

**Marcogaz answer to the ERGEG Public Consultation Paper on
Draft Guidelines of Good Practice on
Regulatory Aspects of Smart Metering
for Electricity and Gas**

General remarks on the chapters 5, 6 and 7:

Whereas electricity meters measure the consumption in energy (kWh), with the result is given instantaneously, gas meters are indicating the gas volume passing through it at measuring condition (m³). The consumption in energy (kWh), which is based on the caloric value (mean value of the caloric value measured upstream in the network), the gas temperature and the gas pressure, is not measured in the gas meter. The bill is given in energy units.

Currently there is no gas meter where the measurement result is given in energy. The use of equipment like a caloric value determination device at each residential metering point is currently not feasible for economic and safety reasons.

We propose to clarify in the document that the consumption of gas is measured in volume (m³) or in mass (kg).

Chapter 5: Customer – Services gas:

When reading the paragraph concerning the MID, we have the impression that ERGEG considers the MID as insufficient and that this directive should be changed to allow smart meters.

To our knowledge, additional functions are allowed by the 2004/22/EC directive (MID) but they shall not influence the metrological characteristics of the measuring instrument.

We fully agree with you that additional functions under national law shall not prevent a barrier to trade by restricting the free movement of goods or technical innovation. The outcome of the mandate M/441 should solve this issue.

Having a "*display of the total quantity supplied or the displays from which the total quantity supplied can be derived, whole or partial reference to which is the basis for payment*" on the instrument covered by the MID, is a fundamental right and a basic protection of the customer. This is the bases for transparency. Since the MID allows additional indications, this could not be an issue to stop smart metering.

We cannot understand the importance given to the “measurement of the pressure compensation”. The influence of pressure variations on a meter, measuring gas at low pressure for the domestic consumption, is negligible. When the replacement of all meters in the field is required, an economic approach, such as the retrofit of existing meters with communication modules cannot be applied.

Recommendation 17: Information on actual consumption, on a monthly basis

When remote index reading is applied, the DSO/meter owner can put the monthly consumed volume at the disposal of the different market players, but in the liberalized market, cost recovery could be an issue. A complex and ‘open’ communication system will have to be developed between the different stakeholders. As mentioned above, the consumption in energy units is not instantaneously available.

Recommendation 18: Accurate metering data to relevant market actors when switching supplier or moving

This functionality is one of the main advantages of smart metering for all stakeholders and the customers.

The responsibility for the acquisition of the metering data by remote reading will have to be clearly defined and well organised in the liberalized market, respecting the interoperability, the data security and the customer privacy.

Recommendation 19: Bills based on actual consumption

This choice should be left to the consumer and the consumer organizations. Anyway, the consumer receives an accurate bill at the end.

Flexibility should be considered to avoid big fluctuations in the invoiced amounts due to the seasonal variations of the gas consumption (e.g. due to heating in the winter). The payment could remain equally spread over a year, with a yearly correction, in order to help the consumer to manage his budget.

Recommendation 20: Offers reflecting actual consumption patterns

This functionality is applicable for electricity where the cost of generation varies hourly, but has limited practical implementation for the residential gas market where gas networks store huge amounts of energy and therefore react slowly over time to changes in demand.

The answer on the questions 20 a) & 20 b) will depend on:

- the cost benefit analysis: The frequency of remote reading and of the determination of the consumed gas in energy has an important impact on the costs. A higher number of transmissions will lead to higher communication costs, lower lifetime of batteries and higher data management costs.
- the accuracy of the bill: Short measuring periods will increase the uncertainty on the determination of the consumption in energy units and the bill.
- the acceptance of the consumer and consumer’s organizations of more frequent readings in regard with the consumer’s privacy?
- the impact on the actual allocation process.

Recommendation 22: Hourly flow capacity reduction/increase

Once again, we like to point out the difference between gas en electricity.

As gas appliances tend to provide for basic needs (minimum ambient temperature, minimum water temperature and hot food), there is limited scope to reduce energy consumption because any reduction depends on the installed appliance's efficiency and the level of insulation in the home. There are many factors where the consumer has no short term influence (external environment such as a long cold winter, damp atmosphere...).

As most of gas systems react slowly to changes in operation, the consumer may not see instantaneous changes to the operations of their appliances, whereas the immediate response of electrical appliances would provide instantaneous information that could help the customer to rationalise their electricity consumption.

Recommendation 23: Activation and de-activation of supply

Adding two-way secured communication system and a valve to the gas smart meter, allows remote interruption and prepayment facilities. For security reasons the valve may not be opened remotely without a safety feature. If the valve is remotely opened with no safety features there is significant risk to an uncontrolled release of gas.

The example you gave requires complete gas shut off guaranteeing gas tightness. The actual used battery powered valve does not allow a smart meter valve to be regarded as an isolation valve.

Recommendation 24: Alert in case of high energy consumption

Appropriate selection and maintenance of the gas appliance and good thermal insulation of the home are the means to obtain low consumptions. Sudden high increases in consumption are not common for gas appliances well maintained.

Smart meters can locally be equipped with excess flow detection and smart meter valve that closes automatically when a high flow (e.g. due to a big leakage) is detected.

Please note that:

- the detection level will be higher than the maximum flowrate for which the meter is designed to allow his verification (e.g. $> 7,2 \text{ m}^3/\text{h}$ for a domestic gas meter G4)
- this functionality may give a false safety feeling to the consumer since this functionality does not prevent uncontrolled escape of gas
- this functionality cannot replace correct maintenance of the customers gas installation.

Recommendation 25: Interface with the home

One technical feasible system to help the end user manage their gas consumption is to provide an output from the gas meter which represents the measured gas volume (m^3). This output can be used by a 'home display unit'. This 'home display unit'; preferably common for gas, electricity, water, heat... consumption, can calculate and display the necessary data to manage the home consumption, for instance load profiles, comparisons of consumptions... and could even provide adaptive control to manage the energy consumption (e.g. to bring the heating on at the correct time or switch it off when no one is home). It is easily feasible to provide this 'home display unit' with a communication system (e.g. by internet) to provide the end user with more useful information.

The pulse output of a residential gas meter is already harmonized in Europe. The most recent residential meters are sometimes provided with a pulse output but a lot of the

meters on the market would have to be changed. If other types of outputs of the residential gas meters are needed, they still will have to be harmonized in Europe.

Consideration shall be given to the electrical safety and the fact that a lot of residential gas meters are installed outside. It should be noted that although the pulse output is harmonized, the output connector, connecting the pulse to any system is not yet harmonized in Europe. In order to obtain the interoperability, this connector will have to be harmonized.

Chapter 6 & 7:

For many usages, there is no alternative for the use of electricity. However natural gas, mainly used for cooking, heating and hot water, has to compete with other energies like heating oil, coal, wood... The introduction of gas smart metering systems should not destabilise either the energy market or the European targets on reduction of greenhouse emission. For gas smart metering to be adopted there has got to be benefits for the end user who directly or indirectly will pay the costs. These benefits need to be appropriately valued to ensure a cost effective solution is provided. The cost for installation, maintenance and metrological verification of a gas smart metering system needs to be balanced against the additional benefits.

Although the drivers and solutions could be different, we promote any industry synergies between all utility systems. Interoperability and ease of operation are essential.

Any gas smart metering system has to respect the specific gas safety issues.

To achieve the energy efficiency and the emission reduction targets, the cost benefit analysis and the roll-out should consider a global approach for all domestic gas consumers, but also assess the feasibility for the different categories of consumers (domestic consumers using gas only for cooking, domestic consumers using gas for cooking and heating, small business consumers, light industrial consumers...). Attention could be given to consumers having payment problems.

A poor experience of the customer will be detrimental to the efficiency of smart metering. This includes non existent or too long payback time period.

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