

Offtake Code Measurement and CV Issues

A note by NGT for the CIWG, 28th July 2004

1. Background

The CIWG reviewed the proposed arrangements for measurement and CV determination at NTS/ DN offtakes on 14th July 2004. A number of questions regarding the arrangements were raised.

This note provides a response to these questions.

2. Responses to questions raised

(Q1) How many tracker stations are there and how many sites where formal CV measurements are made?

(A1) There are 93 sites where Transco has directions to measure CV under the Thermal Energy Regulations. Six of these are NTS terminal or multijunction sites where there is no associated NTS/ DN offtake. There are 34 sites where Trackers are used. All of the Tracker sites are offtakes into the LDZ's.

(Q2) There was a recent instance where a relative density calculation impacted on the allocated energy flows at many NTS/ DN offtakes. Does the proposed process for calculating volume, CV and energy at NTS/ DN offtakes take into account the measurements of relative densities at different points on the system.

(A2) The Thermal Energy Regulations require that CV and volume are separately determined at each NTS/ DN offtake and energy is to be calculated from the product of them.

The measurement systems at all NTS/DN offtakes are capable of determining volume in accordance with the regulations. Volume at Tracker sites is determined using relative density and CV measured by the Tracker, together with an assumed fixed value for carbon dioxide. The recent correction arose through a requirement to use more representative carbon dioxide values. Volume at directed sites is determined by a more accurate methodology using full gas composition measurements.

The measurement systems at NTS/DN offtakes are also capable of determining energy but not in all cases to the CV measurement requirements in the regulations. The "directed" sites measure CV to the requirements of the regulations whilst the "Tracker" sites do not.

If there is no direction to measure in place at the NTS/ DN offtake the applied CV must be attributed from a directed measurement under a set of rules that require the transporter to demonstrate that gas has passed or will pass from the directed measurement place to the site to which it will be attributed without any commingling. Tracker measurements of relative density can be compared with relative density measurements at neighbouring directed measurement points to determine the direction of flow.

There is an additional process for attribution of CVs at directed sites where there is a failure to determine the CV within the requirements of the Regulations (for example, due to equipment failure).

Because of these CV attribution arrangements the CV (and hence energy) at a particular NTS/ DN offtake may be determined from CV measurements made by another DN or the NTS.

It is proposed that under the Offtake Code business rules NTS will continue to perform, for an interim period, the CV attribution process using raw data provided by DNs. The business rules in Section 4 (Measurement) require amendment to recognise that whilst volume measurements will be the sole responsibility of the DN, the CV measurement process (and hence the energy determination) will be subject to the attribution arrangements set out in Section 6 (Calorific Values).

(Q3) What is the process for applying “wet gas” CVs and how does this relate to the CV attribution process described in Section 6 of the business rules? What are the data flows, including to shippers/ suppliers/ consumers.

(A3) The existing process operates as follows:

- Water is detected in the DN system either through an incident (e.g. damage to the pipe) or as a routine analysis of the water dewpoint by the DN or its contractors, in accordance with formal Transco procedures for determining water content.
- The DN notifies the Ofgem Technical Directorate of the incident and there is a dialogue between the DN and Ofgem as to the extent of the issue.
- For confirmed wet gas incidents, Ofgem write to Transco, specifying the postcodes affected.
- Transco posts the postcodes and associated amendment to CV onto the Shipper Information Service (SIS) system
- When the incident is demonstrated to have been resolved by the DN Ofgem is notified
- Ofgem write to Transco to confirm the lifting of the determination
- Transco revises the data on SIS system

The Shipper has responsibility for informing the supplier of wet gas CVs. The supplier informs the consumer.

Wet gas incidents are localized, and generally affect a very small number of consumers. Confirmed incidents result in a 1.68% reduction in CV for these consumers.

Because the wet gas CV process operates at the supply point level it is separate from CV determination at NTS/ DN offtakes. Periodic RbD wet gas adjustments are made in accordance with an agreed methodology reviewed by the Billing Operations Forum.

(Q4) NTS and DNs both have an incentive to ensure NTS/DN offtake meters do not under-read (NTS shrinkage goes up and DN formula throughput down with under-reading). Is there any protection (e.g. statutory obligations, independent audit) to ensure meters do not over-read to the transporters' benefit?

(A4) The Gas Act grants Ofgem legal power to direct how Gas Transporters determine CV. For the adoption of the flow weighted average CV method under the Thermal Energy Regulations, Gas Transporters are required to:

- Notify Ofgem that they intend to adopt the method
- Provide “metering of such accuracy as is requisite” for the FWACV process. This refers to volume metering
- Keep volume records
- Allow Gas Examiners to inspect metering equipment

Ofgem has the powers to withdraw the application of FWACV methodology if it believes that these requirements are not met.

Ofgem has historically monitored Transco’s performance through a joint independent audit process whereby Transco has agreed a scope of audit and confirmed the suitability of the contracted auditor with Ofgem and then let and paid for an audit service contract. Ofgem has access to all audit reports and there has been an annual meeting between Transco, Ofgem and the auditors to review the findings of the audits and any action plans produced by Transco.