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Promoting Energy efficiency to Local Organisations
through dissemination Partnerships in Europe
Best Actions for Collaboration in Countries
for a High efficient Use of energy in Structural funds

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ENERGY SELF-AUDIT SCHEME - all cities - Poland

(project supported by SAVE)

The project was carried on to develop scheme and additional necessary tools, which would encourage industrial companies to undertake well co-ordinated and comprehensive actions aiming at improvements in energy efficiency and a reduction of emissions to the environment.

Target Groups	Sector	Field
- Manufacturers / industry	- Energy supply - Buildings (including municipal properties)	- CHP - Monitoring & Management - Education and training

ANALYSIS

BACKGROUND

Existing studies for the region covered in this project (Poland, Netherlands, Ireland) indicated considerable potential for improving energy efficiency in industry, both with respect to the technical and economic potentials. A considerable share of energy saving potential in industry was not used, even if the investment offers promising pay-back periods, and this mainly due to the following reasons:

- Inside the industrial enterprises there exist lack of about profitable energy efficiency investment;
- Industrial enterprises usually lack know-how in exploiting the existing saving potentials efficiently;
- Industrial enterprises considered facilities as secondary facilities, where tying up capital and staff had to be minimised; investment was focused on the “productive” sectors of the enterprise.
- Investment for energy efficiency was visible on balance sheet and thus shortens other investments possibilities;
- The industrial enterprise had to carry full technological risk of the investment.

To date, the local Polish experience was rather limited as far as such an approach was concerned. The principal assumption of the project was to transfer and adapt to the Polish reality the know-how of similar schemes introduced and functioning in Ireland and the Netherlands.

Furthermore, the reported action was expected to result in drawing up the methodology, auxiliary information and training materials for industrial energy managers, which would allow them to introduce comprehensive long term programmes aiming at improvements in energy efficiency.

The additional assumption was that by implementing of the pilot projects and subsequent dissemination activities, it would be possible to support a process of rationalising energy use in industry essentially.

THE OBJECTIVE

The overall goal of the project was to convince managers of the advantages and benefits of the energy self-audit and Long Term Agreements (LTA) approach when cost reduction and necessity of modernisation of the basic technological processes was an essential and immediate need. Therefore, bearing the above in mind, the main activity of the project was the preparation and implementation of the pilot projects in selected factories and presenting them as successful examples, which can then be copied and implemented by other companies. A special attention was being paid to a role of top management and employees alike in the process of implementation of LTA.

THE PARTS OF THE PROJECT

The project was divided into five main phases:

Phase I - Awareness rising and know-how transfer

The first step was to awake the awareness and to organise an educational campaign and a workshop for factories management to share know-how about the Good Energy manager, who was appointed from within the company.

The main source of the main know-how was the Netherlands and the Republic of Ireland and it was aimed at Poland. There was also a mutual exchange of ideas and experience between NOVEM and the Irish Energy Centre.

Phase II - Registration of factories willing to join the scheme

The next step as to officially register the factories/branches will be administered by the members of the consortium.

Phase III - Self-Audit

When a factory was register to the scheme, it was able to carry the first self-energy audit. Necessary help from an external consultant was provided on request. Special training for energy managers was organised and a self-audit guide-book was prepared.

Phase IV - Internal Statements

The next stage of the scheme was a production of an internal statement of energy policy – a brief statement of intent towards energy practices. The whole point of the scheme was to create a climate in which factories make real energy savings in their operations. This means identifying opportunities for energy savings and acting upon them. The structure for this was an energy audit, as it was very opportunity for a factory step back and take a good look at all aspects of their operation, from process to maintain, from equipment to general behaviour, and see exactly where the energy was being used and where it was being wasted.

Phase V - Public Report- Dissemination

The next point of the scheme follows directly from the audit itself. This was a submission of the annual statement of energy accounts. The results of the project was presented at the final work-shop.

COST AND BENEFITS

THE ACHIVEMENTS OF THE PROJECT

The main achievements of the project were:

- Significant increase of awareness regarding energy efficiency, monitoring and targeting, planning of investments among the factories' managers and technical workers at the factories,
- Identification of no and low-cost undertakings in factories,
- Starting energy monitoring,
- Real reduction of energy consumption and emissions of environmental pollutants at the factories participating the project,
- Confirmation that energy self-audit can be an useful tool also in Polish realities.

THE BASIC ENERGY CONSERVATION POTENTIAL

Table 1. The Basic Energy Conservation Potential and Environmental Effect

Total initial (reference) energy consumption in 18 factories		MWh/year	774 345
Total reduction of energy consumption as a result of no and/or low-cost actions		MWh/year	51 910(app. 7%)
Total reduction of environmental pollutants	CO ₂	ton/year	25 929
	SO ₂	ton/year	172,6
	NO _x	ton/year	45,9
	Dusts	ton/year	49,6

THE LONG TERM ENERGY CONSERVATION POTENTIAL

Table 2. The Medium and/or Long Term Energy Conservation Potential and Environmental Effect

Total potential reduction of energy consumption as a result of medium and/or long term investments in 10 factories		MWh/year	64 386
Total potential of energy efficiency investments cost		EURO	7 611 300
Reduction of energy costs		EURO/year	2 153 000
Simple Pay Back Time (SPBT)		years	4,68
Total reduction of environmental pollutants	CO ₂	ton/year	32 151,9
	SO ₂	ton/year	214,0
	NO _x	ton/year	56,9
	Dusts	ton/year	61,5

PARTNERSHIP**INTERNATIONAL PARTNERS INVOLVED IN THE PROJECT**

The Polish National Energy Conservation Agency - the organisation operating in the field of rational energy use, linking governmental organisations with regulatory bodies, the energy distribution sector and end-users,
Irish Energy Centre - the organisation aiming at promotion the development of a sustainable national energy economy,

Netherlands Agency for Energy and the Environment - the organisation managing policy programmes for the Dutch Government and various international bodies in the field of environment and energy conservation.

RECOMMENDATIONS

FOLLOWING THE PROJECT

Phase - Implementation of the measures

This phase was a consequence of the project, but it was not financing from the project budget. Mainly no-cost/low-cost measures were foreseen. As a direct result of the factories involvement and deeper engagement of the management in the process of energy-management scheme, the broader use of external sources, such as TPF, was expected.

TO KNOW MORE

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USEFUL INFORMATION

List of Internet sites

[KAPE's website / www.kape.gov.pl](#)

THIS CASE HAS BEEN REALISED BY

Organisation :	The Polish National Energy Conservation Agency	E-mail :	jnapiorkowska@kape.gov.pl	Internet :	http://www.kape.gov.pl	Published :	12/9/2002
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[back to top](#) ▲

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