

BEST PRACTICE IN HUNGARY – SMART METERING

BASIC INFORMATION

Title of the Best Practice:

Smart Synergy Project, Hungary

Energy efficiency measures implemented in the building: smart meters were installed in private homes acting as a testbed for large-scale smart meter roll-out in Hungary.

Location:

City: not applicable

Region: not applicable

Country: Hungary

GMaps link: not applicable

Partners involved:

- Mr István Nagy, NKM Áramszolgáltató Zrt. project coordinator
- NKM Észak-Dél Földgázhálózati Zrt. (at time of project start ÉGÁZ-DÉGÁZ Földgázelosztó Zrt. - Gas DSO)
- Szegedi Vízmű Zrt. (Water Treatment Company, Szeged)
- NKM Áramszolgáltató Zrt. (at time of project start EDF DÉMÁSZ Zrt. - Universal service provider, electricity)
- NKM Áramhálózati Kft. (at time of project start EDF DÉMÁSZ Partner Hálózatüzemeltető és Szolgáltató Kft. - responsible for installing and maintaining meters)
- E.On North Transdanubia
- E.On South Transdanubia
- E.On Tiszántúl (Eastern Hungary)
- ELMŰ (Budapest Electricity Plc)
- ÉMÁSZ (North Hungarian Electricity Supply Plc)
- ARIOSZ (market research company)
- Iskrameco, ZPA, Sagemcom (smart meters)
- IC Co., IBM, eMeter, Energy IP (system and system operation)

Implementation year: July 2012 – June 2013 (installation), metering is still ongoing

SYSTEM CHARACTERISTICS

Brief Description:

The aim of the project was to bring smart-metering technology into the market with appropriate functionalities, information tools, support services that enable and enhance consumer empowerment.

The main objectives of the project were:

- a. to examine the willingness of consumers to benefit from smart metering and to modify their consumption behaviour,
- b. to demonstrate the technical and technological possibilities and conditions of establishing smart grids,
- c. to test the appropriateness of smart metering from the aspect of delivery of the expected services,

- d. to contribute to the most appropriate business model taking into consideration the actual way of operation of the market,
- e. to introduce the costs of establishment and operation of smart grids,
- f. to pilot compliance of smart grids with data protection and data security.

FINANCIAL SOURCES AND FINANCING DETAILS

Total investment value:

Hungarian law on electric energy authorised universal and license providers to test at their own costs smart metering so as to outline the long term costs and benefits. In case of NKM Áramszolgáltató Zrt. (at time of project start DÉMÁSZ) the incurred costs in 2012-13 were 500, million HUF (cca. 1,6 million EUR on current prices)

Sources of financing: own funds of the electricity service provider

Electricity savings (MWh/year): during the pilot phase on the demand side the consumers involved registered cca. 1-1,5% decrease in their electricity consumptions.

Cost savings (EUR/year): not applicable

PROJECT IMPLEMENTATION BENEFITS

- Decrease in consumption, costs: during the pilot phase on the demand side the consumers involved registered cca. 1-1,5% decrease in their electricity consumptions. Two groups of consumers were designated when installing the smart meters. One constantly received information on the state of the pilot, on the registered consumption data, and also did receive a formal tariff offer as well. The other had merely new smart meters installed, and functioned as the control group of the active smart group.
- The pilot was accompanied by a communication campaign and a consumer survey, which showed that 48% of consumers in the panel have already heard about smart metering (the ratio is lower in case of residential and higher in case of industrial/commercial consumers). Besides, a detailed analysis was done on frequency of household activities, penetration of multi-media devices, use of ventilation and air conditioning, daytime – night-time use of electricity. The lesson learnt is that 56% of respondents (big consumers, countrymen, the young, people with higher educational attainment) is willing to restructure its electricity consumption patterns provided that they realize 3-5 EUR/month saving. 42 % (the elderly, people living in Budapest, small consumers and people with lower educational attainment) remains aloof.
- The innovation of the pilot was not characterized by developing new devices or software, but by integrating them into the operation of the energy grids. Therefore new technologies have not been developed.

ADDITIONAL INFORMATION

Development stages:

- a. Selection of national address lists,
- b. System design, document creation, reviews and approvals,
- c. Selecting communication service provider, SIM card purchase i
- d. System installation, hardware & software
- e. Preliminary tests (prior to meter installation)
- f. Consultation and connection building with Waterworks and Gas Distribution
- g. Preparing a Communication Campaign. Wide-ranging press, targeted information for affected users
- h. Installation of meters
- i. Creating a test environment
- j. Metering period

k. Evaluation of results

The pilot showed that it is hard to ensure the compatibility of the meter, adapter, head end, system and SAP. Besides, integrating gas and water meters is not easy. Also, sound cooperation among different utility companies has to be set.

Following the pilot project there were developments that addressed the validation, filtering and processing of the data, for the further – not only pilot focused – rolling out of smart meters to other groups of consumers as well. These development directions are still valid up to now.