

## Newsletter n° 1 July 2007

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### Summary

**Introduction to the  
Clearinghouse Support Project**

**Building sector in the target  
regions and PSF implementation**

### Introduction to the Clearinghouse Support Project

**T**he Clearinghouse Support project or ClearSupport in short aims at accelerating the renovation of buildings from an energy saving perspective in targeted European regions. The project started the 1<sup>st</sup> of January 2007 and will be carried out over three years with the involvement of thirteen partners.

The project's key intervention is to facilitate appropriate linkage between project owners – the target groups are municipal and residential buildings – and financiers at both national and international/EU level, as illustrated in the figure below:



- ◆ [The ClearSupport project in the Crete region \(Gr\)](#)
- ◆ [Organisation of PSF in Gdańsk \(Pl\)](#)
- ◆ [Energy Savings in the building sector, Czech republic \(Cz\)](#)
- ◆ [Project service facility \(Lv\)](#)

### Successful examples

- ◆ [Retrofitting of mental hospital in Rokiškis \(Lt\)](#)

### Intelligent Energy - Europe

### Partners

The project takes point of departure in EU's policies for strengthening efforts as laid down in the Action Plan for Energy Efficiency, calling for realising 20% savings by 2020. Better energy performance of buildings is one of the key focus areas. Putting in place local Clearinghouses and to ensure their implementation is one of the instruments that the European Commission wishes to promote. The Clearinghouse Support project can thus be considered as a pilot initiative.

The targeted regions are Latvia, Lithuania, Northern Poland, Czech Republic and Crete. Local partners will operate 'Project Service Facilities/PSF' in order to serve as a backbone in the project's services towards project owners and as an anchor point in the local clearinghouse. Other articles in this newsletter will present the highlights of the mobilisation of these PSFs.

Another essential part of ClearSupport will be to improve the framework conditions for building renovation projects. This effort is divided in three elements:

- 1) creating better financing schemes by facilitating use of Structural Funds and incorporating concepts like third party financing,
- 2) technical project design including developing standardised solutions of building renovation measures
- 3) regulatory framework; e.g. helping to establish appropriate regulation of the building sector to support the desired development.

A project website is currently under construction that will provide further introduction to the project activities and progress.

Six issues of the newsletter are further planned in the course of action.

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## The ClearSupport Project In The Crete Region, Greece

**T**he increase of the energy use in buildings in the Crete region results in higher oil and electricity consumption and in higher CO<sub>2</sub> emissions. It is well accepted today that there is a high potential for energy savings in buildings in the E.U. A target of 20% reduction in energy consumption in buildings can be achieved in the coming years.

The E.U. directive 2002/91/EC for the energy inspection in buildings is not yet valid in Greece and in the Crete region. At the same time very few projects related with energy saving in buildings have been implemented. The Greek regulatory framework is limited to the existing building code. However a new legislative framework related with the Rational Use of Energy (RUE) in buildings is expected soon. Projects related to energy savings in buildings are mainly supported through commercial bank loans and through European structural funds.

In the Crete region there is a lack of municipal, local, or regional policies related to energy saving in buildings. The main policies are elaborated centrally in Athens. Innovative financial tools like the Energy service companies (ESCOs), which could support the RUE in buildings, do not exist in Crete at the moment.

The mobilisation workshop for Clearsupport project took place on the 18th of April 2007 in Chania, in the premises of Technical chamber of Greece. More than 80 people have attended the event and different aspects of the RUE in buildings have been analyzed by various experts. After this event a lot of people have expressed their interest to realize projects in energy saving in buildings.

The creation of the Project Support Facility (PSF) has already started. The first consultancies have been offered mainly to public buildings (schools, local authorities). It is expected that until the end of September 2007 (first 9 months of the project) the PSF in Crete will offer support services and consultancies in six projects related to RUE in buildings in the island.

 John Vourdoubas, Technological Educational Institute of Crete, [gboyrd@tee.gr](mailto:gboyrd@tee.gr)

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### Organisation of Project Service Facility (PWP "Termomodernizacja") in Gdańsk, Poland

**T**he Baltic Energy Conservation Agency (BAPE SA) will be mainly active in the Pomeranian Province. The area of the province is 18 293 km<sup>2</sup> (5,6% of the country). The province is inhabited by almost 2,2 million people. There are many areas of high natural value in the province: 2 national parks: Slovinian National Park and Bory Tucholskie, 9 landscape parks, 45 areas protected under NATURA 2000 programme, as well as nature reserves. Areas mentioned above (except NATURA 2000 areas) account for 1/3 of the province area.

Pomeranian Province's share of dwellings accounts for 5,2% corresponding to 692.000 dwellings in 2005. To a large extent residential buildings in the Pomeranian province are old as presented in the table below.

	Year of construction						
	until 1918	1918-1944	1944-1970	1971-1978	1979-1988	1988-2002	2002
amount of buildings	26 204	45 760	43 171	21 271	32 980	41 208	16 440
	11.5%	20.1%	19.0%	9.3%	14.5%	18.1%	7.2%

Tab.1 The age structure of buildings in the Pomeranian Province (Central Statistical Office)

### Project Service Facility

The project Service Facility consists in the action described below.

Working profile of PWP "Termomodernizacja" BAPE:

- Energy efficiency
- Renewable Energy Sources
- Modernization of energy production and transport systems
- Modernization of buildings and installations
- Financing of investments

Target areas:

- Municipal sector – public buildings: schools and hospitals
- Residential sector – housing co-operatives, housing associations, municipal buildings

Type of measures:


- Thermo-modernization of buildings
- Modernization of heating, hot tap water, ventilation and air-conditioning installations
- Connecting to district heating
- Replacement/modernization of heat sources with special regard to RES (log wood, pellets, wood chips, straw)
- Solar collectors (schools, hospitals and other hospitals with high demand for hot tap water)

PWP "Termomodernizacja" opening hours : Mon.-Fri. 8.00-16.00

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Localisation of the PWP „Termomodernizacja” within Poland



First meeting for the PSF organisation

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## Energy Savings in the Building Sector, Czech Republic

**I**n the Czech Republic about 10 million inhabitants are living in more than 3.8 million flats. Flats were constructed gradually in approximately 6.5 thousand cities and villages.

Almost 1.2 million flats are situated in panel buildings constructed after 1950. About 800 thousands of these flats were built in 1960s and 1970s.

Flats can be divided in several groups in term of ownership (including percentage of total number of flats):

- private ownership flats 47 %
- municipal rental housing 17 %
- co-operative ownership flats 17 %
- private ownership rental housing 12 %
- other flats 7 %

Besides flats, municipalities, regions and state own many thousands other buildings, that are used for healthcare service, education, culture, sport, office work and others.


In all the above mentioned buildings a high energy saving potential still exists. A very positive step towards energy savings was the adoption of Act on Energy Management in 2000. One provision of the law was related to the obligation to prepare energy audits for the buildings with a consumption higher than 700 GJ. This obligation and the increase of the energy price gave a significant impulse and interest in implementing energy efficiency measures in buildings in general.

Mainly building companies have taken advantage of this opportunity. They began to promote building insulation and window replacement. Many times projects were prepared without any analysis to show an expedience of the installations and payback period of the investments. Nevertheless most of the projects realized substantial reduction in energy consumption. The Czech state has supported these activities. In 2000, the State Fund of housing development was established under management of the Ministry of Regional Development. The financial support in better quality housing was almost 15 milliards CZK (i.e. more than 530 million EURO), including support in the field of energy savings (insulation etc.).

Despite the improving situation, many barriers exist and obstruct faster development of established and unconventional methods for realization of energy efficiency projects. For overcoming the barriers the Project Service Facility has been put in place under ClearingHouse Support project. The Czech PSF will be constituted by representatives of state sector (Ministries, Czech Energy Agency), municipalities and other building owners, entrepreneurs (ESCOs and others) and banks. The mobilisation workshop of the project is planned on 26th of July.



School in Prague retrofitted in 2000  
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## Project Service Facility, Latvia

**I**n Latvia the PSF is coordinated by the Institute of Physical Energetics (IPE) in Latvia. IPE is a leading institute for energy research, strategies and policies for long-term energy developments. The IPE established an advisory group with representatives from public institutions and the main stakeholders.

Residential buildings in Latvia account for 30% of the energy consumption including municipal buildings. It is much easier to use these ones as pilot projects in order to demonstrate the technical possibilities.

The first meeting of Clearinghouse was organised in May 2007. The main responsible stakeholders for Energy Efficiency (EE) in Latvia were invited as well as the main potential users of the project results (Consultant companies, Housing owners, Municipalities etc). Eight reports concerning organisational matters, present situation of Energy Efficiency in the housing sector, financial mechanisms for Energy Efficiency, analysis of the legislation, regulation and administrative tools were presented in this meeting.

Based on lessons learned and challenges identified from the previous projects - especially Initiative for energy efficiency in the housing sector - costs and energy saving effects are foreseen. It is important to identify the main organisational, technical, financial problems and opportunities for further development of some kind of hand-book of standard technical measures for EE investments.

Future perspectives for EE in housing sector in Latvia:


- End-user energy efficiency will become a crucial issue,
- The housing sector present a high potential of reducing heat energy consumption and GHG emissions, but it is very complex and challenging,
- EU Structural funds will play an important role in the facilitation of investment for increasing EE in the housing sector,
- Involvement of private sector (like PPP etc.) and Green investment schemes could be very good financing mechanisms for EE project financing in the future.

Some of the main barriers to energy efficiency are:

- The relatively high expenses to implement EE measures and the long pay-back period;
- The lack of quality standards or guaranties to reduce consumer risk when purchasing new efficient technologies;
- Inadequate consumer information about benefits of EE projects, etc.



Realised Housing Renovation Project in Riga  
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## **Retrofitting of Mental Hospital in Rokiškis, Lithuania**

### ***Context***

The retrofitting of the Mental Hospital of Rokiškis was screened as the first eligible ClearingHouse Support pilot project in Lithuania. The Hospital is located in small Rokiškis city (16.7 thousands of inhabitants) situated in the North Eastern part of Lithuania close to Latvian border. Up to 375 patients suffering from mental trouble are presently medicated. The staff of the Hospital comprises 466 persons.

Consisting in 9 buildings, the Hospital complex was built in 1972 according to the construction standards valid at that time, with high energy costs nowadays. Today old Hospital buildings need total refurbishment together with the implementation of Rational Use Energy (RUE) measures.

### ***Results***

During the Energy Audit, standard heat demand for space heating and domestic hot water was estimated to be 3341 MWh/a, while specific heat consumption for space heating was 220 kWh/m<sup>2</sup>a. Fuel used in local boiler plant is: wood, coal, diesel oil. Total heated area of Hospital complex is 15186 m<sup>2</sup>.

The following RUE measures will be implemented during Hospital buildings refurbishment:

- replacement of windows as well as entrance doors with new ones having better thermal performance;
- roof retrofitting;
- putting extra isolation on external walls;
- installation of modern heat substation in buildings;
- modernisation of heating system.

The RUE measures implemented are expected to allow a significant reduction of heat demand and reduction of CO<sub>2</sub> emission together with fuel consumption decreasing:

- annual energy savings 1.85 GWh/a (55%);
- expected CO<sub>2</sub> emissions reduction of 173 ton CO<sub>2</sub>/a;
- calculated specific heat consumption for space heating 98 kWh/m<sup>2</sup>a after retrofitting;
- total refurbishment cost: 1.75 Mio Euros;
- the period of investments pay-back of different RUE measures varies from 7.5 to 31.5 year.

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Mental Hospital of Rokiškis  
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Intelligent Energy  Europe

"**Intelligent Energy - Europe**" (IEE) is the Community's support programme for non-technological actions in the field of energy, precisely in the field of energy efficiency and renewable energy sources.

From 2003-2006, IEE has supported the European Union's policies in the field of energy as laid down in the Green Paper on Security of Energy Supply, the White Paper on Transport and other related Community legislation. Its aim was to support sustainable development in the energy context, making a balanced contribution to achieving the general objectives of security of energy supply, competitiveness, and environmental protection.

**2007** will be the starting point of the IEE II programme as part of the Competitiveness and Innovation Framework Programme. €730 million will be available to fund projects for the promotion of energy efficiency and renewable energy. The new programme will build on the strengths of IEE I whilst giving greater emphasis to addressing the needs of small and medium-size enterprises, as well as improved competitiveness and innovation. The programme will cover three main areas – energy efficiency, renewable energy sources and transport – and within these areas many of the themes from previous years have been repeated, including buildings, industry, consumer products, renewable electricity, heating and cooling and biofuels.

