October 1998

Code of Practice for all Higher Pressure and all other Low Pressure Meter Installations not covered by COP/1a or COP/1b

COP/1c

INTRODUCTION

Meter installation, which was traditionally the domain of the integrated British Gas and latterly Transco, is being opened up to competition. The aim of this document is to inform gas meter installers of the standards required of "approved persons" under Standard Condition 22 of the Gas Suppliers' Licence. The document has been revised in the light of experience gained since its original publication in July 1996.

In addition to the requirements of CORGI with regards to safety, legislation states that a meter must be installed by a person who is "approved" by the Director General of Gas Supply, (or that the installation must be inspected by an "approved" person within a 30 day period for non-domestic customers or a 90 day period for domestic customers). An "approved person" is one who is Ofgas Registered in the appropriate Code of Practice.

Ofgas administer a `Registered Gas Meter Installer' Scheme, which approves persons to install (and/or inspect) meters. Meter installers will be assessed against the requirements of this Code of Practice.

Chapter 3 of this Code of Practice sets out the minimum standards that must be complied with by those registered with Ofgas to perform work within the scope of this document. Chapter 4 provides an overview of statutory requirements of other bodies which will affect RGMIs. Chapter 5 provides guidance on best practice in the carrying out of meter installation services.

This document was originally prepared by Ofgas with the help of a number of institutions, participants in the gas supply industry, consumer representative bodies, meter manufacturing and data collection companies, the caring agencies and individuals and we would like to acknowledge their assistance.

Ofgas would like to acknowledge the substantial continuing assistance provided by the Institution of Gas Engineers (IGE), Transco, the Council of Registered Gas Installers (CORGI), and British Gas Trading Ltd. Ofgas was supported during this original exercise by the Lerryn Consultancy.

Ofgas is responsible for publishing this document, for collating comments and suggestions for its amendment and for arranging its revision.

Copies of this document, the other Gas Meter Installation Codes of Practice, the Guidance Notes on Best Practice for the Reading of Gas Meters, and the Gas Metering Definitions can be obtained free of charge from:-

Ofgas Distribution Centre
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Wigston
Leicester
LE18 2UX

Tel no: 0116 2772617

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Ofgas would welcome comments and suggestions for improvements to this document. These should be sent in writing to :-

Cathy Back
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Stockley House
130 Wilton Road
London
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Where additional guidance is required on any aspect of this document, all requests should be sent to Cathy Back at the above address. Ofgas will consult with other appropriate organisations and technical experts to provide the information requested.

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APPENDICES

1. ABBREVIATIONS

The following abbreviations apply within this Code of Practice :-

AMR	Automatic Meter Reading
CORGI	Council for Registered Gas Installers
GCC	Gas Consumers Council
HSC	Health and Safety Commission
HSE	Health and Safety Executive
IGE	Institution of Gas Engineers
Ofgas	The Office of the Director General of Gas Supply (a non-ministerial government department which regulates the onshore gas industry within Great Britain).
PGT	Public Gas Transporter
RGMI	Registered Gas Meter Installer

1. SCOPE

This Code of Practice sets out the specific requirements for persons and organisations who are registered with Ofgas for gas meter work on all higher pressure and all other low pressure meter installations not covered by COP/1a or COP/1b. It applies to such meter work on meter installations where the gas is conveyed to premises by a PGT, and the installation is used for measuring the gas for billing purposes by the Supplier.

The temporary disconnection of a meter, and its reconnection, to allow for safe working on gas installation pipework downstream of the meter is not deemed to be meter work within the scope of this Code of Practice. Such work is subject to the requirements of the Gas Safety (Installation and Use) Regulations 1994 as amended by the Gas Safety (Installation and Use) (Amendment) Regulations 1996.

In the event that current Regulations or the Gas Act 1986 ("the Gas Act") together with its associated licences conflict with any requirements of this Code of Practice, they shall have precedence.

In this Code of Practice, whenever reference is made to the Gas Safety (Installation and Use) Regulations 1994 or to the Gas Act, the reference is taken to include the relevant later amending Regulations or Acts.

Where a situation appears to be within the scope of this Code of Practice, but it is not precisely covered by the text , reference shall be made to Ofgas for guidance. See page 1 for contact details.

The Gas Metering Definitions document published by Ofgas sets out the definitions used within this Code of Practice.

This Code of Practice covers installations using second family natural gases only.

Note 1: The badged rating is the term widely used within the gas industry and represents the maximum flow rate for which the meter is officially stamped.

2. RESPONSIBILITIES

RGMIs

RGMIs are responsible for ensuring their actions and procedures are consistent with the requirements of this Code. They also are responsible for the selection and installation of an appropriate meter and meter installation in accordance with IGE/GM/1 or IGE/GM/4 as appropriate, for the secure and safe handling of meters in their control and for the passing of relevant information (including any meter losses or the illegal use of meters) to the meter owner and the Public Gas Transporter (PGT). RGMIs will need to be aware of the requirements for, and effect of, any other equipment which is to interface with the meter installation e.g. dataloggers or Automatic Meter Reading (AMR).

Ofgas

Ofgas is responsible for operating a registration scheme for persons and or organisations performing meter work, as RGMIs, covered by the scope of this Code of Practice to ensure meter installation accuracy. Ofgas is also responsible within Great Britain for the approval of pattern, construction, manner of marking and stamping of meters, as required by the Gas Act, and the subsequent testing of such meters in a dispute.

Provision of Meters

Suppliers have an obligation to arrange for the provision of meters if requested to do so by domestic customers. PGTs have an obligation to install and fit meters, of a type reasonably available, if requested to do so by suppliers via the relevant shipper. For loads above 2500 therms per annum the provision of meters is by agreement.

PGT

The PGT is responsible for approving design proposals and the completed installation.

Further details of various parties' responsibilities are given in Appendix 1.

4. METER INSTALLATION - OFGAS REGISTRATION REQUIREMENTS

4.1 CORGI Registration

All RGMIs shall maintain their CORGI registration, in the appropriate work category, as required by the Gas Safety (Installation and Use) Regulations 1994. They shall also inform Ofgas of their registration status.

4.2 Safety and Integrity of the System

In order to ensure the safety and integrity of the system, the design of the meter installation shall be discussed and agreed at the design stage between the RGMI and the PGT. The RGMI shall ensure that the meter installation is constructed and installed in accordance with the agreed specification.

4.3 Responsible Engineer

The RGMI shall appoint a Responsible Engineer who is responsible for the overall design, installation and commissioning of the meter installation in accordance with this Code of Practice.

4.4 Competency of Employees

The RGMI shall ensure that all employees are competent for the work on which they are employed and that they are fit and proper persons within the meaning of Condition 25 of the Standard Conditions of Gas Suppliers' Licences.

Appendix 2 contains an example of an employee vetting procedure.

4.5 Sub-Contract

Where an RGMI sub-contracts work within the scope of this Code of Practice to another party, it is the responsibility of the RGMI to ensure that the sub contractor complies with the requirements of this Code of Practice and is CORGI registered.

4.6 Gas Supply Requirements

The RGMI shall obtain details of the gas user's requirements including the minimum and maximum flow rate, the load profile and any proposed use of compressors or engines, or the proposed use of any associated compressed air or other gases where appropriate, and major seasonal variations of consumption or the use of interruptible supplies.

The RGMI shall obtain confirmation from the Supplier or PGT, as appropriate, of the availability of a gas supply to meet the gas user's requirements, and the maximum and minimum supply pressures.

4.7 Installation Design and Meter Selection

The RGMI shall ensure that the meter installation with its associated components is designed, selected and installed in accordance with IGE/GM/1 or IGE/GM/4 as appropriate. The RGMI shall also ensure that the type and size of meter fitted in a meter installation is appropriate for the installation and the connected load, is fit for purpose and meets the requirements of the relevant legislation, regulations and this Code of Practice.

The connection of any electrical, electronic or optically coupled equipment to a meter shall be made in accordance with IGE/GM/7. Where appropriate, associated conversion systems shall be installed in accordance with IGE/GM/5. Due regard shall also be taken of the Pressure Systems and Transportable Gas Containers Regulations 1989.

Guidance on the selection of the appropriate meter and other components of the installation is given in IGE/GM/1 or IGE/GM/4 as appropriate. In particular, these documents set out the factors affecting meter accuracy and performance for the selection of the correct meter.

Some of the issues to be considered are:-

a) Gas Flow Variations

When selecting an appropriate meter and installation design, the RGMI shall take account of any effects of variation in flow rates which could affect the size and type of meter, particularly with respect to measuring the minimum flow rates. For example, interchangeable orifice plates may be required for summer and winter flow variations.

b) Large Loads at Elevated Pressures

When the gas user's installation involves large gas loads at either elevated pressures, or where compression takes place within the gas user's premises, protection of the meter and supply is required. This is usually provided by non-return or slam-shut valves. The PGT's agreement will be required regarding the protection to be afforded by the valves.

c) Pigging Facilities

Whilst pigging facilities do not normally form part of the meter installation, on larger high pressure installations the PGT will have to be consulted at the design stage to determine any additional space requirements to accommodate pig traps etc.

4.8 Inclusion of By-Pass

Where it is proposed that a meter installation incorporates a meter by-pass, the PGT must be advised as part of the meter installation approval process and its approval obtained. The PGT will recommend the type of meter by-pass valve

and method of sealing to be applied. The sealing of the meter by-pass valve will be by agreement with the PGT.

4.9 Use of Stamped Meters

Where applicable, the RGMI shall ensure that the meter to be installed has been sealed to indicate that it is approved and stamped either under the Gas Act or under the equivalent EU regulations.

It is an offence to break or deface the official seal and continue to allow the meter to be used. Meters which are designed for use above 1600 m^3/h, and are used where gas is supplied under a contract, do not require sealing under section 17 of the Gas Act 1986 provided all parties involved agree to the use of an unstamped meter.

4.10 Location of Meter Installation

The RGMI is responsible for agreeing the location of the meter installation with the gas user and any other interested party e.g. the PGT, for ensuring that the proposed location is appropriate in accordance with IGE/GM/1 or IGE/GM/4 as relevant and for identifying and specifying the requirements for any meter housing or compound as required.

4.11 Installation Materials

Installation materials shall be fit for purpose and conform to the requirements of IGE/GM/1, IGE/GM/4 or IGE/GM/5 as appropriate.

4.12 Additional Installation Skills

In addition to the skills required for CORGI registration, other skills may be needed for some installations. For example, certain types of installation may require the use of fabricated or welded components, and a meter installation may incorporate flow computers (which might include calorific value conversion) other conversion systems or other electronic instrumentation and control equipment. Any person performing such work shall possess the necessary skills, qualifications and training to be competent for that work.

4.13 PGT Installation Approval and Notification

The RGMI shall obtain the approval of the PGT for the design and specification of the meter installation prior to commencing any meter installation work. Appendix 6 provides guidance on the areas to be considered and typical documentation required. The PGT shall either approve, or reject with reasons, the meter installation design within 6 weeks of receipt of the complete and final meter installation design submission.

Where the RGMI is advised that the gas user proposes to use compressors or engines, or any associated compressed air or any other gases, the RGMI shall notify formally the PGT of this intent in accordance with paragraph 17 of

Schedule 2B of the Gas Act. The PGT may, in these circumstances, decide that it needs to participate in the selection and specification of protective equipment at the design stage.

The completed meter installation will be subjected to inspection and acceptance by the PGT.

4.14 Commissioning

The RGMI shall ensure that the meter installation is commissioned in accordance with IGE/GM/1 or IGE/GM/4 as appropriate. It shall also ensure that any volume conversion system is commissioned in accordance with IGE/GM/4 or IGE/GM/5 as appropriate. Where the PGT is to provide the volume conversion system, commissioning and maintenance of the system will be the responsibility of the PGT.

The RGMI shall also ensure that any actions such as the lubrication of installation components have been completed in accordance with the manufacturer's instructions. Rotary displacement meters, for example, are normally supplied dry and the specified lubricating oil must be added to their oil reservoirs before the meter is operated.

The RGMI shall set the meter regulator working pressure to the meter working pressure agreed between the PGT, shipper, supplier and gas user. Wherever possible, meter regulators that are pre-set to the correct working pressure and pre-sealed shall be installed. Where this is not possible, the RGMI shall ensure that arrangements have been agreed with the PGT to seal the regulator before leaving the site.

4.15 Control and Care of Meters

Where the RGMI comes into possession of a meter, it shall hold it in the condition in which it was received with the index unaltered and contact the meter owner (if known), or alternatively the supplier (where known) or the PGT for further instructions. All meters shall be handled with care and be stored in a secure manner at all times, whether they are awaiting fitting into a meter installation or have been removed from a meter installation and are awaiting repair, refurbishment or recycling, or are destined for scrap.

a) Meter Removal

Where a meter is removed, care must be taken to ensure that the meter is not damaged so that it can be tested in the event of a dispute and, where appropriate, refurbished or recycled. The meter inlet and outlet connections shall be covered to prevent the ingress of air, dirt and moisture.

Where a meter accuracy test is needed, the meter must be handled with extreme care in order that it arrives at the test station in the same condition as when it was disconnected. If liquid is present in the measuring chamber of the meter it

must not be drained but an estimate of the amount should be noted and submitted with the meter. The supplier shall make arrangements for any necessary special equipment for transporting such meters to be available.

Any removed meter shall be purged in accordance with IGE/GM/1, IGE/GM/4 or IGE/UP/1 as appropriate to ensure that it is safe.

b) Transportation, Handling and Storage of Meters

A gas meter is a precision instrument and therefore care must be taken during transportation, handling and storage in accordance with the manufacturer's recommendations.

Meters should be stored, handled and transported wherever possible in their original packaging materials with any inlet and outlet connections covered to prevent the ingress of dirt and moisture, having due regard to the manufacturer's recommendations on stacking and orientation. Where the original packaging materials are not available, suitable precautions shall be taken to protect the meter from damage. They shall be stored in a clean, dry location.

Care shall always be taken to avoid damage to any meter seal.

c) Disposal of Meters

The RGMI shall dispose of a meter only on the authorisation of the owner of that meter. Where a meter is to be scrapped, any official seals shall be permanently defaced. Where practicable, the meter shall be rendered inoperable e.g. diaphragm meters can be spiked.

4.16 Maintenance of Meter Installations

The RGMI shall, at the time of installation, notify the owner of the metering equipment if known, or the supplier, of any recommended maintenance procedures.

4.17 Meter Replacement

Meters may be replaced for a variety of reasons. Before any meter work is commenced

a) the connected load and load profile shall be reassessed to determine the appropriate size and type of meter for accurate flow measurement and its associated controls.

b) if, as a result of the reassessment, a meter of a different capacity is required, the RGMI shall advise the Supplier. If a different capacity meter falls outside the scope of this Code of Practice the relevant Code of Practice shall apply to the new meter installation.

Any new installation work that involves a change of specification of any component of the meter installation shall require the approval of the PGT.

Where a replacement meter is to be fitted and the use of a badged meter is required, the seal(s) on that meter shall be checked for damage prior to performing meter work, and also following completion of that work. For example, meters approved and badged in the UK will have Gas Act meter seal(s). In the event of damage to any of these seals, the meters shall not be installed.

Any sealing equipment, security collars or other security fittings shall be kept secure and shall only be used as directed.

4.18 Notification of Meter Details

It is an offence (paragraph 12 (4) of Schedule 2B, Gas Act 1986) to fail to notify connection of a meter to the supplier, where known, or the PGT, of each meter connected, removed or exchanged. Notification should be given 48 hours in advance. Even if advance notice is given, then notification must also be given within 48 hours of completion of the work in accordance with the Gas Meters (Information on Connection and Disconnection) Regulations 1996. A sample meter installation record form is given in Appendix 3. A copy of each meter installation record form shall be retained by the RGMI for 6 years.

The completed form should be sent to the supplier (where known) or the PGT, 48 hours before the work is undertaken. It is an offence (Schedule 2B, paragraph 12(4) of the Gas Act) to fail to submit the form later than 48 hours after installation. Where the meter has been removed, the RGMI shall take all reasonable steps to identify the meter owner and inform it of where the meter can be retrieved. Where ownership of the meter is not clear, contact should be made initially with the PGT.

4.19 Confidentiality

a) Gas User Details

In order to carry out meter work, the RGMI will, by necessity, have access to information that includes personal details of gas users (e.g. name, address, security password etc.) and commercially sensitive details (e.g. name of supplier, meter capacity etc.).

The RGMI and its employees shall not unnecessarily divulge any of this information to a third party.

b) Commercial Information

The RGMI shall implement a policy for all its employees to be bound by a confidentiality agreement regarding the control of commercially sensitive information. In particular, if the RGMI carries out meter work for a number of companies, it shall develop procedures to ensure that one company's or supplier's data is not divulged to a third party.

4.20 Audit

In order to confirm compliance of meter installations, Ofgas (or its agents) may undertake audits of installation activities. The RGMI shall permit and co-operate with audits where it is, in the opinion of Ofgas, reasonable to do so.

5. METER INSTALLATION - OTHER REQUIREMENTS

5.1 Metering Issues

This chapter details some additional requirements for meter installers. The Registration Scheme will not specifically test against the areas detailed in this chapter. However, competent meter installers are required by other legislation to adhere to the conditions detailed below. Please note: this list may not be exhaustive.

Due to the generally complex nature of meter installations covered by this Code of Practice, close liaison will be require between all the parties involved, particularly between the RGMI and the PGT.

5.2 Safety and Accuracy

Gas Meter Installations are a complex assembly of gas fittings and, as such, shall be accorded the appropriate level of care and attention necessary to maintain the safety, integrity and accuracy of the installation.

Where a meter is removed and a replacement meter is not to be fitted immediately, disconnection, purging and capping of the supplies and open ends shall be carried out in accordance with the Gas Safety (Installation and Use) Regulations 1994.

In the interests of safety, the requirements of the Gas Safety (Installation and Use) Regulations 1994 shall be applied in all circumstances, even to those categories of installation excluded from the scope of those Regulations, i.e. Factories, Mines, Quarries and Agricultural Installations.

Where the RGMI discovers or suspects a gas escape or related danger he shall attempt to make the situation safe and inform the gas user accordingly. If the situation cannot be made safe the RGMI shall immediately and personally report the fact to Transco (0800 111 999), or the relevant gas supply emergency provider.

5.3 Location and Housing

In certain circumstances, the gas user is required to obtain planning approval from the appropriate authorities for the construction or provision of any meter housing or compound.

IGE/GM/1 and IGE/GM/4 provide recommendations on the requirements of meter housings. Where a meter module is to be installed, reference should also be made to the module fabricator for housing specifications.

The RGMI is responsible for ascertaining if the proposed location of meter installation is in an area classified as hazardous, and the classification zone in such cases, by discussion with the gas user.

Any equipment installed in a hazardous area or connected to a meter installation located in a hazardous area shall be suitable for use in such areas and shall be installed in accordance with the relevant standards e.g. BS 5345 - 'Code of Practice for Selection, Installation and Maintenance of Electrical Apparatus for Use in Potentially Explosive Atmospheres'.

For Safety reasons associated with reading, installation, maintenance and replacement of meters, meter installations shall not be located in any hazardous area with a classification of Zone 0.

5.4 Testing and Purging

Where meter work is undertaken which involves any part of the meter installation or the gas user's installation pipework being depressurised, a test shall be carried out to verify its gas tightness in accordance with the Gas Safety (Installation and Use) Regulations 1994.

The methods of testing and purging may vary according to the size and complexity of the installation. The specific recommendations in IGE/UP/1 shall be followed.

Immediately after such testing and examination, purging shall be carried out throughout the meter installation and every fitting through which gas can subsequently flow, so as to safely remove all air and gas other than the gas to be supplied.

Where the gas user has extensive installation pipework, consideration may be given to maintaining this under pressure with natural gas in a safe manner during meter installation work. This will minimise the need to test and purge the gas user's installation pipework on completion of the work.

5.5 Replacement of Batteries in Meter Installations

If the RGMI fits batteries to metering equipment, it shall follow the relevant equipment manufacturer's instructions for replacing the batteries and shall ensure that the old batteries are disposed of in a safe and secure manner, having due regard to the appropriate environmental legislation.

5.6 Interfaces to AMR and Other Equipment

Equipment connected to the meter, such as AMR or energy management systems, may be affected by work carried out on the meter installation. In such cases, the RGMI is required to notify the gas user and the supplier as appropriate so that suitable arrangements can be made.

5.7 Tamper Checks

Before performing any meter work, the meter installer is required to check for any signs of tampering with the meter installation, the service pipe and/or the meter and installation seal(s). In the event that signs of tampering, or signs of damage to any of the seals are evident, or the meter installer discovers an actual incidence where the meter installation has been tampered with (i.e. a possible theft of gas incident) he should record the details. The meter installer is required to immediately notify the supplier if known, or the PGT. Appendix 6 sets out the procedure to be followed. However, the meter installer must not endanger himself in doing so, and should leave the premises if his safety is threatened.

5.8 Data Protection Act

The control of personal information may be covered by the Data Protection Act 1984. The RGMI is required to ensure that all its responsibilities in this context are properly understood and met.

6. GUIDANCE ON BEST PRACTICE

6.1 General

It is not compulsory for RGMIs to comply with the guidance given in this Chapter for the purposes of registration. However, it is suggested that consideration is given to the following guidelines on best practice.

6.1.1 Liability Insurance

The RGMI should maintain adequate Public and Employers Liability Insurance. Whilst minimum cover of £2,000,000 per incident is considered satisfactory for the majority of situations, a higher level of cover may be appropriate.

6.1.2 Lead Time and Planning

The size and complexity of meter work covered by this Code of Practice may include components which are not immediately available. This will need to be taken into account by all concerned when planning such meter work.

The approval of the installation by the PGT will be dependent on an assessment of the implications of the additional load on the system upstream of the meter installation. Any reinforcement work required may also have an impact on timescales.

6.1.3 Supply Meter Point Reference Number

PGTs may have numbering systems to help manage the meter points in their charge. Procedures relating to these numbering systems should be followed by RGMIs.

Where Transco, for example, is the PGT, each Supply Meter Point has a unique reference number known as the "M Number", used to identify it. Details of the "M Number" can be obtained from the supplier.

6.1.4 Suppliers' Licence Obligations

Suppliers are obliged by the Standard Conditions of their licences to fulfil certain duties. Some of these duties relate to the Supplier's metering arrangements. A supplier cannot delegate its licence obligations to an agent. A supplier is always responsible for ensuring its licence obligations are met. It is recommended that the RGMI gains an understanding of what is expected of the Licensed Gas Supplier. Copies of the Standard Conditions can be obtained from Her Majesty's Stationary Office.

6.1.5 Gas Act Obligations

The Gas Act places obligations on a number of parties besides Licensed PGTs, shippers and suppliers. These include meter owners and gas users. Again it is recommended that RGMIs understand these Gas Act obligations. Most of the meter related obligations are to be found in Schedule 2B of the Act. Copies of the Gas Act can be obtained from Her Majesty's Stationary Office.

6.2 Relationship with Gas Users

The Metropolitan Police Doorstoppers' Code of Practice was used as the basis for the following issues relating to contact with gas users and members of the public. RGMIs should consider the following points arising from that code:-

a) Identity Cards
A meter installer shall carry at all times, and show to a gas user when gaining access to premises, a valid identity card which shall include a photograph. The RGMI shall control the issue, use and redemption of the identity cards for its employees.

Standard Condition 25 of the Supplier's Licence requires that members of the public may readily confirm the identity or authority of an officer of the supplier and that the supplier should ensure that identity cards, uniforms, liveried vehicles etc. are not misused.

b) Uniform
All meter installers shall wear at all times, whilst carrying out meter work, a valid and recognisable uniform. The RGMI shall control the issue, use and redemption of uniforms for its employees.

c) Appointments
A meter installer shall only call at a gas user's premises or home by prior appointment, except where a visit is made in respect of a suspected theft of gas or disconnection for non-payment, or an emergency.

d) Meter Installation Work
A meter installer shall not cause gas consumption to be incorrectly registered.

e) Keys - Gas Users
Keys to a gas user's premises, or meter housing, may be issued. These shall be kept secure when in the meter installer's possession, not passed on to a third party, and returned promptly. Copies of keys shall not be made.

f) Passwords - Gas Users
The installation information may include passwords or security details which are used to gain entry to premises. Such details shall remain restricted information and not be divulged to any third party.

g) Other Activities

A meter installer shall not abuse his opportunity to enter premises and homes for the purpose of performing meter work to promote or sell products, services or advice to gas users. This does not affect the duties and responsibilities of RGMI employees to recognise and respond to unsafe gas situations as required by the Gas Safety (Installations and Use) Regulations 1994.

h) Vehicles

RGMIs should ensure that, as far as possible, all vehicles used by meter installers carry their recognisable company logo.

i) Handling of Complaints

The RGMI shall ensure that its employees are competent to handle complaints from gas users. As a minimum, they shall be able to identify the relevant party for complaints as appropriate e.g. billing and meter accuracy queries/complaints to the supplier.

j) Rights of Entry

If the RGMI is working for a non-licensed entity, such as a gas user, they do not have any rights of entry.

There are circumstances where access to property can be gained without the consent of the gas user. Where the RGMI is involved in such rights of entry action, they shall ensure that they comply with the provisions of the Rights of Entry (Gas and Electricity Boards) Act 1954. Meter installers only have statutory rights of entry where they are acting as the agents of a licensed PGT, shipper or supplier.

Meter installers do not have an automatic right of entry to gas users' property. They may enter a gas user's property to perform meter work if the gas user allows them entry.

RGMIs should consider producing a Code of Conduct for their employees. This would set out clearly what is, and is not, acceptable conduct. An example of such a Code is at Appendix 4.

7. REFERENCED DOCUMENTS

Listed below are the documents referred to in the text of this document. Except where stated in the text, reference should always be made to the latest edition or amendment.

Document	Publisher
Data Protection Act 1984	Her Majesty's Stationery Office
Gas Act 1986	Her Majesty's Stationery Office
Gas Act 1995	Her Majesty's Stationery Office
Gas Meters (Information on Connection and Disconnection) Regulations 1996	Her Majesty's Stationery Office
Gas Safety (Installation and Use) Regulations 1994	Her Majesty's Stationery Office
Gas Safety (Installation and Use) (Amendment) Regulations 1996	Her Majesty's Stationery Office
Gas Safety (Installation and Use) (Amendment) (No. 2) Regulations 1996	Her Majesty's Stationery Office
Pressure Systems and Transportable Gas Containers Regulations 1989	Her Majesty's Stationery Office
Rights of Entry (Gas and Electricity Boards) Act 1954	Her Majesty's Stationery Office

Gas Metering Definitions	Ofgas
COP/1a - Code of Practice for Low Pressure Diaphragm and Electronic Meter Installations with Badged Meter capacities not exceeding 6m³/h (212 ft³/h),	Ofgas
COP/1b - Code of Practice for Low Pressure Diaphragm and Rotary Displacement Meter Installations with Badged Meter capacities exceeding 6m³/h (212 ft³/h), but not exceeding 1076 m³/h(38000 ft³/h)	Ofgas
Supplier's Licence Standard Conditions	Ofgas
BS 5345 - 'Code of Practice for Selection, Installation and Maintenance of Electrical Apparatus for use in potentially explosive Atmospheres'	British Standards Institution
IGE/GM/1 - 'Gas Meter Installation for Pressures not exceeding 100 bar'	Institution of Gas Engineers
IGE/GM/4 - Flow Metering Practices for Pressures between 38 and 250 bar'	Institution of Gas Engineers
IGE/GM/5 - 'The installation and use of Electronic Gas Meter Volume Conversion Systems'	Institution of Gas Engineers

IGE/GM/7 - ‘Electrical Connections to Gas Meters’	Institution of Gas Engineers
IGE/UP/1 - ‘Soundness Testing and Purging of Industrial and Commercial Gas Installations’	Institution of Gas Engineers

APPENDIX 1 - INFORMATION ON THOSE INVOLVED WITH THE SUPPLY OF GAS

HSC AND HSE

The Health and Safety Commission and the Health and Safety Executive are statutory bodies whose overall purpose is to ensure that risks to people's health and safety from work activities are properly controlled. HSE has the day to day responsibility for enforcing gas safety legislation.

CORGI

The Council for Registered Gas Installers (CORGI) is responsible for the mandatory registration of businesses as required by regulation 3(3) of the Gas Safety (Installation & Use) Regulations 1994. Registration is only granted to those businesses deemed competent to carry out work on gas fittings. It might be helpful to think in terms of CORGI as the HSE's agents as regards safety.

IGE

The Institution of Gas Engineers (IGE) is acknowledged as the foremost independent authority in the British gas industry. They are responsible for the publication of the Gas Measurement Procedures identified in this Code of Practice.

PUBLIC GAS TRANSPORTER (PGT)

PGT's are responsible for transporting gas to an agreed point within pre-defined or agreed pressure and volume parameters, whilst maintaining the safety and integrity of their system. PGT's are also responsible for providing such services as are required under licence or legislation and for providing additional services as might be agreed from time to time. This would normally include maintaining a Sites and Meter Database covering all primary meters and sub-deduct meters and in some instances the maintenance of safety equipment.

The PGT is responsible for ensuring that the dynamics of the connected gas supply, particularly during sudden changes in flow rate, are assessed to ensure the system is protected from unacceptable depletion or over-pressurisation of gas. The Pressure Systems and Transportable Gas Containers Regulations 1989 require that data is exchanged and that safe operating limits are not exceeded.

GAS SHIPPER

Gas shippers are responsible, if requested by a supplier, for arranging a meter installation with a PGT in accordance with the terms of the licence. Shippers are also responsible for liaising with the supplier and a PGT regarding the current and projected gas consumption, the location and size etc. of the meter installation, the location of the gas service and the programming and execution of the meter work.

GAS SUPPLIER

Gas suppliers are responsible for supplying gas to a gas user, and are responsible (amongst others) for:-

a) making meter installation arrangements for the gas user if asked to do so,

b) identifying with the gas user the maximum current and projected hourly gas consumption through the meter installation, including the range of flow variations,

c) liaising with the gas shipper and the gas user on the gas consumption, the location and size etc. of the meter installation, the location of the gas service, and the programming and execution of the meter work.

THE GAS USER

The gas user is responsible for providing adequate details of the current and projected gas consumption, for providing a suitable location and adequate housing for the meter installation and, where appropriate, any associated equipment in accordance with the requirements of the PGT, for obtaining planning approval from the appropriate authorities for the construction of a meter house where appropriate and for maintaining the meter environment in accordance with the Gas Act 1986 and the Gas Safety (Installation and Use) Regulations 1994.

THE METER OWNER

The owner of the meter installation is responsible for its correct operation and maintenance in respect of the registration of gas consumption.

GCC

The Gas Consumers Council is established under the Gas Act 1986 and is responsible for representing the interests of all gas consumers.

APPENDIX 2 - AN EXAMPLE OF AN EMPLOYEE VETTING PROCEDURE

The information in column 1 below is required from all applicants who shall sign to confirm the information is correct. Any false declaration shall constitute grounds for immediate dismissal.

All information shall be verified in accordance with column 2. The verification is to be recorded in column 3 and signed by the supervisor/manager responsible.

Information to be obtained	**Verification required**	**Verification OK?** **Yes/No**
Applicant's Name	Documentary evidence of identity, ideally with photograph or minimum 2 documents with name and address e.g. driving licence.	
Current Address and length of time at this address.	Documentary evidence of residence e.g. driving licence, utility bill.	
Is current address a permanent or temporary home?	Applicant to confirm details in writing.	
Previous Address(es) if less than 5 years at current address.	As for current address.	
Is Applicant registered on the Electoral Role? If so, at what address?	Applicant to confirm details in writing.	

Applicant's NI Number.	Documentary evidence e.g. P45, P60 Tax Coding notice.	
Previous employment history (minimum 10 years or since leaving full time education).	Confirm employment history with each employer.	
Name and addresses of 2 references.	References to be obtained in writing.	
Any previous convictions or criminal record.	Applicant to confirm details in writing. Any convictions not regarded as spent under the Rehabilitation of Offenders Act 1974 to be subject to management review with due regard to the duties to be undertaken.	
Undertaking to notify employer of any change to the above information.	Written undertaking required.	

APPENDIX 3 - METER INSTALLATION AND EXCHANGE RECORD

This page to be completed prior to siteworks
Please Note: Shaded areas indicate legal requirements

To: .....

.....

.....

This form should be sent directly to the SUPPLIER if known, otherwise to relevant PGT

Competence Level. ***Registered Gas Meter Installer (RGMI) - Ofgas Registration No** .....
***Gas Meter Installer (GMI)**

** Delete as appropriate*

Details of Meter Company

Name ..... **Installers Name** .....

Address ..... **CORGI Registration No** .....

..... **Registration Level - Meter Provider Y / N**

Postcode .....

Telephone No .....

Name of Person Requesting Meter Work (e.g. Gas Supplier or User) .....

Name of Person Who Placed Contract for Meter Work ....

Position/Company .....

Address .....

.....

Postcode .....

Telephone No .....

Details of Meter Work Location

Site Name ..... **Meter Point Ref.**.....

Contact Name .....

Site Address .....

.....

Postcode .....

Telephone No .....

Person/Company Authorising Work .....

Position in Company ..... **Date** .....

Name of Company ..... **Tel. No** .....

Work Description

This page to be completed on site

Meter Installed - reason	Meter Exchanged - reason	Meter Removed - reason

Meter Details

Old Meter Details				New Meter Details			
Date & Time of Removal	AM / PM			**Date & Time of Removal**	AM / PM		
Final Reading				**Final Reading**			
Meter Serial No.				**Meter Serial No.**			
Manufacturer				**Manufacturer**			
Type *Delete as appropriate*	Diaphragm Ultrasonic Turbine Rotary			**Type** *Delete as appropriate*	Diaphragm Ultrasonic Turbine Rotary		
Meter Model i.e. U6, U16				**Meter Model** i.e. U6, U16			
Max. Badged Capacity				**Max. Badged Capacity**			
Year of Manufacture				**Year of Manufacture**			
No. of reading dials				**No. of reading dials**			
Index Scaling i.e. x1, x10, x100				**Index Scaling** i.e. x1, x10, x100			
Registration Units	Cubic Ft / Cubic Metres			**Registration Units**	Cubic Ft / Cubic Metres		
Prepayment Meter	Y / N	Coin	Y / N	**Prepayment Meter**	Y / N	Coin	Y / N
		Token	Y / N			Token	Y / N
		Electronic	Y / N			Electronic	Y / N

For Meters With An Annual Load Above 25,000tpa/732,000kWh

Gas Meter Height Above Sea-level (Metres) .....

Meter Pressure (millibars) .....

Meter Location .....

.....

Bypass been approved by PGT **Y / N**

Bypass Fitted	**Y / N**	**Bypass Sealed**	**Y / N**
Meter Collar Fitted	**Y / N**		

Converter Details

	On Disconnection From Meter	On Connection to Meter
Manufacturer		
Year of Manufacture		
Converter Model		
Serial No.		
Reading (unconverted)		
Reading (converted)		
No. of Dials (unconverted)		
No. of Dials (converted)		
Temperature Conversion	**Y / N**	**Y / N**
Pressure Conversion	**Y / N**	**Y / N**
Compressibility Conversion	**Y / N**	**Y / N**
Density Conversion	**Y / N**	**Y / N**

Meter/Converter Owner Details		
	New Meter	**New Converter**
Name of Owner		
Address of Owner		
Postcode		
Telephone No.		
Emergency Contact Telephone No.		

APPENDIX 4 - AN EXAMPLE OF A CODE OF CONDUCT

The following is an example of General Rules of Conduct for all employees of a RGMI employed on meter work.

1. SAFETY AND SECURITY

You shall:-

a) Observe all gas and other safety regulations, statutes and authorised Codes of Practice.

b) Not act in a manner likely to endanger yourself or any other person (including members of the public) or property.

c) Not smoke in any area designated as a 'No Smoking' zone, where safety or a special health hazard might exist, e.g. 'Live Gas Working'.

d) Co-operate with security and safety measures prescribed to protect life and property, using safety equipment where appropriate.

2. GENERAL CONDUCT AND PERFORMANCE AT WORK

You shall:-

a) Ensure when on duty that your performance is not affected by drink or drugs.

b) Not smoke whilst on gas users premises.

c) Not act in an abusive, violent or irresponsible manner towards persons or property.

d) Not discriminate against gas users on any grounds e.g. sex, colour, race, creed, nationality or ethnic origin.

e) Obey reasonable instructions and follow laid down working procedures.

f) Act in a manner which will maintain satisfactory relations with gas users and members of the public, avoiding unwelcome physical advances, suggestive remarks and language likely to cause distress or offence.

g) Carry out work in a careful, attentive and competent manner, to the required standards.

h) Avoid bringing the gas industry into disrepute or in any way hindering the efficiency of its operation.

3. THEFT, FRAUD, PERSONAL GAIN AND DISCLOSURE OF CONFIDENTIAL INFORMATION

You shall not:

a) Misappropriate property.

b) Divert business to a competitor.

c) Reveal confidential information to an unauthorised party.

4. MISCELLANEOUS

You shall:

a) Wear such uniform or protective clothing as is provided;

b) Produce an identity card when required, and wear it in such a manner that it can be seen at all times.

c) Dress in a presentable manner suited to your job and the circumstances in which it is performed.

IF IN DOUBT

This Code has been prepared to give guidance. If you are ever in doubt about any matter concerning conduct or any other issue regarding your work, you should seek advice from your manager.

APPENDIX 5 - EMERGENCY GUIDELINES (GAS ESCAPE)

General Rules for RGMI Employees

The following are general rules that should be followed when a gas escape is discovered by any employee of the RGMI employed on meter work.

This is not intended to be a definitive procedure.

1. DOMESTIC PREMISES

a) Advise the gas user that there is a gas escape.

b) Advise the gas user:-

- to turn off the supply at the meter;
- not to smoke or use matches or naked flames;
- to open doors and windows to get rid of the gas;
- not to turn electrical switches (including door bells) on or off and not to operate remote external entry systems; and
- to check if the gas to an appliance has been left on, unlit or if the pilot light has gone out.

c) If a gas user is not present, you should turn off the supply at the meter unless there is a reason for not doing so.

d) Report the gas escape immediately and personally to Transco (0800 111 999), or the relevant gas supply emergency provider.

2. INDUSTRIAL AND COMMERCIAL PREMISES

The same rules as in 1a) to 1d) above apply but note that:

a) You shall make every effort to inform the responsible person e.g. the site manager, site supervisor, or appropriate person in authority, of the gas escape.

b) The responsible person shall take the decision to turn off the gas supply. If in your judgement an immediate danger exists, you may turn off the supply of gas in the absence of a person in authority.

c) When reporting the gas escape as in para 1d) above, it is necessary, where possible, to give details of the nature of the escape, the location within the premises and in addition the complexity of the meter installation.

APPENDIX 6 - APPROVAL DOCUMENTATION

When submitting a meter installation design to the PGT for approval, the RGMI should complete a COP/1c Meter Installation Proposal Form (or any form that the PGT may subsequently develop) and submit this along with the appropriate supporting documentation to the PGT.

The attached form is based on that required by Transco. It is anticipated that other PGTs will develop similar forms.

COP/1c Meter Installation Proposal

The following information will be required by Transco to fulfil its obligations under the Ofgas Code of Practice COP/1c.

Date received

Transco District Site Works Reference Number

Office Use Only

'M' Number if known

Registered Gas Meter Installer Name and Registration Number

Installation Name/Identification Address including Postcode

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1. General Installation Details

1.1 Maximum design capacity (scfh)

1.2 Design Installation Inlet Pressure (mbar)

Minimum continuous flow (scfh)

1.3 Metering pressure (mbar)

1.4 Does the proposed meter installation incorporate a pressure regulator ? **Yes / No**
If No, attach copy of HSE exemption certificate.

1.5 Is it proposed to fit a bypass ?
If Yes, state reason for bypass.
(or attach certificate)

Yes / No

2. Installation Pipework and Layout

Attach a suitable, dimensional, engineering drawing of the installation plan, front and side elevations, showing details of all pipework and components installed, any vents and reliefs fitted. Provide details of proposed:-

Jointing methods
Pipework and equipment supports (location of supports)
Pressure ratings of spools and pipework (working, fault, test)
Welding standards
Position of purge and test points
Pipework materials

3. Component Details, i.e. Regulators, Meters, Valves etc.

Attach a list of the components proposed and include details of:-

Make
Size
Type
Materials
Pressure rating (working, fault, test)
Meter Pulse Output (type)

4. Installation Location and Zoning

Attach a general installation location drawing (distances to be shown in metres), clearly showing:-

Proximity of adjacent buildings
Location of meter within site perimeter
Location of major electrical equipment (e.g. high voltage equipment)
Hazardous area zoning (of both the installation and its immediate surroundings)
Access
Nearest vehicle access
Location of crash barriers
Size of floor area of installation

5. Housing Details and Ventilation

Attach drawings, plan and elevation, of the housing or enclosure showing :-

Size, type and location of ventilators
Security arrangements
Any explosion relief
Position of vent stack terminations
Materials of housing construction
Electrical equipment within housing or enclosure and immediate surroundings,
e.g. conversion system, data logger, other electrical equipment

What is the floor area of the ventilation ?

What is the available total free area of ventilation ?

Ventilation free area expressed as a percentage of the floor area of the installation ?

6. Electrical Equipment Details

Attach list of proposed electrical equipment, e.g. conversion system, and details of certification, i.e. n type, I.S. etc.

Attach schematic diagram of electrical circuit connected to the meter, showing barriers etc.

7. Gas User's Plant

Attach description of Gas User's Plant, specifying total connected load, modes of operation etc.

Is the Gas User intending installing gas compressors, boosters, or using extraneous gases downstream of the meter installation ? Specify _____

If Yes, attach results of dynamic analysis. If No, go to 9.

Number of proposed compressors, make / model

What type of compressor ? Screw / reciprocating / other

What type of control method proposed ? Spill back / inlet throttle / step

If spill back is fitted, what is its capacity ? (m^3/h)

8. Compressor System Supply Safeguards

8.1 What under / over pressure protection devices are provided on the compressor inlet ? e.g. Low pressure trips, relief valves, slam shut etc.

8.2 Attach diagram showing location and orientation of safety devices.

8.3 Low pressure trip points ?

8.4 NRV maximum reverse pressure rating ?

8.5 Relief valve setting ?

9. Technical Standards

This installation has been designed in accordance with :-

10. Registered Gas Meter Installer's Details

Engineer responsible, contact name and phone number :-

Signature .....

On completion, return to the local Transco office at : -

Approved/Rejected	**Issue**	**Date**	**Change**
Comment			

Note: Transco will only verify the meter installation to ensure that it does not affect the Safety and Integrity of its system and the appropriateness of the meter.

APPENDIX 7 - GUIDELINES FOR SUSPECTED/ACTUAL METER TAMPERING

General Rules for RGMI Employees

The following are general rules that should be followed when a suspected or actual case of meter tampering is discovered by any employee of the RGMI employed on meter work.

This is not intended to be a definitive procedure.

1. SUSPECTED TAMPERING

a) If you suspect that the meter installation has been tampered with, you must record details of the suspected method or evidence of tampering using the specified procedures.

b) If you believe that the meter installation is unsafe (i.e. the integrity of the installation has been affected by interference) you shall report the gas escape immediately and personally to Transco (0800 111 999), or the relevant gas supply emergency provider.

c) The meter reading and the meter details, if different from those expected, shall be recorded.

d) It is good practice for you to make additional personal notes for future reference.

2. ACTUAL TAMPERING

a) If you discover an instance of meter tampering, you shall follow the procedure below, and then immediately report the case to the RGMI for them to advise the PGT immediately.

b) An installation that has been tampered with is deemed to be unsafe. You shall report the gas escape immediately and personally report the fact to Transco (0800 111 999), or the relevant gas supply emergency provider.

c) You shall record the tampering details using the specified procedures set out below. In appropriate cases, you shall sketch the details of the tampering (e.g. by-pass fitted, meter 'propped up', meter reversed etc.).

d) In appropriate circumstances, you should mark the reverse of the meter with evidence that the meter had been turned (e.g. by scratching your 'employee number' on the reverse of the meter).

e) The meter reading and the meter details, if different from those expected, shall be recorded.

f) You shall record any meter status displays that are activated as a result of tampering.

g) It is good practice for you to make additional personal notes for future reference, which should include the time and date.

3. SAFETY

You must at all times be mindful of your own safety, the safety of the gas user and the safety of the general public. You should use your own judgement, when carrying out these guidelines, to ensure that safety is not compromised.

YOU SHOULD NOT ENDANGER YOURSELF OR THE LIVES OF ANY OTHER PERSON IN CARRYING OUT THESE DUTIES AND SHOULD LEAVE THE PREMISES IF YOUR SAFETY IS THREATENED

Note: For security reasons, this procedure does not attempt to define all the means by which tampering can occur.