

Statement

ERGEG Public Consultation - Draft Guidelines of Good Practice on Regulatory Aspects of Smart Metering for Electricity and Gas

Berlin, 10th September 2010

1 General remarks

The companies in BDEW stand by their social responsibility. They advocate and support the efforts being made for climate and environment protection, protecting resources and appropriate final energy prices. Also, they support the efforts to make more efficient use of energy and to give domestic customers incentives to make savings both through energy efficiency and through offering a choice of tariffs.

In the future, smart metering can be an important element in an intelligent energy supply, particularly where smart grids are concerned. BDEW therefore welcomes the ERGEG public consultation paper, as it pools experience from various member states of the EU and makes it available for general use.

At present, the member companies of BDEW are playing an active role in implementing the existing German metering regulations resulting from Sections 21b and 40 of the Energy Industry Law (EnWG).

There are also intensive discussions on the provisions of the 3rd internal market package as contained in directives 2009/72/EC on electricity and 2009/73/EC on gas for the use of smart metering on the final consumer market, with corresponding projects taking place at the same time.

Aside from implementing these regulations, the political and public sectors are currently involved in intensive discussions on the use of smart meters. Basically it can be said that without sufficient acceptance of the consumers, smart meters will fail to fulfill the high expectations. In the end, acceptance can only be achieved by an appropriate cost/benefit ratio resulting from the use of smart meters. Any decision on a market roll-out of such devices must be preceded by a serious look at the possible price advantages for consumers and energy efficiency potential, together with corresponding financial appraisal. This applies in particular with regard to investment in meter/IT/TC infrastructure as well as the anticipated operating costs and TC costs. These are joined by costs for data transfer and data management, while issues of data protection and technical data security should not be disregarded. Similarly, the domestic sector currently only offers limited possibilities for load transfer and there is a need for a precise review of the resulting advantages for grid operators. BDEW therefore welcomes the approach taken by ERGEG, which includes consumer safety in the focus of its considerations.

The pending decisions and analyses on any possible roll-out of smart meters therefore have to be prepared and implemented with great care while also giving due priority to the economic efficiency of the measures. Before statements can be made - particularly for the gas sector - and resulting recommendations for minimum standards are issued, all possibilities of application and use have to be analysed and appraised from the economical as well as the technical point of view.

The appropriate use of smart meters requires extensive consulting services and supplementary energy services. Here, the energy suppliers can contribute with their know-how and customer contacts to ensure that all individual activities are linked right across the whole energy industry without any friction losses.

Furthermore, smart meters should be used with a forward-looking approach taking changing framework conditions in the energy industry into account. This also implies a view to future technical standards and the issue of an expanding own generation. Equally, storage possibilities on the domestic sector ought to be reconsidered. A technology-neutral analysis of the potentials is necessary as well as general trust and confidence in competition, which produces the most suitable solutions.

However, BDEW feels that a purely market-driven development without corresponding framework stipulations for technical standards is not appropriate. Lacking technical and IT compatibility can lead to misdirected investments in the initial phase, which can be detrimental to competition and corresponding sales on a national or even cross-border scale.

Fundamental interfaces and data formats in the devices should be coordinated and harmonised between all market players in a reconciliation process, also with regard to the anticipated EU calibration requirements. Similarly, there should be a clear allocation of the various roles on the market. In particular for communication lines, a clear, unequivocal responsibility is necessary.

The national regulatory authorities must ensure acknowledgement on the regulated sector of the costs for smart meters with stipulated minimum functionalities (basic meters) and related services. It must be possible to add further functions to the basic meter¹ as and when the need arises and depending on economic efficiency. However, the proposed functions of a smart meter exceeding those stipulated in the MID (Directive 2004/22/EC), e.g. measurement of reactive power and reactive energy, will not be necessary for domestic customers. The consultation paper only partly solves the issue as to which types of services are regarded as support services and which are regarded as regulative stipulations. In particular as additional features are concerned, BDEW advocates solutions that evolve from competition and that are open to all market participants.

BDEW underlines the great differences prevailing in the energy retail markets in Europe. It is vital to take account of the differing standards in energy supplies and the differentiated market role models (sales / grid operators / meter operators / energy service providers) and to avoid making generalised stipulations. Similarly, a cost/benefit analysis of the use of smart meters should review which roll-out solution best corresponds to the specific national circumstances. An undifferentiated European recommendation for a "regulated roll-out" or a market-driven solution will not take account of the prevailing national circumstances. With regard to the following remarks, attention is drawn to the fact that in some cases, the ERGEG recommendations presume that a decision is taken for a widespread roll-out. BDEW is not automatically against a widespread roll-out in principle; instead, BDEW advocates the cost/benefit analysis

¹ Basic meter defined by the Federal Network Agency: the position paper by the Federal Network Agency refers to the following functionalities for electricity and gas meters: display of energy consumption in kWh (electricity, in m³ (gas), consumption of last 24, 168, 720 hours, utilisation period: at least two tariff registers "reflect" the values: display on the meter or alternatively a home display or internet portal interface (with open standard) to the grid operator and to the home display

recommended in the third internal market package. Only after the results of this analysis are available, a reliable assessment of the various implications of the use of smart meters is possible.

2 Remarks on the individual recommendations

2.1 Electricity

Recommendation 1: Information on actual consumption, on a monthly basis

The method and the cycle for information about energy consumption should always be tailored to the individual customer's requirements and not stipulated as a flat-rate solution. There is a large number of possible implementation solutions available in competition, such as In-Home-Units (IHU), access to consumption data via applications for smart phones or internet solutions, monthly billing procedures etc. In the end, the question as to which solution will be accepted by the customers depends on costs and practicality issues. More up-to-date and more frequent information than for example an annual final statement of account for domestic customers will probably always involve higher costs (additional costs of an IHU including installation, additional costs for accurate monthly billing vis-à-vis monthly instalment payments etc.).

According to Section 40 (2) of the Energy Industry Law (EnWG), in Germany consumption information and billing is to be facilitated on a half-yearly/quarterly/monthly basis depending on the preference of the customer. However, in Germany, customers have so far shown little interest. Only in individual cases such services have been requested.

ERGEG states that information about consumption/costs and feed-in quantities/revenues should also be provided on a monthly basis to customers who draw energy from the grid as well as feed energy into the grid. As a basic principle, the Member States should be responsible for taking the corresponding decisions, as the introduction of smart meters for all feed-in systems depends on the structure of the national feed-in regime.

Recommendation 2: Accurate metering data to relevant market actors when switching supplier or moving

Correct and adequate metering data are a basic prerequisite for smooth supplier switching and therefore for a functioning competition market. Here smart meters can help to simplify and accelerate processes. Widespread smart meters would be when SLP customers switch supplier, for recording the current consumption situation. Basically Germany already has functioning processes for switching supplier and for data management that are acknowledged by the regulation authority.

Recommendation 3: Bills based on actual consumption

In Germany it is normal for customers to pay for what they have actually consumed. Similarly, it is a standard procedure for customers to receive timely information about price changes and for the bills to take accurate account of price changes according to the consumption periods.

Accurate monthly billing as the minimum standard is conceivable for smart meter customers, depending on the functionality of the meters. However, this causes additional costs that have to be weighed up against the possible savings. Mandatory accurate monthly consumption billing presumes a widespread use of smart meters with SLP customers.

Smart meter technology and new, customer-oriented products will result in innovative invoicing solutions tailor-made to the individual needs of the customers (e.g. pre-payment or billing in very short periods). On behalf of vzbv (Federation of German Consumer Organisations), the German FORSA institute has done a survey on customer wishes. The survey indicates that customers prefer monthly instalment payments. It should therefore be possible for customers to continue to use this option. Additional regulative stipulations are not necessary here.

Recommendation 4: Offers reflecting actual consumption patterns

Offers reflecting actual energy consumption can lead to a more conscious approach to energy and support energy saving and efficiency. Basically, customer information about current consumption values going over and beyond the basic standards is an essential element of future energy products. Here the best ideas and solutions preferred by the customers will emerge in the competitive process. In this context it is necessary to review and adapt existing models such as standard load profiles. A framework should be created that makes it possible to generate real monetary savings on shifting consumption from high-load to low-load times on the grid and on shifting consumption from the suppliers' high-tariff times to low-tariff times.

A load profile measurement of all domestic customers should give due consideration to the quantity of information involved and the resulting high follow-up costs for IT and the principle of data minimisation. As far as electricity is concerned, recording quarter-hour values for an SLP customer results in an explosion in the quantity of measured data to more than 35,000 measured values. Similarly, the intervals should be compatible with existing market and accounting rules and data exchange formats. Essential data protection issues also need clarification. In principle, energy services resulting in more efficiency and energy savings can also be visualised on the basis of a lower data volume.

Moreover, variable tariffs are only beneficial to customers if they can adapt i.e. control their consumption behaviour. But this does then also have to be implemented consistently; here the focus is placed on smart home applications.

Question 4a:

For tariffs going over and beyond the weak-load tariffs named below (under Question 4b), one conceivable solution could, for example, consist in load profile measurement (RLM measurement as already used for large consumers) in line with the accounting and market regime of the respective national energy market. For electricity, current practice for RLM measurement in Germany is based on quarter-hour values as time intervals. This would lead to an expansion of the accounting system for customers with annual consumption exceeding 100,000 kWh to domestic customers, probably with corresponding impacts on the cost side.

With regard to tariffs going over and beyond the previous weak-load tariffs, consideration should also be given to tariffing in downstream central systems. Tariffing in the meter, with a large number of tariff registers to cover many conceivable tariff variations, is very complex and results in great workload in terms of data transfer processes. Here it is also necessary to differentiate between data needed for billing and data needed for controlling customer consumption behaviour. The latter do not necessarily have to be transmitted and could therefore be made available by means of an in-house solution.

Question 4b:

At present, in Germany two tariff registers are displayed by common weak-load tariffs. The metering equipment used in this case (conventional meters with two tariff registers, supplemented by a timer or ripple control) represents a balanced cost/benefit ratio for the introduction of possible tariffs corresponding to the requirements of Section 40 of the Energy Industry Law (offering tariffs with an incentive to save energy). Remote metering is not vitally necessary here. As far as the national regulatory authority (BNetzA) is concerned, this is considered adequate, at least in the medium term. To make smart meters viable for the future, it should be possible to easily reconfigure them for the use of a certain number of registers.

Recommendation 5: Power capacity reduction/increase

It may be possible to achieve reductions in customer consumption levels in the framework of suitable price formulas by passing on reduced grid fees and energy costs for consumption in weak-load times.

In order to safeguard future viability of smart meters, it should be possible already at this point to expand them into an instrument for grid control and generation management. Similarly, related investment costs in the regulated area should be recognised by the regulatory authorities – this is not possible at present in Germany. As a basic principle, the problems of consumer and data protection must be taken into consideration in all these matters.

Recommendation 6: Activation and de-activation of supply

From the customer's point of view, the range of application is limited. Possible uses can be found in the context of home automation products, with a focus on controlling the customer's consumption sources. However, amongst others this requires password management for authorised customer access. As far as suppliers, meter operators or grid operators are concerned, this functionality would be conceivable for blocking processes. However, altogether remote blocking by suppliers or grid operators will scarcely be enforceable in Germany for cultural and political reasons. Up to now, prepaid systems are not common in Germany.

Recommendation 7: Only one meter for those that both generate and consume electricity

Basically, this multi-functionality of a smart meter for customers that both generate and consume electricity is a welcome feature for future solutions such as increased own energy generation and storage possibilities in the household. But there will be cases where this is not possible or maybe even desirable without further ado for technical/financial reasons. Corresponding decisions should therefore be left up to the Member States, particularly with regard to the national feed-in regime (e.g. EEG or KWKG in Germany), leaving sufficient scope for a certain pragmatic approach.

Recommendation 8: Access on customer demand to information on consumption data

Basically customers should have access to all their data. However, the cost involved should be seen in relation to the benefit and what customers really want. Provision of the data on customer demand for a certain fee is conceivable. In the competition process, products will be developed that make information available according to the needs of the respective customers. However, these services are not part of a basic solution.

In large cities, the meters are usually located in the basements or outside the dwellings. It would be a good idea to have a display of the data in the dwellings, but this cannot be part of a basic roll-out solution. An increase in the quantity of transmission channels must be expected to increase the data protection relevance. "On-demand" should be seen in the context of an in-house solution.

Recommendation 9: Alert in case of non-notified interruption

No need is seen to offer this kind of service in view of the high grid availability in Germany with short service recovery times after any interruption, particularly as this feature would cause a disproportionate increase in the costs for a smart meter and the respective warning system. In the event of meter failure, there would be an urgent need to inform the supplier or grid operator. The grid fees would have to take account of the costs for this kind of solution.

Recommendation 10: Alert in case of high energy consumption

This is a service that could be offered for example in the framework of an energy management product on the competition market. Basically many different possible varieties are conceivable here, insofar as the customer wants this kind of product and is willing to pay the associated higher costs. This product should not be part of a mandatory basic solution.

Recommendation 11: Interface with the home

In Germany, interfaces are to be provided as a basic principle for the meters fitted in new-builds and major refurbishments in accordance with the FFN specification (standards for electricity in Germany) and the corresponding position paper of the Federal Network Agency. A mandatory provision of a web portal or home display or other home automation services as part of a basic metering operation, as recommended by the ERGEG, is not appropriate; this should be left as an instrument of a competitive market. Here again, it is up to the market to satisfy the specific customer demands and find solutions to meet the individual customer's requirements.

Recommendation 12: Information on voltage quality

As proposed by the ERGEG, grid operators see a need to review the use of instruments measuring quality parameters at certain grid node points with prior evaluation of benefits and costs, particularly in the context of increasing decentralised energy generation and in view of a future smart grid. The widespread use of such instruments in every meter does not appear necessary. Basically, standard EN 50160 applies to all issues of quality parameters.

Recommendation 13: Information on continuity of supply

This function would only be possible with an additional battery. No need is seen to offer this feature in view of the high grid availability in Germany with short service recovery times after any interruption. Any decisions on this issue should be left up to the market and possibly the respective Member State.

Question on Recommendation 13:

Smart meters should be based on a basic, low-cost solution with the possibility of further additional features which comply with the requirements of the energy industry and meet customer demands. Active customer participation in the smart grid depends on market impetus and financial incentives, regardless of the installation of a smart meter.

Recommendation 14: When making a cost benefit analysis, an extensive value chain should be used

We welcome the approach of an "extensive value chain", as we share ERGEG's opinion that an informed decision in this question that will bring actual benefit on a macroeconomic level can only be taken after obtaining a full picture of the benefits and costs. It is therefore important to ensure that all corresponding costs are evaluated. Attention should also be paid to the resulting operating costs, in other words, the analysis must not be limited just to the investment costs of the new meter infrastructure.

These costs are to be compared with the resulting benefit. These will particularly arise for DSOs, customers and suppliers, so that there will probably be a difference in the distribution of benefits and costs between the various market roles and players. Those faced with the costs in the first step are not necessarily those who will benefit from the roll-out in the short term. Furthermore, possible advantages for suppliers and grid operators depend primarily on altered framework conditions in the energy industry (market rules/legislation). In order to make actual use of the anticipated benefit effects, massive investment will be necessary for consumer information. The costs and benefits involved here must also be included in the overall analysis. Investment in the regulated sector must be acknowledged with an appropriate ROI. Possible additional benefits for suppliers (following due amendments to the framework conditions in the energy industry) could include products with a larger service share.

Recommendation 15: All customers should benefit from smart metering

A profitability analysis along the lines of the internal market regulations should always be an open-ended process. In the case of a "regulated" roll-out for a smart meter with basic functions and corresponding cost acknowledgement by the regulatory authorities, all customers should be able to use the benefits of these devices. A widespread roll-out could then also create synergy effects in the procurement, installation and operation of the smart meters. However, the introduction of smart meters must not be detrimental to competition because of complicated or cost-intensive change processes.

Recommendation 16: No discrimination when rolling out smart meters

We agree to this recommendation in the event of a full roll-out.

2.2 Gas

At present it is still difficult to identify the advantages of smart meters for gas consumption with domestic customers. Savings in central heating and cooking appliances as the main applications are only possible through fundamental changes in customer behaviour (reduced use of the central heating) or high-cost measures (new heating system or insulation). The question arises whether all gas customers can make appropriate use of a smart meter, particularly those with small consumption points (cooking appliance). Furthermore, higher costs must be expected for gas meters with electronic devices caused by additional energy con-

sumption (batteries) and shorter calibration periods, compared to the classic positive displacement gas meter.

With reference to the synergy effects outlined by ERGEG in Chapter 7 generated by a joint roll-out for electricity and gas, we would like to draw attention to the fact that these effects can only be achieved if the overall regulatory framework is suitable for this. For example, it should be possible for the gas grid operator to use the communication device of the electricity meter and to claim the costs involved. Here the question arises as to non-discriminating access to the communication device, as well as issues of data protection and data security. This is particularly relevant in Germany with its large number of grid operators, where the operator of the electricity grid is not necessarily the same as the operator of the gas grid. Attention should also be drawn to the fact that in a liberated environment for meter operation and metering services such as the German market, a large number of processes, interfaces and contractual regulations etc. will be necessary to facilitate such "shared" use by different grid operators and/or meter operators/metering services. This is why we feel that it is difficult at the moment to make detailed recommendations for the gas sector. As a general rule, most of the comments made on the preceding recommendations also apply to smart meters on the gas sector. The following comments refer to additional aspects referring specifically to gas.

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

For customers with seasonal use, monthly information about gas consumption only makes sense during the utilisation period (this is normally the winter period).

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

see comments on Recommendation 2 (electricity).

Recommendation 19: Bills based on actual consumption

Monthly billing of gas consumption is not appropriate in view of the seasonal use of gas. Many customers prefer to make instalment payments that spread the costs for gas over the whole year. Annual billing of gas consumption in Germany is based on the actually measured energy consumption (see also comments on Recommendation 3 (electricity)). In Germany it is thus normal for customers to pay for what they have actually consumed. Similarly, it is standard procedure for customers to receive timely information about price changes and for the bills to take accurate account of price changes according to the consumption periods.

Recommendation 20: Offers reflecting actual consumption patterns

see comments on Recommendation 4 (electricity).

With regard to Recommendation No. 20, Questions 20a and 20b and Recommendation No. 22, we would like to add that in contrast to electricity, at this moment in time the demand for gas from domestic customers in Germany is driven primarily by the need for central heating. Thus, consumption depends essentially on the temperature and season and is concentrated mainly during the daytime hours, depending on day to day habits. The grid's storage capability usually balances out load fluctuations during the day. Consequently, time/load variable tariffs and capacity restrictions are currently not appropriate for gas on the domestic sector. This situation is also reflected in the current regulatory framework in Germany which does not specify time/load variable tariffs for the gas market, in contrast to electricity.

Question 20a:

Consideration must certainly be given to the principle of data minimisation and the cost/benefit issue in terms of the volume of generated data. The intervals must also be compatible with existing systems and data exchange formats on the gas market.

Question 20b:

Classic gas meters (positive displacement gas meter) only supply pure consumption data (volume). A display of the energy consumption and/or price would entail additional measurements of pressure, temperature and calorific value, making the costs of a smart meter far more expensive. Furthermore, an additional battery would be required for the meter's communication tasks (gas meters are not connected to the power supply), whose service life would be drastically reduced by many transmitting and receiving processes.

Recommendation 22: Hourly flow capacity reduction/increase

This Recommendation cannot be implemented for technical reasons.

Recommendation 23: Activation and de-activation of supply

This Recommendation should not be implemented for safety and cost reasons.

Recommendation 25: Interface with the home

As recommended by ERGEG, this functionality should not be included in a basic version. Optional products including this functionality can be offered on request from the customers. Here again, attention is drawn to the additional power consumption by the batteries and their service lives.

Recommendation 26: When making a cost benefit analysis, an extensive value chain should be used

See preliminary remarks for the section on "Gas Smart Meters".

Recommendation 29: Customer control of metering data

Compliance with the statutory regulations for data protection and data integrity is a fundamental prerequisite. Explicit consideration must be given to the resulting costs when analysing the value chain in Recommendation No. 14 / 26.

As far as the customer consumption data are concerned, corresponding rules on data security and integrity must be clearly defined and their application safeguarded in every Member State.

Contact Person:

Peter Krümmel
Telefon: +49 30 300199-1360
peter.kruemmel@bdew.de