GEODE Position Paper on European Third Energy Package - Smart Metering[1]

(Considers the electricity meters only)

The view of the European Commission

In it's Communication "Prospects for the internal gas and electricity market" issued on January 10, 2007, the European Commission states that infrequent measurement of consumption prevents any kind of demand response from certain customers.

It is further stated that the extended use of smart metering would enhance competition and other policy goals such as energy efficiency and security of supply, encouraging innovation in the provision of energy services. Smart meters are also good for consumers giving them more frequent readings and the opportunity to modify their consumptions patterns.

Directive 2006/32/EC on energy end-use efficiency and energy services already provides for Member States to use smart metering to achieve energy efficiency targets.

This Directive states that Member States shall ensure that, in so far it is reasonable, final customers are provided with individual meters that accurately reflect the final customer's actual energy consumption and provide information on actual time of use.

Billing should be based on actual energy consumption, and be presented in clear and understandable terms. Billing on the basis of actual consumption shall be performed frequently enough to enable customers to regulate their own energy consumption.

Position

GEODE agrees that the extended use of smart metering would enhance policy goals such as energy efficiency and security of supply whilst encouraging innovation in the provision of energy services. We also agree with giving the end-consumer a better understanding of their energy use and time of usage and through this increased awareness become more efficient in their energy consumption.

[1] *This document is part of GEODE position papers prepared on the EC third energy package: GEODE pp on internal electricity and gas energy market, GEODE pp on unbundling, GEODE pp on generation and GEODE PP on smart metering are available from the GEODE General Delegation offices.*

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Billing based on actual usage further increases said consumer awareness.

It is **GEODE**´s view that frequent billing based on actual consumption is only one way of creating a better understanding of energy consumption patterns. There are several ways this effect can be achieved and some of these are touched on below.

Benefits of Smart metering

- Increased consumer awareness of how and when energy is spent.
The shorter the time cycle between readings, the more useful the information is for the end user. Hourly readings give a very different understanding of usage pattern than monthly or yearly readings. The closer in time to the actual consumption the data is made available to the consumer, the better the awareness. A display in the home showing for example current consumption in kWh, the cost in monetary terms or CO2 effect of consumption will be much more likely to change consumer behaviour than information on a bill received months later. A web application that can give the customer detailed information on their energy consumption is another way of increasing awareness and driving energy efficiency.

- Increased internal efficiency within energy distributors, distribution system operators and retail energy sales companies.
The internal efficiency improvements from fewer manual tasks, improved processes and fewer errors in meter measurement handling have the potential to create substantial savings for the DSO and other associated companies. Also, the provision of better information regarding the low voltage distribution network holds potential savings. For companies with large energy losses in the network there are further savings to be had.
In one Swedish example, the estimated annual internal savings were approximately 10% of the total investment cost. Several Italian DSO's were able to generate a good return on investment largely due to savings from decreased energy losses.

- Potential to create incentives to reduce peaks in power demand.
By steering the end consumer behaviour through time based tariffs, it is possible to steer energy consumption away from hours or days where there is a risk of peaks in power demand. If an installed Meter System supports it, disconnections on a rolling scheme can further help in controlling peaks in power demand.

- An opportunity for energy related services, especially within energy saving consultancy.

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The increased knowledge about the end-customers' energy related behaviour, gives an opportunity to develop new services aiming at helping the customer become more energy efficient.
- Better information for Investment Planning.
The improved information that is generated by Smart Metering on the low voltage network creates an opportunity for better Investment Planning. The information can be used both for new investments in infrastructure as well as for reinvestments in current networks. Load profiles over time, maximum loads, and load distribution in the grid are a few examples of information that could assist better Investment Planning.

Barriers to Smart Metering

The cost of installing a Smart Metering System is a major investment. The return on such an investment can take a number of years and create a need to actively pursue cost savings..

It should also be possible to transfer part of the cost to the customer through an access tariffs or in some other way. The customer stands to gain significantly by Smart Metering and should be prepared to share at least part of the cost of implementing such a system.

The cost per customer might not have to be substantial. In the Swedish example mentioned above, a 10-20 Euro per year per customer in additional revenue would together with internal savings generate a positive return on investment.

The Commission must consider how to allow for an increase in access tariffs, should they implement further actions in this area. As Member States have different ways and levels of regulating tariffs, the way of transferring part of the cost to customers might have to differ between Member States.

Ownership of Advanced Metering Infrastructure

DSO's should be responsible for meters and metering in order to facilitate customers switching supplier. If for example the energy supplier owns the meter infrastructure, then the meter and possibly part of the supporting infrastructure has to be replaced every time a customer switches supplier. With a 20% churn this could create an extreme number of meter replacements in the future as well as a large number of competing infrastructures. The best solution would be if most, if not all, of the suppliers agree on the same Smart Metering System and infrastructure.

Conclusion

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GEODE agrees that Smart Metering will assist in achieving the Commission's energy efficiency goals. The development of Metering Systems will create more opportunities for additional services and better information to the end consumers. The investment in Smart Metering for any DSO is substantial in financial terms as well as in effort and time and must not be taken lightly. Projects usually run for several years and needs internal staffing from many areas of the organisation.

GEODE would argue that at least a part of the cost of such a system must be covered by the end customer, in some form. In order not to create barriers to switching electricity supplier, the Metering Infrastructure should be managed by the DSO.

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