

### Project Summary

The project RESHAPE is supported by the European Union under the **Intelligent Energy-Europe** programme. It started in January 2006, with a duration of 30 months. The project is a common action of ten partners united in a consortium which is co-ordinated by Ecofys (The Netherlands).

RESHAPE covers six pilot countries: The Netherlands, Belgium, Spain, Estonia, Czech Republic, and Bulgaria. Through dissemination activities the target area has been enlarged with Romania and Greece.

RESHAPE intends to contribute to the implementation of the EU Directive on the Energy Performance of Buildings (EPBD). In this framework a consortium of stakeholders in social housing will:

- Demonstrate the preparation of social housing actors for implementation of the EPBD by planning and testing the integration of energy performance certification (EPC) in operational processes and services.
- Test and demonstrate added-value opportunities of EPC.
- Develop support tools for West-Europe, South-Europe and East-Europe.
- Disseminate the project outcomes to social housing actors in order to increase their awareness and change their attitude towards solutions for refurbishments.



### Targeted groups and key actors

- Social Housing Stakeholders (housing associations, housing co-operatives, federations of social housing actors);
- National and regional dissemination actors (national agencies, regional agencies, municipalities);
- Building construction, financial sector.

### Expected outcomes of RESHAPE

- Overviews of the energetic quality of building stocks in the targeted 6 countries.
- A cross-country overview on integration of EPC in operational and communication processes of housing actors.
- A cross-country inventory and analysis of barriers and solution for retrofitting.
- EPC building stock assessments tested as instrument for developing retrofitting strategies.
- A cross-country overview of retrofitting scenarios for six countries.
- Six policy papers addressing framework barriers.
- Toolsets (guidelines, training materials for capacity building and best practice examples) for three geographic areas (West-Europe, South-Europe and East-Europe).

### Consortium Partners

No	Participant name	Country
1.	Ecofys B.V.	Netherlands
2.	Woonstichting Etten-Leur (Woonwel)	Netherlands
3.	De Zonnige Kempen CV (DZK)	Belgium
4.	Vlaamse Huisvestingsmaatschappij (VHM)	Belgium
5.	3E nv	Belgium
6.	Estonian Union of Housing Co-operative Associations (EKYL)	Estonia
7.	Bulgarian Housing Association (BHA)	Bulgaria
8.	Black Sea Regional Energy Centre (BSREC)	Bulgaria
9.	Stredisko pro Efektivni Vyuzivani Energie (SEVEN)	Czech Republic
10.	ADIGSA, empresa publica	Spain

### *Results in RESHAPE countries*

#### **Czech Republic**

With the introduction of the Energy Performance of Buildings Directive (EPBD), the energy consumption becomes an important quality of a dwelling. This consumption has an impact on the management of social housing and communications to tenants and homeowners. Furthermore, the EPBD related assessment of measures to improve the energy performance of buildings can be used to develop retrofitting strategies. The work programme in the Czech Republic is split into two parts:

- Energy performance certification in housing stock and operational process.

In the Czech Republic a tool for evaluation of energy performance certification has been developed. This tool enables calculation of the thermal losses of a building construction, losses of a heating system and ventilation and finally prints out the label and the passport of the building. In 2007 the tool is being tested at about 20 various constructions. Energy audits are compared with this tool.

- Energy performance certification for development of retrofitting strategies.

In 2007 and 2008 the certification of municipal buildings is strictly ordered by the act 177/2006. SEVEN, o.p.s. finds out projects for municipalities which can be paid by savings of energy – energy performance contracting. This type of a service enables to overcome initial

shortage of money and saves energy. Similar projects could be made for groups of condominium buildings.

Other owners of buildings are informed about various financial solutions for retrofitting projects.

#### **The Netherlands**

The project Retrofitting Social Housing and Active Preparation for EPBD (RESHAPE) has started in January 2006. In the Netherlands the partners within RESHAPE are Ecofys Netherlands B.V. and housing association Woonstichting Etten-Leur. The project intends to contribute to the implementation of the EU Directive on the Energy Performance of Buildings (EPBD) and to communicate the results of this implementation.

Especially for tenants of Woonstichting Etten-Leur the energy performance of the houses will be communicated on the website of Woonstichting Etten-Leur. Also the total cost of housing (including energy cost) will be shown in relationship with the overall quality of the houses.

Based on this, potential tenants can make a better decision which house to rent. Up till now all houses of Woonstichting Etten-Leur have been investigated for performing Energy Performance Assessments (EPA's). Next steps will be the analysis of the outcome of these EPA's and adapting and developing communication material to disseminate the results.



### Belgium

On 19-20 April 2007, CV Zonnige Kempen and the Province of Antwerp organised a Conference in co-operation with EHEN (European Housing and Ecology Network) and RESHAPE at Kamp C, the Provincial Centre of Sustainable Building.

The first topic was "Sustainable social Housing in Practice", with presentations of EHEN members from several countries. Afterwards came the practical examples, with visits to new-construction projects at several local sites.

The theme of the 2<sup>nd</sup> day "How can we give existing social houses an EPB-label?" was discussed by Frank and Charel, both members of RESHAPE project team. This day included also visits to several renovation projects.

There were 12 foreign EHEN and RESHAPE guests and about 70 other participants, from architects to engineers and people from other social housing companies.



Hearing all those positive reactions, this EHEN-RESHAPE Conference was definitely a success!

### Estonia

The Estonian partner organization in the RESHAPE, the Estonian Union of the Co-Operative Housing Associations (EKYL), is the roof organization for more than 8000 housing associations. EKYL objectives in this project are:

- to find the best retrofitting strategy in the situation where most of the living stock has been built 30-40 years ago and there is lack of the funds for the housing cooperatives.

- to implement the energy certification system for the buildings and to unify the energy audit methodology.

To achieve these objectives, EKYL has performed 14 pilot audits and renovation works in social houses. The analysis of the results is ongoing and the conclusions will be available in July 2007.

In April 2007, in Tallinn, EKYL has organized the 4<sup>th</sup> Baltic Housing Conference. The conference was dedicated to the end of the housing reforms in Eastern and Central European countries. The main topics were: experience from „old” cooperative housing movements; overview of different reform processes in the new member states; new programming period of EU structural funds.

At the conference, a special attention was put on energy efficiency in each presentation. A study made on the basis of the energy audits and implemented renovation works in those buildings has been presented.

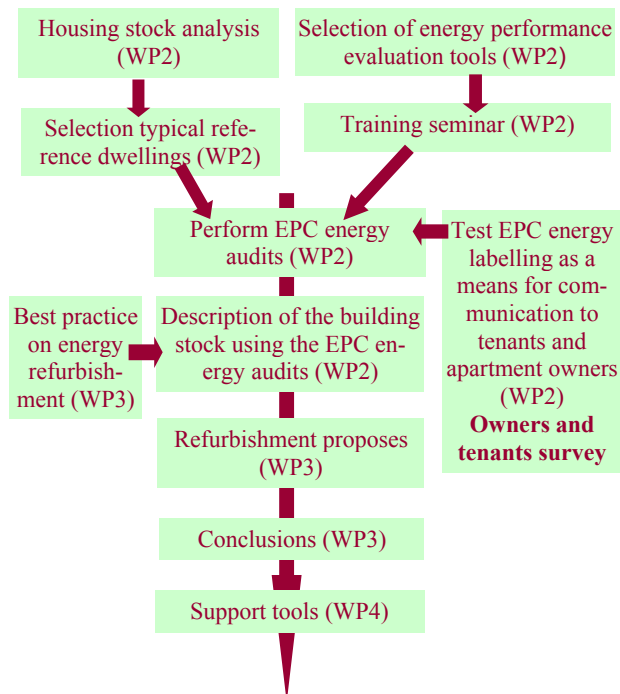
About 200 representatives of housing cooperatives were present at the conference. The participants stressed the importance of receiving know-how from foreign experts.

### Spain

EPBD implementation in Spain started last year with the definition of minimum energy requirements for new buildings. These requirements are compiled in the new Spanish Building Code (CTE: Código Técnico de Edificación). In January 2007 the certification legal framework for new buildings was approved. An official certification tool for residential buildings (CALENER VyP) has been published last May and the Catalan Energy Agency (ICAEN) is also working on an alternative prescriptive tool for new buildings.

Taking into account the state of the art of the EPBD implementation in Spain, Adigsa is working on a pilot project for the implementation of the official certification tools in existing social houses. This pilot project should help identify the best ways to implement EPBD in existing buildings in Spain.

The following scheme presents the tasks that are under development in Spain:



Last 29th of March, Adigsa organized a workshop on energy certification of buildings. This workshop was held to discuss the situation of energy certification process in Spain and to start talking about the certification of existing buildings. The workshop took place in Barcelona with the participation of about 100 energy experts, municipalities and social housing project developers of Catalonia and other regions.



On 18<sup>th</sup> April 2007, RESHAPE was presented at the energy expert commission of CECODHAS (the European liaison committee for social housing). The presentations concerning Spain covered the EPBD implementation situation in the country and RESHAPE tasks under development by Adigsa.

All members of this commission have commented the situation on EPBD implementation in each country (Ireland, Netherlands, Germany, Italy, France, Switzerland and Spain). Adigsa has developed a survey about energy certification tools and process, to be distributed to all members of the commission in each country to collect information about energy certification tools or certification process strategies used in these countries.

### Bulgaria

A selection of 6 types of reference dwellings has been made. Reference buildings describe the existing condominium stock in the country in terms of energy efficiency. Information about these 6 types of reference buildings has been collected in regard with:

- Structure
- Spaces and architecture
- Building materials
- Building envelope energy efficiency
- Quantitative structure of types

Energy audits have been made of 4 reference buildings and the results have been analyzed and reported at national workshops and in media presentations.

Training materials on energy efficiency have been prepared for tenants of condominium buildings.

Critical assessment of existing Bulgarian energy efficiency legislation from the tenant's point of view has been made. It can be concluded that the characteristics of the multi-store residential buildings are not taken into account – the required energy audits of these buildings are much more complicated and expensive than necessary. A more simplified methodology has to be developed for such buildings.