

Landis+Gyr AG's Response
to the
ERGEG Public Consultation Paper on
Draft Guidelines of Good Practice on
Regulatory Aspects of Smart Metering

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About Landis+Gyr

Landis+Gyr, is the global industry leader in integrated energy management solutions. With an installed base of over 300 million electricity meters and over 1,000 advanced metering solutions deployed, Landis+Gyr is the world's leading smart metering solutions provider. With annualized sales of over US\$ 1.25 billion, Landis+Gyr operates in 30 countries across five continents, and employs approx. 5000 people. Of those, 2000 work in 13 EU Member States plus Switzerland and Norway. By having the broadest portfolio of products and services in the electricity metering industry, Landis+Gyr is paving the way for the development of smart grids, and helping the world to manage energy better.

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Introduction

Landis+Gyr not only welcomes, but wholly supports ERGEG's initiative to set down guidelines of good practice for regulation in the area of smart metering.

The deployment of smart metering in Europe has been lagging behind other areas of the world, notably North America. Effective regulation is the key to making the benefits of smart metering a reality for European consumers and to lay the foundation of the smart grid as soon as possible. The European Union has some of the most ambitious energy and environmental goals in the world, but all of these depend on the transformation of the current grid into a dynamic, multi-directional energy and communications highway. As the European Commission rightly pointed out, smart metering is the foundation of and an essential first step toward the development of the smart grid. Therefore, no time can be wasted in deploying this essential technology.

The timeframes in the 3rd Energy Package to implement smart metering are too long for the EU to achieve its 20-20-20 targets.

The ERGEG Draft Guidelines of Good Practice on the Regulatory Aspects of Smart Metering for Electricity and Gas (GGP) make a very positive contribution to the debate, and in Landis+Gyr's view, bring us a significant step closer to the realization of smart metering in Europe.

Landis+Gyr concurs with virtually all of the recommendations in the paper, especially those relating to the benefits of smart metering and the services to be rendered.

Clarification is needed, however, in respect to the recommendations on providing consumers with alarms or alerts. Particular attention should be devoted to the recommendation that one meter be offered to all customers that both generate and consume energy. While it is technically possible to have one meter measure both net export and net import of electricity, a meter cannot measure both simultaneously, and the regulatory framework in many Member States on feed-in tariffs for renewables make a single meter impractical.

Additionally, Landis+Gyr has given specific answers to the questions posed in Recommendations 4 and 20.

Landis+Gyr would like to congratulate ERGEG on these GGP as a well-balanced and thought-out reference for smart metering regulation, and we look forward to a continuing dialog and being able to make a constructive contribution toward making smart metering a reality in Europe, as it is elsewhere.

Detailed responses to the individual recommendations can be found below.

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

Landis+Gyr supports this recommendation. Information given for any period of time greater than monthly would not enable an end consumer to regulate his consumption. Therefore, monthly information is the minimum.

The question arises, however, if being informed of “actual” electricity consumption implies that the electricity consumption must be measured. Landis+Gyr believes that only measured consumption can be reflected in information on “actual” energy consumption.

The easiest method of communicating this information would be in a monthly bill.

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

Landis+Gyr supports the recommendation that accurate metering data must be supplied to relevant market actors when switching supplier or moving. Landis+Gyr would add, however, that the “resolution” of data for the billing period should be one day when changing supplier. The change from one day to another as a “snap shot”, and should incorporate the consumption data from the whole previous day – not hourly, i.e. changing in the middle of a day, or monthly.

Recommendation 3: Bills based on actual consumption

Landis+Gyr supports the recommendation that bills are based on actual consumption. One of the most basic benefits to end consumers from smart metering is that they will no longer have to accept estimated bills. Energy is still the only product that is billed this way to a consumer. It should be a basic consumer right to have an accurate bill based on measured consumption rather than an estimate.

Recommendation 4: Offers reflecting actual consumption patterns

Landis+Gyr supports this recommendation, as it is one of the advantages to both end consumers and to energy suppliers from smart metering that products and offerings can be developed, based on the information provided by smart meters, that are more closely aligned to the individual consumption patterns of consumers.

Question 4a and 4b to stakeholders:

a) Landis+Gyr’s Smart Metering technology can provide for any of the four options mentioned by ERGEG and even more frequent readings depending on the end-user demand. However, Landis+Gyr recommends that the metering interval be one hour. The household tariffs and balancing data are based on one hour intervals. Hourly data also avoids a number of discussions around data privacy and consumption transparency.

Anything less than half an hour brings an inordinate increase in the amount of data that must be dealt with.

b) Generally, up to 6 tariffs in the meter can be understood by the average consumer. Anything more than 6 tariffs would be of questionable benefit. More complex tariff structures can be done through interval metering in the central system.

Recommendations 5 & 6: Power capacity reduction/increase and Activation and de-activation of supply

Landis+Gyr supports both of these recommendations. Both of these are to the benefit of the end consumer.

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

Landis+Gyr disagrees with the recommendation that only one meter be used for those that both generate and consume energy.

A normal smart meter can add the consumption and production of electricity to give a net value. For example, if a household both produces and consumes 1 kwh of electricity, the net amount would be zero. The meter cannot, however, measure both consumption and production of electricity simultaneously and separately.

As long as it is the case, as in many EU Member States, that there are different prices for the export of electricity produced from renewable energy sources into the grid (feed-in tariffs) and for the consumption of electricity taken from the grid, two separate meters will be required.

While it is possible to build a meter that can measure both, it will be a much more complex meter. Such a meter will have two more connecting points and will not fit into normal metering boxes, and thusly be much more expensive. All consumers would be equipped with a very sophisticated meter that only a small percentage will need.

Therefore, the price increase would be substantial for a traditional consumer, someone only consuming but not producing electricity, but minimal for a "prosumer" with installed photovoltaic, etc. It would be more economically fair for the prosumer to install a second meter. Furthermore, such a requirement and the accompanying extra costs could destroy the business case for a smart meter rollout, i.e. the meter boxes would need to be torn out, new and complex meters installed, etc.

Moreover, the ability to manage the grid is diminished by only measuring the net import or export, as this may be erratic over time. In order to maximize the operation of the distribution network with a large amount of de-centralized generation, separate measurements (and therefore separate meters) are needed for import and export of electricity.

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

Landis+Gyr agrees with the recommendation that the final customer have access "on demand" to information on consumption data. The easiest and most convenient method of providing this data would be through an In-Home Display (IHD).

Recommendation 9: Alert in case of non-notified interruption

With electricity, the meter will not be able to send an alarm, but it will be detected that the meter is not responding/communicating. When using PLC technology, the Data Concentrator could send an alarm when an electricity meter is no longer reachable. With a GPRS direct connection this could also be detected. Therefore, a customer may be able to receive information on an outage, but not immediately. A re-

quirement for having an outage alarm from an electricity meter would be expensive, but a detection of the lost link in the communications chain could be sufficient.

Recommendation 10: Alert in case of high energy consumption

The easiest and least intrusive method of communicating extraordinary increases in consumption would be through an In-Home Display (IHD). There are several methods a IHD could use, the most simple being a color-coded system, for example green for “normal” use, yellow for increased consumption and red for extraordinarily high use.

That way, the consumer has the information readily available and can control his or her consumption immediately in response to the alert.

Recommendation 11: Interface with the home

Landis+Gyr fully supports ERGEG’s recommendation that meters be equipped with a gateway into the home. The full potential of demand-side response can only be realized with direct consumer information and home automation.

Recommendation 12: Information on voltage quality

Today’s smart meters can measure “quality of supply”, and that is sufficient for households.

Recommendation 13: Information on continuity of supply

To be clear, a smart meter is not a power quality device, but it can measure quality of supply, and only those aspects that effect the safe use of household devices.

The standards mentioned are for grid measurements, which require a very high quality. But there are none currently available for households.

Recommendation 14

The benefits of smart metering are spread across the entire value chain. The end consumer gets accurate information on consumption and costs; the network operator has the information to optimize operations and make sounder investment decisions; through demand-side management, electricity generation can be optimized, and smart metering enables the up-take of larger amounts of renewable and microgeneration. Society benefits as well through greater energy efficiency and reduced CO2 emissions.

But whereas the benefits of smart metering are dispersed and longer term, the costs are usually concentrated and short term.

Therefore, any cost-benefit-analysis must examine the costs, and particularly the benefits across the value chain from the end consumer to the generator. Importantly, the benefits to society as a whole must also be taken into consideration.

Moreover, the status quo and a business-as-usual scenario cannot be the baseline for such an analysis, but rather the costs of not deploying smart metering must also be considered, i.e. the opportunity costs to society if smart metering is not implemented.

Therefore, Landis+Gyr agrees with and fully supports the ERGEG recommendation that an extensive value chain be used when making a cost-benefit-analysis.

Recommendations 15 & 16: All customers should benefit from smart metering, No discrimination when rolling out smart meters.

An area-wide rollout is the best method to ensure that the maximum number of consumers benefit from smart metering at the lowest cost. An area-wide rollout would ensure that no customers or group of customers is discriminated against, and a house-by-house, street-by-street deployment is considerably more cost effective than installing smart meters on a point-by-point basis.

Questions 20 a) and b) to stakeholders: Interval metering for gas and ToU registers

Landis+Gyr's smart gas metering technology can provide for any of the intervals mentioned in the GGP and as many registers as required, however, more frequent readings have a negative impact on the battery-life in the gas meter. Would there be any advantages to hourly over daily gas readings that would warrant the need to exchange the battery in the gas meter more often?

Recommendation 21: Access on customer demand to information on consumption

Landis+Gyr supports the recommendation that the final customer have access "on demand" to information on consumption data. The easiest and most convenient method of providing this data would be through an In-Home Display (IHD).

Recommendations 22 & 23: capacity reduction/increase; activation/de-activation of supply

Landis+Gyr agrees with both recommendations.

Recommendation 24: Alert in case of high energy consumption

The easiest and least intrusive method of communicating extraordinary increases in consumption would be through an In-Home Display (IHD). There are several methods a IHD could use, the most simple being a color-coded system, for example green for "normal" use, yellow for increased consumption and red for extraordinarily high use.

That way, the consumer has the information readily available and can control his or her consumption immediately in response to the alert.

Recommendation 25: Interface with the home

Landis+Gyr fully supports ERGEG's recommendation that meters be equipped with a gateway into the home. The full potential of demand-side response can only be realized with direct consumer information and home automation.

Recommendation 26: Extensive value chain used when making a cost benefit analysis

As in the case with electricity, Landis+Gyr whole-heartedly supports ERGEG's approach to performing a "holistic" cost benefit analysis. Any robust evaluation of the costs and benefits of a smart gas meter rollout must include the costs and benefits to all market actors and to society as a whole.

Recommendations 27 & 28: All customers should benefit from smart gas metering, no discrimination when rolling out smart gas meters.

An area-wide rollout is the best method to ensure that the maximum number of consumers benefit from smart metering at the lowest cost. An area-wide rollout would ensure that no customers or group of customers is discriminated against, and a house-by-house, street-by-street deployment is considerably more cost effective than installing smart meters on a point-by-point basis.