include TACOS and note that OATIS will be replaced.</p>	<p>Page 40 and glossary</p>