

Improving the Social Dialogue for Energy Efficient Social Housing – ISEES project



The ISEES project wants to implement a “social dialogue” between users, housing associations, energy utilities and municipalities, in order to:

- ✓ **Identify the problems connected to energy use in social housing (from supply and demand side view);**
- ✓ **Provide the involved stakeholders with appropriate technical solutions and socio-economic tools to optimise the energy use in social housing;**
- ✓ **Assess the quality of services provided by utilities and DH companies;**
- ✓ **Provide concrete solutions to overcome these barriers on the way to achieve energy efficient social housing.**

The target group of the project is:

- Occupants: tenants and owners of dwellings in buildings classified as “social housing”;
- Decision-makers on the local level;
- Housing associations;
- Local energy suppliers and utilities, in particular district heating companies;
- Architects, planners and equipment suppliers.

Partners in the project are:

Austria

- KWI Consultants & Engineers – coordinator
- Inter-university Research Centre for Technology, Work and Culture
- ACE Group

United Kingdom - Energy for Sustainable Development Ltd. (ESD)

Czech Republic - Cityplan spol. s.r.o.

Slovak Republic - Energy Centre Bratislava

Lithuania - Lithuanian Energy Institute

Bulgaria - Sofia Energy Centre

The project is carried out in the following steps:

Assessment of energy supply and demand in social housing in the participating countries

- ❖ The assessment of the quality of the energy services provided in 5 countries is carried out through interviews and questionnaires sent to utilities and district heating companies.
- ❖ The demand side is assessed through interviews with occupants regarding their satisfaction with quality of energy services, prices, quality of buildings, problems and major shortfalls encountered.



The first results of the interviews with occupants show:

- In all countries the tenants have been living for quite long time, up to ten years or longer in their present flats.
- A major problem that occurs in all countries is not airtight windows and insufficient insulation of the building.
- Regarding the individual flats poor sound isolation, poor thermal insulation, not airtight windows and draught are common problems.



The first results of the interviews with occupants show that:

➤ The satisfaction with the heating situation differs depending on the respective country:

- ✓ Bulgaria has the lowest level of satisfaction. An indicator for this dissatisfaction is also that 40% have an average temperature below 18 degrees during winter. Surprisingly, the majority is not using any supplementary heating.**
- ✓ In Lithuania and UK the satisfaction level is similar (about 40%), but the same percentage is also unsatisfied with the heating. In both countries 17% have an average temperature below 16 degrees.**
- ✓ Also in Czech Republic and Slovak Republic the situation is similar: here the majority is quite satisfied with the heating situation and do not use any supplementing heating.**

The first results of the interviews with occupants show that:

- In all countries the tenants have the possibility to regulate the heat in the rooms.
- Especially in Bulgaria a low level of satisfaction with the services of the district heating company is given. Main reasons for dissatisfaction seems to be that billings are not comprehensive. Also in UK and Slovak Republic the tenants see potential for improvement, but in general the tenants are more satisfied with different aspects of service than in Bulgaria. Main reasons for dissatisfaction also seems to be that billings are not comprehensive.
- On contrary to the above-mentioned countries in Czech Republic and Lithuania the majority of tenants don't have the feeling that the services need improvement. Most aspects of service are considered as rather satisfying.

The first results of the interviews with occupants show that:

- **The reasons why tenants still use district heating, although they are unsatisfied with the service are the same in all countries: no gas network exists, they lack money for system reconstruction or it is too complicated to disconnect.**
- **Main reasons for a disconnection in all countries would be that the heating is too expensive and that they want to know exactly what they pay for. Also poor service and the desire to be independent from the district heating company or that they want to be able to heat any time of the year were named. In fact only in Bulgaria 6 flats were disconnected from the district heating. In the other countries all tenants are using district heating.**

Economic and financial aspects in social housing are examined through assessments of the current level of energy prices and level of costs compared to household income in the 5 countries; assessment of the competitiveness of district heating in a current market of distorted energy prices, and compare it with other countries.

Based on the results of the above-mentioned investigations will be defined major cornerstones for the inclusion of RUE and RES measures in housing.

Assessment of user behaviour in social housing

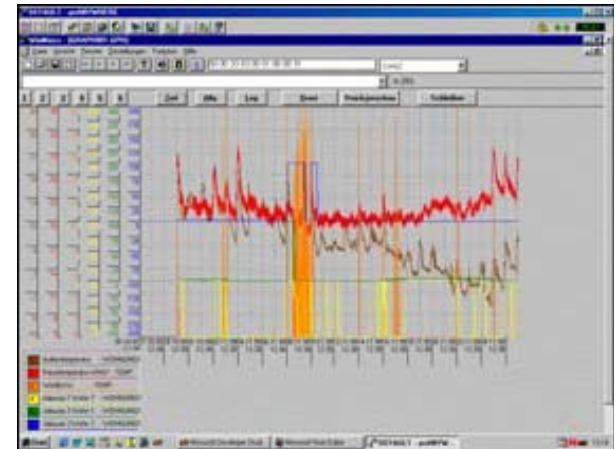
In order to receive as much as possible concrete information on the influence of individual occupants on the energy consumption we are assessing one out of three selected building in the 5 countries BG, CZ, LT, SK, UK to perform detailed measurements on the user behaviour of occupants.

In each model building per country 5 apartments were selected to reach a small, but realistic sample.

In each flat the following devices were installed: heat meters per each flat and one for the whole building, window contacts to measure the ventilation behaviour, outside thermometers and thermostats in the rooms; every flat measured is connected to a central PC unit to register the data continuously over one heating period. This task is performed in collaboration with



Data evaluation and conclusions:
 actual energy demand measured will be compared to a standardised demand; results will be given in kWh/m².a, and related to the actual outer/inner temperature, ventilation behaviour, and characterisation of the occupant for each apartment and type of building, generalised conclusions will be drawn.



Socio-economic and behavioural analysis

The aim of this task is to assess the scope of user behaviour and individual approaches chosen by tenants/owners to cope with the existing situation of inefficient energy supply and demand. Different social conditions and country-specific circumstances in this regard are assessed together with innovative approaches to overcome the current situation. Innovative approaches to user participation and the chances for occupants to actively evaluate and influence their own residential environment will be developed and proposed at the end of this phase of the project.



- **The social impact of user behaviour will be assessed through a questionnaire and interviews conducted with occupants involved in field testing.**
- **The strategies and solutions chosen by occupants to cope with existing situation of inefficient energy use will be assessed through interpretation of the results of the interviews and assessment under which circumstances tenants cannot afford to adequately heat their homes; specific strategies and solutions chosen by occupants will be summarised and suggestions will be made how to improve their current situation as energy user.**



➤ **Identification of major steps to realise a social dialogue in social housing: One aspect which will be the introduced is the concept of “co-operative refurbishment”, a way to integrate occupants, house owners and housing associations into energy improvement and refurbishment processes.**

Evaluation of various models for participation in refurbishment processes: For each of the 5 countries assessed, individual approaches will be defined to realise the defined steps.



Development of solutions, tools and recommendations for improving the “social dialogue”

Based on the social impact assessment of the user behaviour and the strategies identified to cope with the unsatisfying situation in regard to energy use in social housing, the next step is to realise practical approaches as far as possible. In this phase the project will aim at realising the social dialogue in different pilot actions to be developed together with occupants and major stakeholders on the local level. The focus will be on the social aspects in realising energy efficient housing, only to a limited extent will technical measures be reflected and proposed as well.

The expected results of improving social dialogue for energy efficient social housing are:

- ❖ **A better understanding of the users' behaviour, their motivation and their needs for energy services;**
- ❖ **Knowledge on the socio-economic rationality that lies behind individual decision-making processes;**
- ❖ **The outline of a model refurbishment process for each participating country where the needs of the occupants are being respected and where tenants/owners are actively involved in the development and realisation of improvement measures;**

The expected results of improving social dialogue for energy efficient social housing are:

- ❖ A set of measures developed to improve the situation of tenants/owners regarding energy use, within the given limits, and raise their awareness for realisable measures;
- ❖ A set of tools for decision-makers in the housing sector and energy utilities to improve the quality of social housing on the one hand, and energy services on the other hand;
- ❖ Improved knowledge of problems associated with retrofitting of social houses, to provide more appropriate solutions;
- ❖ Country-specific recommendations for the dispersion of low-energy social housing concepts within existing buildings.

A photograph of a large, multi-story residential apartment complex with many balconies, set against a blue sky with white clouds. In the foreground, there are lush green trees and a paved area with some structures.

**Thank you
for
your attention**

Visit our project website at: <http://www.isees.info>

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**“Retrofitting of Social Housing Policy and
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