



Making a positive difference
for energy consumers

Gwneud gwahaniaeth gwirioneddol
i ddefnyddwyr ynni

To: All domestic gas suppliers,
and other interested parties

Date: 5 August 2014

Dear colleagues

Calculation of average calorific value in accordance with the Gas (Calculation of Thermal Energy) Regulations 1996

This letter sets out guidance for all domestic gas suppliers on how to calculate the calorific value used for domestic consumer billing.

Background

Unlike electricity meters, which measure energy units directly, gas meters measure in volume units. Because the amount of energy in a volume unit of gas can vary (known as its calorific value), gas suppliers convert the metered volume units to energy units to calculate customers' bills. The price consumers pay for gas is therefore a function of the gas's calorific value (CV)¹ and the volume of gas consumed. The CV of gas varies across the country dependent upon the source of the gas. Consumers who receive gas with a higher CV typically pay a higher price per unit of volume of gas consumed than those who receive lower CV gas. This is designed to be cost-neutral for consumers, because the greater level of energy contained in the gas they receive means that they require fewer units of gas to heat their homes, for example.

Standard Licence Condition 22.7 (Calculation of kilowatt hours) of the gas supply licence, as read together with Regulations 3(2) of the Gas (Calculation of Thermal Energy) Regulations 1996² (referred to collectively as 'the Regulations' and described in Appendix 1), set out how domestic suppliers should calculate the CV used for consumer billing purposes. The Regulations exist to ensure domestic suppliers calculate CV in the same way in order to charge consumers in a consistent and fair way for the energy they consume. There is a risk consumers will be overcharged for gas if suppliers are not complying with the Regulations. There is a further risk to competition in the gas supply market if suppliers are calculating CV in different ways.

¹ Calorific Value (CV) is a measure of the energy contained within a gas and is dependent upon the composition of the gas. The CV is used to calculate the energy that may be released when a known volume of gas is completely combusted under specified conditions.

² SI 1996 No 439, as amended by the Gas (Calculation of Thermal Energy) (Amendment) Regulations 1997, SI 1997 No. 937 and the Gas (Calculation of Thermal Energy) (Amendment) Regulations 2002, SI 2002/3130.

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This letter provides guidance to suppliers on how to meet their obligations on using calorific value when billing customers.

Guidance on the calculation of thermal energy on the basis of determined calorific values

Use of average daily figures

Regulation 3 (2) states that the "average calorific value of gas so conveyed during any such period shall be calculated by adding the daily values...for each gas day in that gas period and dividing by the sum of the number of those gas days...".

National Grid is responsible for determining the daily average CV for each charging area. National Grid publishes this daily average CV for each charging area rounded to one decimal place in accordance with Regulation 4 (4) (set out in Appendix 1). National Grid then transmits this daily calorific value electronically to gas transporters and gas suppliers for their respective uses.

The daily CV provided to gas suppliers by National Grid should be the basis for calculating the average CV for any gas period.

The CV used for consumer billing should be an average of the daily average values received from National Grid for the billing period. The use of a fixed CV, which some suppliers refer to as an 'industry standard', is not consistent with the Regulations.

Requirement to truncate

Regulation 3 (2) is clear that when calculating CV "any amount of less than 0.1 megajoules per cubic metre shall be ignored."

This means that for a given gas billing period, suppliers should truncate the average CV to one decimal place. Rounding average CV is not consistent with the Regulations, nor is calculating to more than one decimal place.

Prepayment meters

Prepayment meters (PPMs) by necessity have a short term fixed CV built into the energy calculation and consequent charge rate. Suppliers should already be undertaking regular reconciliations to ensure that they do not subsidise or overcharge PPM customers. These reconciliations should reflect the CV as calculated using this guidance.

Compliance monitoring and enforcement

The Regulations provide important consumer protections by ensuring that all suppliers use the same methodology for calculating CV. **We intend to review supplier compliance in approximately 6 months' time.**

It is incumbent on all suppliers to take the necessary steps to ensure they meet the conditions of their licence, codes and other relevant legislation. Details of our approach to compliance and enforcement may be found on our website.³

If you have any questions on this guidance, please contact Duncan Carter, Policy Analyst, (duncan.carter@ofgem.gov.uk, 020 7901 3942).

³ <https://www.ofgem.gov.uk/about-us/how-we-work/our-approach-regulation>

Yours faithfully,

Rob Church
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Appendix 1 - The Regulations

Standard Licence Condition 22.7 states:

"A Domestic Supply Contract that provides for any element of the Charges for the Supply of Gas to be related to the Amount of gas supplied to Domestic Premises or Domestic Premises that are Secondary Premises must also provide for the number of kilowatt hours supplied to the premises to be calculated in the same manner as such number would have been calculated under section 12(1) of the Act if the gas had been conveyed to the premises by a Gas Transporter."

This condition requires suppliers to calculate the thermal energy of the gas conveyed to domestic premises in the same manner as it would have been calculated under section 12 (1) Gas Act 1986 if the gas had been conveyed by a public gas transporter.

Regulation 3 (1) prescribes the formulae for calculating CV, while Regulation 3 (2) provides:

"The average calorific value of gas so conveyed during any such gas period shall be calculated by adding the daily calorific values..... for each gas day in that gas period and dividing the sum by the number of those gas days but so that any amount of less than 0.1 megajoules per cubic metre shall be ignored."

Regulation 4 (4) sets out how National Grid should report the daily average CV for each charging area:

"In calculating any daily calorific value--

- (a) any amount of less than 0.05 megajoules per cubic metre shall be ignored; and*
- (b) any amount of less than 0.1 but not less than 0.05 megajoules per cubic metre shall be treated as [if] it were 0.1 megajoules per cubic metre."*