

Submission to the ERGEG's Public Consultation on

Draft Guidelines of Good Practice on Regulatory Aspects of Smart Metering for Electricity and Gas

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1. Introduction

Deutsche Telekom very much welcomes the opportunity to comment on the ERGEG Public Consultation Paper on Draft Guidelines of Good Practice on Regulatory Aspects of Smart Metering for Electricity and Gas. We embrace the development of such guidelines as an important step towards harmonised implementation of the 3rd Energy Package and as a timely response to the definition of new functionalities outlined so far by Mandate M/441.

With Smart Metering & Home Management, Deutsche Telekom offers a trendsetting smart metering solution that is suitable for the mass market. It transmits measured and counted data and also provides a bidirectional connection between the household and the energy provider via a powerful, open, Internet-based communication platform. The service is suitable for electricity, gas, and water, as well as other meters, e.g. heating cost allocators. It can also be used for controlling smart home applications and devices.

Deutsche Telekom strongly supports ERGEG's view that smart metering is linked to smart grids. Indeed, we firmly believe that smart metering is an important step towards smart grids and that an EU-wide roll-out of interoperable, standardised meters with bidirectional communications capabilities is an absolute prerequisite for the implementation of smart grids. In addition, we believe that smart metering is also an important basis for other innovative services such as electric mobility, with cars turning into mobile energy storage units, and smart home management solutions. It is of the utmost importance that these important enabling factors of smart metering are taken into account when defining minimum and optional customer services and when conducting a cost/benefit analysis.

In general terms, we support the definition of minimum services both for gas and electricity. Deutsche Telekom also shares ERGEG's view that a certain level of minimum functionalities is crucial to the sound deployment of smart metering systems, in particular in light of the future development of smart grids in the electricity sector. Overall, we believe that the European Single Market could benefit from a more harmonised approach both with regard to the minimum set of functionalities and of services. This also holds true for standardisation, to allow for the greatest possible extent of interoperability within the EU.

When conducting a cost/benefit analysis, it is very important to acknowledge that the roll-out of nationwide smart metering solutions in households and companies benefits all market participants. Furthermore, the enabling role of smart metering for smart grids, e-mobility and home management needs to be recognised. Smart metering and smart grids make power supply more efficient, decrease costs for users and create growth opportunities in several sectors. The energy industry needs more transparency in order to manage power generation and distribution more efficiently. Ultimately, smart metering and smart grids can significantly contribute to meeting the EU's climate goals, as users will be more aware of how they use energy, utility companies will improve their production processes, and the sharing and efficient use of renewable energies will increase. Against this background, we strongly support ERGEG's view that an extensive value chain should be used when carrying out a cost/benefit analysis.

In the following sections we provide more detailed input on these and further issues related to the Consultation Paper.

2. Comments

2.1. Minimum and optional services

In its draft paper ERGEG distinguishes between services that should be supplied for every customer as a minimum service and services that should be supplied on an optional basis. The former includes endowing customers with information, e.g. on consumption, billing and power capacity deployment. Other services are deemed optional, e.g. interface with the home, alert in case of interruption or high energy consumption and information about the voltage quality or continuity of supply.

We appreciate this approach to determining a basket of services that should be available to every customer. All services that have the potential to improve social welfare or bring positive benefits with regard to consumer protection should be added to this basket. The other basket should include optional services that bring a positive benefit only to those customers that are willing to pay for these additional services.

In order to provide an answer regarding the welfare contribution of each service, all existing and anticipated business models have to be taken into account. The welfare contribution should be positive and is calculated in a cost/benefit analysis as discussed in Chapter 3 of the ERGEG draft paper.

In the context of the cost/benefit analysis it has to be acknowledged that current products or services may be minor products of future business models. For smart metering it must be taken into account that it is a prerequisite for smart grids and that in the future smart grids will enable the development of further business models (e.g. in the field of e-mobility).

The ERGEG draft paper also addresses retail customers that both generate and consume electricity. In these cases the managing functions of intelligent networks become more important. Therefore we welcome ERGEG's attempt to identify the functionalities that aim to permit flexibility and innovation and which are needed to accomplish these services.

It is important that next to smart metering the roll-out of a multi-utility meter architecture is made legally binding. This would lead to significant cost savings as the communications costs can be shared by many services. It would also open up a great deal of potential for business models in future.

In detail:

Recommendations 1 to 3 (17, 18 and 19) state that customers should receive information on their actual consumption on a monthly basis. Information on actual consumption is indeed a key precondition for allowing customers to modify their consumption behaviour.

Regarding question 4a) we strongly recommend an interval of 15 minutes to enable business models in the area of smart grids (according to Mandate 441 two-way-communication that enables real-time data transfer could be necessary in cases of remotely managed networks and to enable real-time electricity pricing). To optimize communication behaviour we recommend differentiating the meter-reading and data transmission intervals.

The number of registers in the meter (question 4b/20b) should not be raised. Rating in the meter would require the roll-out of more expensive meters. Instead, we strongly recommend that consumption data is rated and mediated in the back-end systems. Experience drawn from the mobile telecommunications industry shows that such a back-end system is not only less expensive, but also allows for much more flexibility and innovative tariffs. It would also mean very simple, low-cost meters can be used.

2.2. Cost/benefit analysis

Draft recommendations 14 and 26 deal with the costs and benefits associated with the roll-out of smart meters. As set out in Directive 2009/72/EC the implementation of smart metering systems may be subject to an economic assessment of all long-term costs and benefits not only to the individual customer but also to the market and society as a whole. With respect to this, we strongly support recommendations 14 and 26 according to which a cost/benefit analysis should be based on an extensive value chain in order to assure a holistic perspective.

We appreciate the fact that ERGEG systematically addresses not only the direct benefits of smart metering solutions for customers, households and companies stemming from the availability of minimum and optional services, but also for the market, including suppliers and manufacturers, network owners/controllers and network operators. It is important to note that smart metering is also a basis technology and that the market will thus also benefit from intelligent home management (e.g. tariff-oriented use of electrical equipment) and e-mobility solutions. With respect to suppliers a better frequency and quality of billing data might also help to introduce innovative business models with new tariffs and services.

It is coherent and important to complete a cost/benefit analysis by analysing the potential benefits for the economy and society as a whole. The potential benefits for the economy and the society as a whole, however, will not only include the possibility of reducing greenhouse gas emissions and using electricity and gas more efficiently. Furthermore, we would like ERGEG to also consider the increased potential for using renewable energy sources, more efficient market outcomes and long-term employment effects as an integral part of a cost/benefit analysis.

Important from a methodological point of view is that the basic scheme of any cost/benefit analysis should mimic an efficient market size. Starting with biased assumptions concerning the market structure (e.g. a too small customer base) would put the whole concept at risk. Since a significant part of the required investment volume for the roll-out is de facto fixed, economies of scale are of particular relevance and must be taken into account within the cost/benefit analysis. What is more, many of the other effects rely on a sufficiently large number of intelligent meters. The recommendation should therefore make it clear that the entire customer base should be taken as the starting point of the cost/benefit analysis.

Finally, we would like ERGEG to underline that any cost/benefit analysis at a national level needs to be conducted in a transparent and non-discriminatory manner. Each cost/benefit analysis should foresee a public consultation process in order to assure the participation of all stakeholders.

2.3. Roll-out

To follow the objectives of the 3rd Energy Package it is important to stipulate a roll-out of interoperable, standardized meters with bidirectional communications capabilities to the greatest possible extent. As explained above, smart metering is a core element of smart grids which in turn are key to the whole concept of next generation smart energy. Smart metering is an enabler for smart grids, e-mobility and intelligent home management. A sufficiently large number of appropriate smart meters being timely installed and operated will be to the manifold benefit of end customers. A large-scale and timely roll-out of smart meters will also result in the faster amortization of investments in IT and data management systems and their migration. Furthermore, a major roll-out of smart meters is to be seen as a prerequisite for establishing smart grids, which depend in part on a sufficiently large number of units that measure actual consumption and generation. This ensures that the energy industry is able to make effective use of the required information in order to manage power generation and distribution.

According to recommendations 15 and 16 all customers should benefit from smart metering. While this is in principle to be confirmed, it seems to be important to underline the need for a sufficiently large and timely roll-out. We would appreciate further concrete guidance from ERGEG on how the roll-out process can be accelerated. This could relate to regulators when defining the roll-out timetable. In addition, a timely roll-out will surely benefit from harmonized industry standardization that should be the reference at a national level, too.

The recommendation should also clarify that when assessing and deciding on a roll-out, the underlying cost/benefit analysis should be based on an extensive value chain in order to ensure that all relevant positive impacts to the economy (including those in downstream segments) are taken into account. To execute the roll-out in the most efficient and cost-effective way, a structured street-by-street approach should be taken. Field staff can install the meter, a concentration and communication device and eventually an in-home display with a minimum expenditure of time and costs in the households. In this case the drive-by costs and effort, which represent a major part of the overall roll-out costs, can be optimized. A standardised connection interface (in best case a standard mounting form) between the meter and the concentration and communication device would also help the reduce installation time and save costs.

We therefore agree with recommendations 27 and 28, according to which discriminatory behaviour should be effectively avoided when rolling out smart meters. A competitive landscape is best suited to ensuring an efficient and timely roll-out of smart meters.

2.4. Data security and integrity

In general, we support the ERGEG's position on data security and integrity. We strongly believe that clear and binding rules with regard to the security of the measured data and the customer data are a prerequisite, especially to safeguard consumer trust in the new technologies.

Encryption over the end-to-end delivery chain is considered mandatory. On this basis we recommend the roll-out of meters that support highly secure and reliable encryption and certification standards. The well-known and firmly established telecommunications security standards (e.g. PKI, SSL) meet very high security requirements.
