

Fact sheet

Meter Approval & Verification

The use and performance of gas and electricity meters are governed by the Gas Act 1986 and the Electricity Act 1989 (consolidated under the Utilities Act 2000) and supporting regulations. Under this legislation Ofgem has a duty to approve and verify meters as well as appoint competent and impartial persons as meter examiners to undertake duties related to gas and electricity meters.

Where a meter is used to measure the amount of energy supplied for billing purposes, the meter must be of an approved type for electricity and of an approved type and stamped for gas. In addition, for electricity supplies to domestic customers by licensed suppliers, a certified meter must be used.

Electricity Meters

Schedule 7 of The Electricity Act 1989 provides the primary framework here with supporting legislation in the form of Statutory Instruments and guidance Directions as required. The key documents are:

- **The Meters (Approval of Pattern or Construction and Manner of Installation) Regulations 1998, SI 1565**
- **The Meters (Certification) Regulations 1998, SI 1566**
- **The Electricity (Approval of Pattern or Construction and Installation and Certification) (Amendment) Regulations 2002, SI 3129**
- **The Measuring Instruments (EC Requirements) (Electrical Energy Meters) Regulations 1995, SI 2607**
- **The Measuring Instruments (EC Requirements) (Electrical Energy Meters) (Amendment) Regulations 2002, SI 3082**

All these are available from HMSO at www.hmso.gov.uk.

Approval

Ofgem approves the pattern/construction and manner of installation of meters by ensuring that the meter type conforms to requirements covered in regulations. This is achieved by testing a representative sample of meters against the appropriate harmonised national or international technical standard.

Meters are tested in a laboratory nominated by Ofgem, a service currently under contract to SGS (UK) Ltd (www.sgs.com) although test reports from other accredited laboratories may be accepted as demonstration of compliance with certain aspects of standards. SGS will test the meter(s) concerned and provide a report to Ofgem and the applicant detailing the results and findings. Ofgem will analyse the report and make the final decision on approving a specific meter type. Once approved, the meter will be listed in Schedule 4 of SI 1566 which is a statutory register of all pattern approved electricity meters suitable for use in the UK.

Both induction (electro-mechanical) and static (electronic) meters are approved by Ofgem. Additionally, induction meters approved by another EC member state to the

appropriate EC regulations and European standards may be used in the UK without the need for further approval. Conversely, Ofgem can provide EC approval of such meters which then may be put into use in any EC member state without the requirement for further approval. All subsequent modifications to approved meters are also subject to further examination and approval.

It is important to note that unless a meter is approved by Ofgem or another EC member state (in the case of induction meters) it cannot be used for billing purposes in the UK. On its own, conformance to a standard does not amount to Ofgem approval, formal certificated approval is a prescribed requirement.

Once an approval is granted a manufacturer or agent can submit meters, manufactured in accordance with the type approved, for certification. Each meter will be examined to ensure that it conforms with the approval and that it performs appropriately.

Certification (Verification)

All domestic meters used for billing purposes by a licensed electricity supplier, must be certified to show that when tested following manufacture/refurbishment they conformed to the original pattern approval and operated within the prescribed levels of accuracy. They may be used for a specified period of time after which they must be removed from circuit..

This process is described in detail in The Meters (Certification) Regulations 1998, SI 1566.(as amended) This prescribes that all meters following approval be allocated a certification life (i.e. the time a meter is allowed to remain on circuit from initial certification. Meters for industrial and commercial customers are either certified or the supplier reaches agreement with the customer for a meter with a similar level of accuracy to be fitted.

Ofgem allocated certification life is restricted to 10 years for newly approved induction meters and for periods of between 10 and 20 years for static meters. Certification periods greater than 10 years (for electronic meters) are subject to the submission and validation of a component reliability model based on the Siemens Norm SN29500. Subsequent in-service surveillance monitoring can result in either increase or decrease of this period. Up to date information regarding the status of any particular meter type can be gained by viewing the latest release of Schedule 4 to the Meter (Certification) Regulations which are listed on the Ofgem website.

Prior to submission for certification meters will have a uniquely marked seal attached. In the UK, meters can only be certified by an Ofgem approved meter examiner.

The meter need not be certified where the supplier does not hold a supply license. This provides for situations where the supplier might be landlord selling on electricity to their tenants or a caravan park owner billing individual berth occupiers. However, the meter owner is obliged to use an approved meter and keep the meter in good working order.

Sealing

All certified meters are sealed. A seal is used to provide security for the measuring elements of a meter from tamper, identify the manufacturer/repairer of the meter, the

year of certification and the fact that the meter is certified. The seal can take the form of a crimped security seal on traditional meters or an indelible inscription on the meter case for sealed for life static meters.

Testing

Meter test requirements are defined in Schedules 1-3 of SI 1566.

Gas Meters

Section 17 of the Gas Act (1986) provides the primary framework here with supporting legislation in the form of Statutory Instruments as required. The key documents are:

- **The Gas (Meters) Regulations 1983, SI 684 (as amended)**

Approval

Ofgem approves the pattern/construction of meters by ensuring that the meter type conforms to requirements covered in regulations. As with electricity meters, gas meters are tested in a laboratory nominated by Ofgem. This is currently under contract to SGS (UK) Ltd. As with electricity meters SGS will test the meter and provide a report to Ofgem detailing the results and findings. Ofgem will analyse the report and decide whether to approve or otherwise.

Mechanical and electronic meters up to a maximum flow rate of 1600m³/hr (at standard conditions) are approved by Ofgem. Additionally, mechanical meters can be approved by another EC member state to European Standards and used in the UK.

The minimum standards to which gas meters of approved pattern and construction must perform are detailed in SI 684 (1983). Meters must not leak gas and they must meet various tests to demonstrate their accuracy.

Stamping (Verification)

As indicated, gas meters are examined to ensure that they conform to a type approval and perform within the prescribed limits..

Once an approval has been granted a manufacturer or agent can submit meters, manufactured in accordance with the type approved, for stamping. Each meter will be examined to ensure that it conforms with the approval and that it performs appropriately. On successful completion of this process the meter will have a uniquely marked seal attached to the meter. These can be plastic or lead and are located in positions to prevent unauthorised access to functioning parts of the meter and as such are designed to be tamperproof.

Meters can only be stamped by, or on the authority of, a meter examiner appointed by Ofgem. Once again, mechanical meters can be stamped by another EC member state and used in the UK.

There is an obligation on meter owners to ensure the meter continues to register accurately and is kept in good working order.

Disputes

The dispute process for gas and electricity meters is covered by their respective legislation and typically is initiated by the customer challenging the validity of a submitted bill.

The majority of billing complaints are typically caused by:

- Accounting errors
- Estimating Errors
- Information System errors
- Meter inaccuracy
- Customer misunderstanding
- Faulty metering installation

The majority of disputes are resolved by discussion between the supplier and his customer. Where this is not possible the customer has the right to involve Ofgem. However, consulting with your local Energywatch office or supplier is the recognised route and they have an obligation to facilitate this.

Further Advice

If you are still unsure about the status of your meter please ring Energywatch on 08459 060 708.

If you smell gas, please ring Transco (the gas transporter) on 0800 111 999.

Your Energy Supplier should be the main contact for any queries you have about your meter.