



Smart Metering Technologies for Low Income Households

The Malta Intelligent Energy Management Agency (MIEMA) together with partners from 6 other EU countries (Cyprus, France, Greece, Italy, Spain and Slovenia) covering the whole Northern Mediterranean seacoast are working together to improve energy efficiency and promote energy saving in low income housing in MED area through the project ELIH-Med - Energy efficiency in Low Income Housing in the Mediterranean. The project implementation in Malta is co-financed by the MED Programme (85%) and the Ministry for Energy and Health (15%).

The ELIH-Med project focuses on energy efficiency in low income housing in the Mediterranean area and on the involvement of the residents in the implementation of a large scale pilot project to improve energy efficiency in low income households in order to help the MED area to reach EU2020 objectives. As part of this pilot project MIEMA carried out energy retrofitting in 35 low income houses in Malta and Gozo.

As part of the pilot project, MIEMA is carrying out a study on how smart meters can help to reduce energy consumption in a household. This is being done through a monitoring exercise of 15 selected households. The main goal of this analysis is to extract functions and services of energy Smart Metering systems with the best possible impact on final consumer in low income households to achieve measurable energy savings and increase overall energy efficiency.

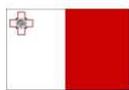
Two types of energy meters have been used in the 15 households where each household was given a set of six plug-in meters to monitor the consumption of electrical appliances and a centralised meter that was connected to the utility supply which monitored the overall consumption of the household and had data logging facility. The monitoring process started in the beginning of 2014 and is being accompanied by an awareness campaign to help the residents understand their energy consumption.

MIEMA carried out research on the current technologies in relation to smart metering in order to identify what systems are available on the market that can be most useful in low income households. Various smart metering systems are available on the market at different prices depending on the functionalities of the particular system. The most sophisticated systems which offer online services and web applications can promote energy savings up to 10% in each household.

Smart metering is a very useful technology in the field of energy efficiency because it is an instrument that can be used to measure the savings achieved as a result of the implementation of

efficiency measures. The application of smart metering technologies can be used during different phases of an energy improvement projects, from the design stage (in order to measure an evaluation the consumption and energy losses of a building before the implementation of energy efficiency measures), during the implementation of measure and after the completion of the project (to measure the energy savings that have been actually achieved).

The use of smart metering is useful at all levels of the distribution and consumption of energy, from the electricity supplier to a single household. In the case of low income households it is a very reliable method to evaluate energy consumption and plan both active and passive energy efficiency measures. The most important part of the smart metering exercise is the involvement of the citizens in the monitoring exercise. This is considered extremely important since it increases the awareness which is crucial to reduce energy consumption and reduce harmful emissions in relation to energy production.



MED Operational Programme – Cohesion Policy 2007-2013
Europe in the Mediterranean
This project is part-financed by the European Union
European Regional Development Fund (ERDF)
Co-financing rate: 85% EU Funds; 15% National Funds



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