



3rd project newsletter (May 2009)

aim 4 SMEs – Automatic Intelligent Metering for Small and Medium-sized Businesses

www.aim4smes.com



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1. Project organisation and objectives

Automatic intelligent metering involves automatically collecting detailed (e.g. ½ hourly) energy/water consumption information and sending this data to a computer system for analysis. Analysis of the data can help identify savings opportunities.

“Intelligent Metering – aim 4 SME’s” is a project that intends to demonstrate the potential for energy savings from automatic intelligent metering in small/medium sized enterprises (SMEs).

The project „Intelligent Metering“ involves 9 partners from 5 countries (Austria, Hungary, Poland, Portugal and the UK), including businesses, local/regional energy agencies, an association of municipalities, universities and a utility company.

Anticipated results of the project include:

- 75-100 SMEs using intelligent metering for monitoring in the project
- Energy cost, consumption and related carbon dioxide savings of 10-25% in participating SMEs
- SME staff trained in energy savings opportunities/intelligent metering

2. 4th project meeting in Krakow, Poland



Figure: The project partners, working on Intelligent Metering – aim 4 SMEs

From 26th to 27th May 2009 all participating project partners met in Krakow (Poland), to discuss the progress of the European “Intelligent Energy Europe” project, which is called aim4SME’s. The partners discussed challenges during the work in progress and point out the status quo from the 8 Work packages. The meeting was also attended by the EC Officer, Mr. Patrick Naghten. He discussed the interim project report and issues arising and was able to answer questions from the partners. He also reminded the partners how important it is for the European Commission, to reduce energy consumptions.

3. Support and barriers faced by PNEC for SME’s in aim4SME’s

The biggest problem for PNEC (Polish Network “Energie Cités”) was to reach and convince SMEs to join the project. SMEs did not want to join the project if there was any financial charge for them. For that reason PNEC first had to find resources for metering equipment, and then agreements with SMEs could be signed.



Several meetings and negotiations with small/medium business were held, and their representatives were invited to join the project. Later on, after several talks with representatives of local gas, water, heat and electricity supplying utilities it appeared that they could support only those SMEs which are located in Krakow.

The crucial problem was purchasing of the equipment. In Poland all the meters belong to 4 main local utilities (responsible for electricity, gas and water supply and also district heating), therefore meetings with their representatives were held and the agreements with them had been signed. They offered to make the meters accessible to 5 SMEs free of charge. PNEC received a list of SMEs which had pulse meters which were acceptable by the local gas utility. This list was sent to the rest of utilities and in agreement with them SMEs were chosen. From this list 5 bakeries have decided to join the project. Software, metering

equipment and installation was supported and realized by Pracownia Informatyki NUMERON Sp. z o.o. (computer science laboratory).

Engaging took almost one year instead of six months. Very long decision way in utilities took also much time. Fortunately, once utilities and SMEs signed agreements, it took only 3 months to install equipment (also changing some meters if needed).



Thanks those efforts 5 bakeries are monitored:

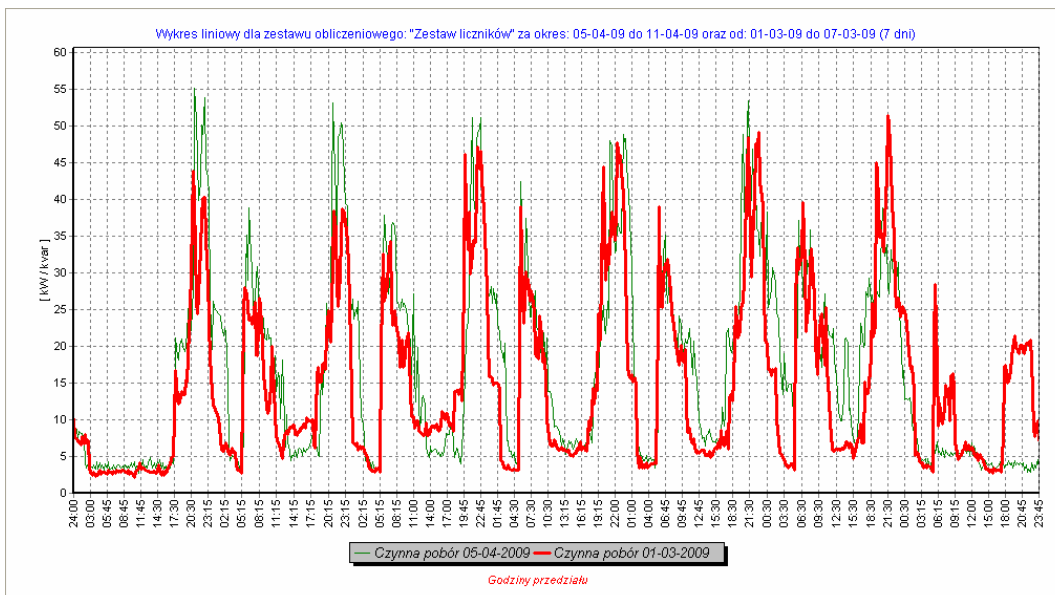
- “Cukiernia Adam Adamek”;
- “Piekarnia-Cukiernia Waclaw Kuciński & Omar Faris”
- “Piekarnia Grzegorz Krupa”;
- “Pieczywo Buczek Piekarnia” – Cukiernia;
- “Zakład Piekarniczo-Cukierniczy Z.Trela J.Trela s.j.”

To engage those SMEs PNEC cooperate with:

- The Cracow Chamber of Commerce and Industry,
- Malopolska Chamber of Craft and Enterprise,
- Groceries Guild.

PNEC has not included? heating measures. SMEs which have been chosen are bakeries – heat comes from baking ovens. In this case heat is side-effect (by-product) of gas consumption. Anyway bakery owners are very interested in heat recovery. This can be an opportunity for new energy saving projects.

PNEC also has had to give up water metering for one SME (“Pieczywo Buczek”) because of the very bad location of the water meter (under the ground and far away from the object). A large part of water use goes for the baking process. It means that this part of water doesn’t have to be charged with sewage? fee. Only one enterprise has two separate water meters: one for water used in the technology process and the second meter for normal use. Such solution does not generate savings of water consumption, but allows to avoid costs of sewage? disposal.

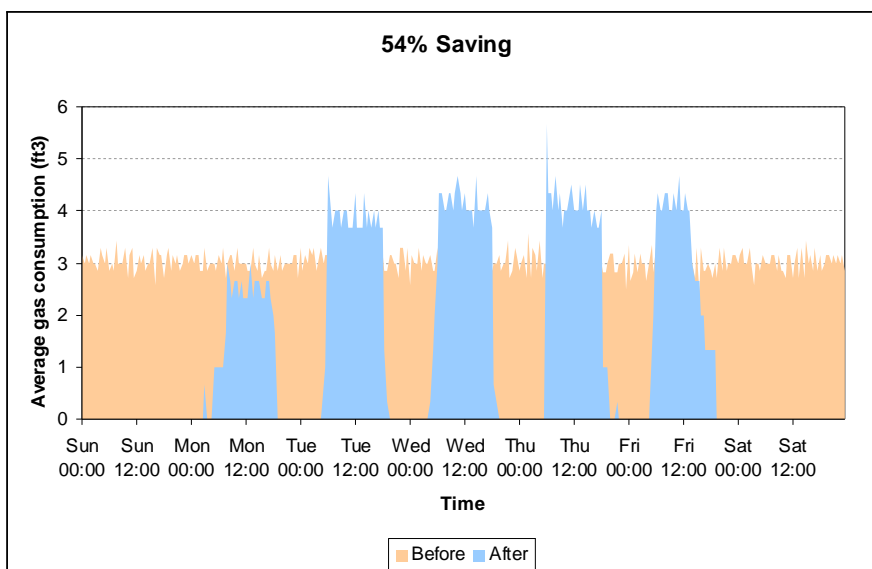


Employers were rather sceptical after the first workshop (09.10.2008) for SMEs involved in the project. They accepted conditions of the project, but didn't believe that project actions will give any results. On the second workshop (03.04.2009) some reports and conclusions were introduced. From that time owners start to see that intelligent metering is a tool which can let them generate savings. They noticed that energy savings give them money savings. Individual meetings with bakeries owners allowed to discuss conditions of energy use in separate SMEs. PNEC explained potential savings for each SME. Since then SMEs have got more involved in metering issues and have been more active in monitoring of their energy consumption.

4. Example for data collection from an SME

UK Printing company makes about 50% saving on heating bill

Labelapeel, a label manufacturer based in Leicestershire in the United Kingdom recently installed ½ hourly data collection equipment under the AIM4SMES project. Soon after installation it was noticed that gas consumption in their main building was at the same level no matter what time of day or day of the week.





This was quickly identified as a clear indication that the heating system was not properly under control and that the building was being heated during unoccupied periods.

The situation was improved greatly by simply setting the 24hr timer control and arranging for the boiler to be manually switched off over the weekends. This simple action cost nothing and has so far been shown to have made about a 50% saving on heating energy which translates directly to cash savings.

Energy wastage used to be difficult to identify without the cost and inconvenience of regular energy surveys. Automated metering systems ensure costly problems such as this can be identified and resolved as soon as they arise. <http://www.labelapeel.co.uk/>

For further information please call Leicester Energy Agency (tel. +44 (0)116 262 4698)

5. Overview of the training structure

These are the first steps in the use of intelligent metering in SMEs. Our aim is to change the behaviour of building users; this is a long and complex process.

The training pack gives advice on the complex factors involved in changing the behaviour of individuals and groups with regard to energy and water.

Pre launch data collection

Before the training, at least 1 month of consumption data from intelligent metering for the buildings is analysed to identify savings opportunities and inform the training.

It is important to gather the information about the SME buildings that the people to be trained work in. The half hourly data of their building can be used to show how energy is consumed every half hour each week. The trainees should be able to recognise that pattern and help identify opportunities for energy and water consumption reductions.

The energy manager/energy representative for the SME should have a role in this process.

Individual training meeting

A meeting can be held with a representative at the SME to explain the intelligent metering graphs and the short analysis report on the first data being produced for each business. A walk round survey can be carried out and a short action plan produced, for example with no cost, low cost and higher cost energy/water saving measures. How other training will be delivered in the SME can be discussed.

Best practice guides

These allow tailored training to be carried out for specific business sectors.

- Whole group training of 'specialist building users', for example business 'Facility Managers'.
- One to one discussions, for instance when setting energy and water targets with the key financial stakeholders of the SME.

Good Housekeeping

This section is aimed at SME building users to enable them to address energy efficiency in their day-to-day work. It is divided into 4 sections:

1. Heating
2. Lighting
3. Electrical equipment
4. Hot Water



Posters and stickers

Posters and stickers can remind staff of the training they are receiving and important actions they can take.

Training for all SME building users

Other training for all SME building users is provided. This can be based on training resources referred to in the full training pack, including the Learning for Sustainability approach, and other relevant materials which are available.

6. Next project steps

- Initial analyses of the metered buildings to show where energy savings can be made
- Training of employees and staff members to raise their awareness and help? them to save energy
- Monitoring of savings and small corrective actions if necessary

7. List of partners and contact details for further information

Further information regarding Intelligent Metering you'll find on the project Website: <http://www.aim4smes.com/>

The participating partners are from five different European countries. All of them can answer your specific questions about the project:

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PT: LABLEC	gouveiapedrosa@edp.pt
UK: EMT – Energy Control Group Ltd.	jedmonds@eccl.co.uk
UK: De Montfort University	pflaming@dmu.ac.uk
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 New Partner:	
H: Csanady & Partners Consulting Ltd.	csanady.w@invitel.hu

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