

The Gas (Calculation of Thermal Energy) Regulations

The regulations are complex and wordy, but they appear to say that for sites (“take off points”) where the AQ is expected to no more than 732,000 kWh (using a site-specific conversion) then the energy should be calculated using the **standard conversion factor of 1.02264**.

This applies to the “volume of converted gas” conveyed to the “take off point” by the public gas transporter.

The Regulations do not specify who should use the resulting volumes but it **could** be argued that everyone who is issuing invoices for these volumes should calculate the volume of converted gas in the same way. This would include Transporters, Shippers and Suppliers.

However the Regulations are over 20 years old and may not have been reviewed recently, so any other views on interpretation would be welcome.

Document Links

1996 Regs - <https://www.legislation.gov.uk/uksi/1996/439/regulation/2/made>

1997 Amendments - <https://www.legislation.gov.uk/uksi/1997/937/made>

APPENDIX – Text of The Gas (Calculation of Thermal Energy) Regulations 1996, Tracked with changes made by the The Gas (Calculation of Thermal Energy) (Amendment) Regulations 1997

PART I

Interpretation and application

2.—(1) In these Regulations, unless the context otherwise requires—

“the Act” means the Gas Act 1986;

“appropriate standard temperature conversion system” means a system for converting, with such accuracy as is reasonably practicable, any volume of gas into the volume which that volume would have if the gas had been measured at a temperature of 15°C and at the same pressure;

“appropriate standard volume conversion system” means a system for converting, with such accuracy as is reasonably practicable, any volume of gas into the volume which that volume would have if the gas had been measured at a temperature of 15°C and a pressure of 1013.25 millibars;

“charging area” means an area, within an authorised area of a public gas transporter, where the transporter intends to charge for the gas conveyed to any take off point (not being a take off point to which paragraph (4) below or Part III of these Regulations applies) situated in the area on the basis of the same daily calorific value;

“converted volume of gas”, in relation to gas conveyed to any meter for registering the volume of gas conveyed to a take off point during a gas period, means the volume of that gas in cubic metres which—

(a) in so far as the meter is connected to an appropriate standard volume conversion system and that system is in operation throughout the gas period, is given by the application of the system to the registering of the volume of gas;

(b) in so far as—

(i) the meter is connected to an appropriate standard temperature conversion system and that system is in operation throughout the period; and

(ii) gas is conveyed to the meter at a rate which is reasonably expected to exceed 2,500 therms or 73,200 kilowatt hours a year (if the temperature and pressure conversion factor within the meaning of paragraph (b) of the definition of that expression were applied to the volume of gas registered by the meter),

is given by the application of the system to the registering of the volume of gas and by multiplying the result by the number given by the following formula, namely—

$$P \times Z$$

where

- P = the pressure conversion factor calculated in accordance with the provisions of Part I of the Schedule to these Regulations;

- Z =the compressibility conversion factor calculated in accordance with Part II of that Schedule;

(c)

otherwise, is given by multiplying the temperature and pressure conversion factor by the volume of gas registered by the meter;

“the Director” means the Director General of Gas Supply;

“gas day” means a period ~~of 24 hours~~ beginning at 6am on one day and ending immediately before 6am on the following day;

“gas examiner” means a person appointed under section 13(1) of the Act;

“gas period” means one or more successive gas days;

“input point”, in relation to a take off point (not being a take off point to which paragraph (4) below or Part III of these Regulations applies), means—

(a) where the take off point is situated in a charging area, any point at which gas is introduced into that part of the pipe-line system operated by the public gas transporter which is—

(i) in the charging area; and

(ii) used for distributing gas to take off points (not being take off points to which paragraph (4) below or Part III of these Regulations applies) in the charging area; and

(b) where the take off point is not situated in a charging area, any point at which gas conveyed to the take off point ceases to be conveyed to any other take off point;

“output point”, in relation to a take off point (not being a take off point to which paragraph (4) below or Part III of these Regulations applies) in a charging area, means any point at which gas which—

(a) has flowed past an input point for take off points in the charging area; and

(b) is still in the course of conveyance by the public gas transporter,

ceases to be conveyed to any such take off point;

“relevant licence holder”, in relation to a public gas transporter, means—

(a) another public gas transporter operating a pipe-line system to which gas is conveyed through pipes by the transporter; or

(b) a gas shipper who has arranged with the transporter for gas to be introduced into, conveyed by means of or taken out of a pipe-line system operated by the transporter;

“take off point”, in relation to a public gas transporter, means any premises to which gas is conveyed by the transporter or any point at which gas conveyed by the transporter enters any pipe-line system operated by another public gas transporter;

“temperature and pressure conversion factor”, in relation to any meter for registering the volume of gas conveyed to a take off point, means—

(a) where gas is conveyed to the meter at a rate which is reasonably expected not to exceed 25,000 therms or 732,000 kilowatt hours a year (if the conversion factor within the meaning of paragraph (b) below were applied), 1.02264; or

(b) where gas is conveyed to the meter at a rate which is reasonably expected to exceed 25,000 therms or 732,000 kilowatt hours a year (if the conversion factor within the meaning of this paragraph were applied) the number given by the following formula, namely—

$$T \times P \times Z$$

where—

- T =the standard temperature conversion factor, namely 1.0098;
- P =the pressure conversion factor calculated in accordance with the provisions of Part I of the Schedule to these Regulations;
- Z =the compressibility conversion factor calculated in accordance with Part II of that Schedule;

(2) Any reference in these Regulations to the volume of gas registered by a meter shall, where the meter registers in cubic feet, be construed as a reference to the volume of gas so registered multiplied by 0.0283.

(3) Except in the cases prescribed by paragraph (4) below, the number of therms or kilowatt hours conveyed by a public gas transporter to a take off point shall be calculated in accordance with Part II of these Regulations, or, where a public gas transporter makes or adopts a declaration of calorific value in accordance with regulation 8(1) below, Part III of these Regulations.

(4) The cases prescribed by this paragraph are the following cases, namely—

(a)where—

- (i)gas continues to be conveyed through a pipe to particular premises; and
- (ii)the number of therms or kilowatt hours conveyed through that pipe to those premises was, immediately before the commencement of these Regulations, calculated on the basis of calorific values determined by means of apparatus provided and maintained only for purposes connected with the conveyance of gas through that pipe to those premises;

(b)where an agreement between a public gas transporter and a relevant licence holder or the owner or occupier of particular premises provides for the number of therms or kilowatt hours conveyed through a pipe to those premises to be calculated on the basis of calorific values determined by

means of apparatus provided and maintained only for purposes connected with the conveyance of gas through that pipe to those premises.

(5) Any reference in these Regulations to therms shall cease to have effect on 1st January 2000

PART II

3.—(1) The number of therms or kilowatt hours conveyed by a public gas transporter to any take off point during any gas period shall be calculated in accordance with the following formulae—

$$\begin{array}{l} \text{number of therms so conveyed} \\ \text{number of kilowatt hours so conveyed} \end{array} \quad \begin{array}{l} = \frac{A \times B}{105.5} \\ = \frac{A \times B}{3.6} \end{array}$$

where

A is the number of cubic metres in the converted volume of gas conveyed to the take off point during the gas period and B is the average calorific value of gas calculated in accordance with paragraph (2) below.

(2) The average calorific value of gas so conveyed during any such gas period shall be calculated by adding the daily calorific values calculated in accordance with regulation 4 below 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.

(3) This paragraph applies in respect of the take off points in a charging area or a take off point not situated in a charging area where a public gas transporter has—

(a) notified the Director and taken reasonable steps to notify relevant licence holders that he is content that this paragraph should apply in respect of the take off points in that charging area or, as the case may be, that take off point;

(b) provided and maintained, in relation to each—

(i) input point for the take off points in that charging area or, as the case may be, that take off point; and

(ii) output point in relation to the take off points in that charging area,

apparatus and equipment for recording, at such locations and with such accuracy as is requisite for the purpose of calculating daily calorific values under regulation 4A below, the volume of gas flowing past the input point or output point, as the case may be, being the volume which that gas would have had if it had been measured at a temperature of 15°C and a pressure of 1013.25 millibars;

(c) made arrangements for the safe keeping of the records of the volume of that gas made by any such apparatus and equipment at the place or premises at which it is provided;

(d) continued to allow gas examiners all reasonable facilities for inspecting any such apparatus and equipment and any such records; and

(e) not notified the Director and not taken reasonable steps to notify relevant licence holders that he is no longer content that this paragraph should apply in respect of the take off points in that charging area or, as the case may be, that take off point, and

where no notification to the transporter of a determination by the Director that a provision of sub-paragraph (b), (c) or (d) above is not being, or is likely not to be, complied with in respect of the take off points in that charging area or, as the case may be, that take off point, has been made or such a notification, having been made, is withdrawn in consequence of a determination by the Director to the contrary effect.

(4) In this regulation and regulations 4 and 4A below, any reference to a take off point shall be construed as a reference to a take off point to which neither regulation 2(4) above nor Part III of these Regulations applies.