



ETIP SNET

EUROPEAN
TECHNOLOGY AND
INNOVATION
PLATFORM

SMART
NETWORKS FOR
ENERGY
TRANSITION



ENERGY STORY

Measuring the impact of smart meters on consumers

The Smart Synergy Project was launched to pilot smart metering roll out and obtain practical experiences on operating the power grid both from the suppliers' and users' side.

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In recent years, smart meters have become commonplace in homes and properties across Europe. By allowing energy consumers and suppliers to have immediate access to their consumption data, smart meters have proven to be a fundamental element of the energy transition and a necessity in the energy landscape of the future. Smart meters encourage and facilitate the active participation of the consumer in the energy retail market, which opens up unprecedented possibilities for consumers to directly control and manage their individual consumption patterns. In turn, this provides strong incentives for efficient energy use. For example, smart metering facilitates the penetration of energy from renewable sources into the grid, by allowing consumers – citizens and companies alike – to buy electricity at competitive prices. An increase in energy from renewable sources in the grid leads to a decrease in price and smooths out peaks in the energy consumption.

In its EU 2020 Strategy, the European Union included the development of smart grids and the dissemination of smart meters as a vital element of the energy transition. With more EU policies emphasizing the urgency of this technology, the challenges to be addressed become apparent.

Understanding what it takes to make smart meters attractive

Integrating smart meters in today's energy system is far from easy. Aspects to be taken into account range from technical challenges, like the definition of common standards, over regulatory questions, such as data protection, to social ones, such as consumer acceptance and behavioural changes. This is why a consortium of Hungarian energy suppliers started a pilot project in 2012 to bring smart-metering technology into the market while paying attention specifically to its uptake by consumers. These meters are still producing data today and provide a detailed, long-term insight into the challenges.

The Smart Synergy project installed smart meters in Hungary with the aim of bringing smart-metering technology to the market that combined technical functionalities with real-time information tools and support services that make the active participation of users as easy as possible. The acceptance of the new tool by the consumers is crucial, so a media campaign has been accompanying the project.

A total of 3,000 electricity meters were installed in different types of households. The data collected during the metering period were complemented by a consumer web portal and survey, which analysed, for example, consumer behaviour and public awareness of



smart meters. For example, this helped the project partners analyse when electricity was used in the households, how keen participants were to use multi-media devices to monitor their energy consumption, whether they used ventilation and air-conditioning, and the daytime and night-time use of electricity. It was shown that 56% of respondents are willing to restructure their electricity

consumption patterns, provided that they saved 3-5 €/month – so apparently, small savings are already an incentive. The respondents who are willing to embrace the new technology can mostly be identified as: big businesses, people living in rural areas, the young generation and people with higher education levels. On the other hand, 42% of respondents remained indifferent or reluctant and can be mostly identified as: the elderly population, people living in Budapest, small businesses and people with lower education attainment.

Impact:

The Smart Synergy project was able to contribute to investigating the main challenges surrounding smart metering. In essence, the project analysed the attitude of consumers towards smart metering, examining the technological possibilities of multi-utility smart metering, and defining possible business models for smart metering. This goes together with the overall objective to learn more about the acceptance of this technology by the consumers and tailor it to their needs.

The metering period is ongoing and reinforced by SET-UP, a European-level project co-financed by the Interreg Europe Programme that builds on the findings of the Smart Synergy project. Through cooperation of eight regions across Europe, this project aims to improve regional energy policies by analysing common challenges, exchanging good practices and defining efficient actions.

Project Benefits

- Improved social acceptance
- Reduced energy bills

Keywords: Smart grid, energy retail market, consumer attitude.

More info at: [website](#) + [SET-UP project](#)

Note: Project Benefits based on specific criteria outlined in [ETIP SNET monitoring exercise](#)



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