
WORKSHOP REPORT

Event: INTERNATIONAL WORKSHOP: „Energy saving measures in municipalities - legal preconditions and holistic housing estate planning”

Date and place: April 23-24, 2009, Castle Křtiny, Křtiny, Czech Republic

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*This report is equals to Deliverable 2.4 and 4.3 in one document (part I)
Part II will be available after the international workshop on Energy Sound Planning to be held in Poland.*

Workshop framework and main objectives

This workshop was held in the framework of the project "From Estonia till Croatia: Intelligent Energy Saving Measures for Municipal housing in Central and Eastern European Countries" (INTENSE), that is implemented in 11 Central and Eastern European countries and Germany, by a consortium of 28 partners - multiplier organizations, municipalities and expert groups, aimed at influencing building developments at local level, in terms of legislation, technical and planning issues as well as consumer behavior.

The workshop was the first international event organised under the project, combining activities from two work packages, and gathered over 50 participants from 15 countries - representatives of partner municipalities and other interested municipalities from CEE region, Ministries of Environment/housing agencies, coordinating partners from 12 countries, German partner municipalities and speakers from different German, Austrian, UK and Dutch agencies.

Goals of the workshop:

- To illustrate opportunities for municipalities to implement the requirements of the directives transposed in national legislation at their local level (good examples from different European countries)
- To improve understanding of the requirements of the EC Directives through international dialogue and experience exchange (comparison of roles and responsibilities at local level)
- To highlight the importance of holistic planning for energy optimised cities as first step to influence development at our municipalities
- To view and evaluate examples of steering instruments for planning at local level, and discuss their usefulness across INTENSE project countries

Day 1 - Thursday, April 23, 2009

Ms. Heidrun Fammler (*Baltic Environmental Forum*) opened the workshop and welcomed the participants on behalf of the organiser. Ms. Fammler presented the INTENSE project consortium, as well as project's programme which is divided in 8 work packages. She specifically focused on presenting the goals of Work Packages 2 and 4, in the framework of which this workshop was organised, as follows:

- **WP2 - Legal preconditions for energy saving measures faced by municipalities** aims at comparing & analyzing how the two Directives 2002/91/EC (Energy performance of buildings)

and 2006/32/EC (Energy end-use efficiency and energy services) are implemented in the CEE countries, with special view on municipalities, their performance and roles delegated in the different countries.

Expected result: better understanding of the legal requirements and terminology in 11 target countries at local level.

- **WP4 - *Holistic planning of housing for energy optimized municipalities*** is the central focus of the project highlighting the importance of planning, where each of the 13 partner municipalities shall elaborate an own project related to energy efficiency at its locality and work on it, with international assistance.

Expected result: Trained municipalities and 13 individual concepts for an energy optimized housing planning, with an implementation plan; publication of guidelines in national languages.

Ms. Fammler then presented the goals of the event and the agenda, and continued chairing the workshop.

On behalf of the host, the official welcome was given by **Mr. Miloslav Novotný**, Chairman of the Local Action Group (LAG) Moravian Karst and Mayor of the Vavřinec municipality. He presented his organisation, LAG, which focuses on educational programs to further develop small businesses in agriculture, animal farming and forestry, as well as international cooperation projects aimed at introducing sustainable development in this area. As increasing energy consumption forces to consider more energy efficient measures in housing sector, Mr. Novotný reminded how the experience shared among countries within this project will have a big impact through training of specialists and liaising among experts, thus improving understanding of high energy performance buildings, which brings financial savings as well.

Session I - ENERGY POLICY FRAMEWORK AT EU AND NATIONAL LEVEL

Mr. Tamas Csoknyai (*Budapest University of Technology and Economics*) gave an introductory presentation of the two EC directives relevant for the INTENSE project - 2002/91/EC and 2006/32/EC, presenting their main requirements with a particular focus on the role of local governments. He explained that, given that 40% energy is used on buildings, it was the main reason for starting development of EU energy legislation with this particular aspect.

The *Directive on end-use efficiency and energy services* addresses EE throughout the entire supply chain, with national indicative target set at 9% savings improvement in the period 2008-2016. In order to achieve this, national EE action plans are required for every Member State, including a financing plan. Roles for public sector in this task include: setting examples, initiating pilot demonstrate projects, concentrating on their own employees and buildings, publishing EE-investment and purchasing guidelines, promoting active participation of energy companies as well as imposing restrictions on energy distributors regarding tariff setting. The Directive recommends introduction of energy audits, providing financial instruments for energy saving measures, and smart metering, all based on the principle 20-20-20 (20% energy saving; 20% more efficient energy performance; 20% CO₂ reduction by year 2020). Despite the transposition deadline of May 2008, transposition goes much slower than expected, so the countries should be further supported by various measures. Even so, EC wishes to make the other Directive (EPBD) stricter - more stringent requirements for new buildings, lower threshold for surface of renovated houses subject to EPBD, new enforcement requirements.

Directive 2002/91/EC on energy performance of buildings (EPBD) puts all buildings subject to minimum one requirement, requiring also energy certification for purposes of selling or renting. Mr. Csoknyai informed that in most countries there are delays in implementation of 2-3 years in relation to January 2006 deadline (still not in Hungary), due to not enough certification experts and no sufficient political will. The EPBD requires that design of new buildings bigger than 1000m² has to include alternative systems of energy and heat generation, while major renovations require energy performance updates when feasible. Expectations from member states require an individual customised approach due to different climate conditions, socio-economic background etc., adoption

of methodology for calculating energy performance of buildings (changes in legislation) and setting of minimum energy performance requirements (diff. btw new/existing/different building types), as well as reviews to follow technological progress in the field. However, EC proposal of a new EPBD version (2008) seems to already give methodology for economical calculation of requirements for new buildings.

Mr. Csoknyai then presented different approaches to calculating and expressing energy performance (units/indicators, user type references) used in various EU member states, including variations in graphical presentation of Energy Performance Certificates (EPCs), and reminded of some additional challenges, especially the varying quality and performance of existing buildings (e.g. old Soviet-style houses with high energy consumption). An example of a national subsidy program was also given - e.g. Hungary grants 20% support for installation of EE insulation, or permits to build a higher building if sufficient energy savings are demonstrated.

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Ms. Daina Indriksone (*BEF Latvia*) gave an overview on implementation of the two EC directives at national and local level in Central and East European Countries, that resulted from a survey which aimed to establish whether local authorities are aware of the two EC Directives requirements (through national legislation) and if they have any responsibilities in this respect; and are there any practical examples in implementation already, including gaps/problems.

The most interesting was to find out that in many countries the quite unclear requirement of the Directive that municipalities should have an "exemplary role" in energy efficiency is not reflected in national legislation, even where Directives are fully transposed. Also, potential role for municipalities exists especially in public procurement for construction/renovation of buildings, but it is unclear how it is really working in practice, as procedures guidelines are not yet developed, and there is low awareness of it at local level. According to existing legislation, therefore, municipalities should find their own way, and financial support, to implement EE criteria/measures. Therefore it was planned to discuss this issue further in the workshop through small groups, and later in countries-national teams, hoping to get certain recommendations, feasible for different countries.

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Session II - IMPLEMENTATION OF EU REQUIREMENTS AT LOCAL LEVEL – SUCCESSES AND CHALLENGES

Ms. Birgit Wildt (*City of Münster, Germany*) presented a case of good practice of implementing EU requirements at local level, on the example of Münster - a middle-sized city, with a considerably long climate protection history that started in the 1990-ies (2006 German Climate Protection Capital), and the first German winner of European Energy Award. She presented the strategy that the city implements in order to implement energy efficiency measures stricter than the national standards, and CO₂ reductions targets in their territory, and explained the excellent EE results which are in Muenster case directly related to ownership of land. This instrument of municipal land ownership is used both for private houses and office/service buildings, in order to set contractual obligations to investors for implementing low energy standards on all new construction, including quality assurance through uniform criteria, affordable prices in attractive areas, harmonisation with all aspects of town planning, regular inspections during construction stages, and checking of energy passports.

Main arguments towards citizens in the 1992 for the ambitious EE and climate change goals included extensive presentations and public discussions on **cost calculation + energy savings**, and **federal subsidies/incentives in the first years**. Initially CO₂ reduction didn't have that big a ring, but nowadays it starts to get more popular/fashionable even among citizens. Therefore the most important recommendation arising from Muenster experience is investing in public outreach -

having a responsible information officer or a unit to provide information on EE possibilities to citizens and interested legal entities; regulations and instructions are not sufficient.

Transposition (applicability) of this instrument in CEE region is unfortunately limited, as currently in CEE land is sold to cover current municipal needs and rarely municipal administration can afford to buy land where it can set building requirements. Also in Germany 10 years ago, there were only 3 cities using this approach, but now the number is growing.

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Mr. Istvan Varga (*Szentes municipality*) and **Ms. Maria Keckes** (*Szeged municipality*) presented good practice examples from two Hungarian municipalities on implementing EU energy efficiency requirements at local level. Mr. Varga stressed the importance of municipal administrations in functioning as a bridge btw. the regulations and the citizens, and influencing individual and organisational changes. In that context he emphasised the importance of involving energy experts in local decision-making, communicating energy saving examples to citizens, introducing incentives for private EE investments, and also presented several examples of measures introduced in Szentes related to using renewables (solar lamps for street lighting). Ms. Keckes presented a project of refurbishment of municipal hospital for 250.000 people, largest such project in central Europe, finalised in 2005, winner of 2007 European award. The investment, financed jointly by EC and Szeged municipal funding, included a heating system renovation by change to solar energy in order to increase usage of solar energy for heating-cooling instead of gas (south Hungary, town with highest sun exposure in the country), while hospital was in use all this time. In result, new roofing of 800m² solar thermal cooling-heating system was installed, increasing solar energy capacity by 24 times which now covers 37% of hot water demand, and NO_x and CO₂ reduction to 25% of previous emissions. Cost recovery is expected in 10-11 years, and for 3 years the system functions without problems.

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Discussion in small groups - Implementation of the relevant EU/national requirements by municipalities: Successes and challenges

Participants were divided in 4 small groups according to the type of organisation they belong. The results of small group work are listed below:

a) 2 small groups with municipality representatives:

Municipalities - Group 1 - Evaluating own situation regarding legislation implementation:

1. Problems/gaps

- lacking sufficient financial support (legal basis for it)
- lacking knowledge (capacity and adequate number of experts, especially in small municipalities, e.g. licensed auditors)
- lacking enforcement of certain standards (how to impose the renovation to private owner of traditional house)
- people "don't like" laws

2. Satisfaction

- satisfaction with citizens' opinion as being "modern" if having energy-efficiency targets
- legislation and certification of buildings in place
- EC and state co-financing programs for energy audits and renovation exist in most countries

3. Next steps municipalities should do

- identify and build capacities (experts) of energy efficiency teams, establish info points/phone-lines
- educate politicians in order to have political support
- enforce passive house standards in contracts

Shiny examples from different municipalities; applicability to other municipalities/countries:

- Münster, Tübingen and Heidelberg as leaders in energy efficient municipal housing in Germany
- Münster – combination of state program and municipal financial support to EE activities, runs for 10 yrs regardless of political majority running the municipality; 2 people working in energy efficiency team, informing the people on renovation possibilities and expected economic benefits; audits (energy passports) for private houses financed by owners (400 EUR); in 2012 introduction of passive house standard is planned;
- Sisak (Croatia) – forerunner in energy efficiency - energy team of 2 staff since 3 years provides regular EE information to citizens/owners/potential investors; so far 10 projects for heating reconstruction in schools with investments of 1,5 mil EUR and 10% reduction in energy consumption; in March 2009 announced a tender for citizens: 50.000 EUR investment for 3 buildings (650 flats) construction
- Romania – National program for thermo-rehabilitation of buildings (insulation of windows, doors) includes local government in conducting thermography and planning, and national financial support is matching the private investment (50-30-20%)

Municipalities - Group 2 - Evaluating own situation regarding legislation implementation:

1. Problems/gaps:

- two sides of having stricter EE rules for buildings: stricter means denying national standards (Netherlands); complaints by builders can be expected in CEE region as it is still questionable how to achieve the requirements.
- lack of control - vague regulations-tasks for the municipalities and low level of awareness from both from public bodies and final users, mainly because that transposition and implementation of EE-directives on the local level varies from country to country
- need for capacity building for entrepreneurs and municipal departments to be able to inform on advantages of applying energy saving measures
- weak or no standards for old buildings
- missing linkage among all EE-related legislation both at EU and national level (also including RES).

2. Satisfaction:

- certification - good basis for comparison (benchmarking), others can follow an example
- *'if one - then all'*: example of Estonia - in cooperative apartment buildings (houses owned by union of owners), if one owner wants to certify, others have to do it as well, and the whole building then gets EE-improved – awareness of one owner can motivate others (however, in other countries it is opposite - no improvements can be made unless there is consensus among owners)

3. Next steps:

- buildings with “G” category EPC should be demolished – this justifies the purpose of certificate as a means to define further action (Netherlands already applies this). This is the problem with most building stock in CEE region dating back to 1970's and 1980's, with high heat energy demand, qualifying only for G category.
- capacity building, awareness raising, better communication between national and local authorities

Shiny examples from different municipalities; applicability to other municipalities/countries:

- Szeged - trying to link/harmonise all energy legislation. Municipal gas example – a public-private partnership was established with a British company, which offers assistance in defining municipal energy strategy and a complete municipal service (ESCO contracts with

municipalities), in exchange for the rights to manage municipal bio-waste and methane for heat generation

b) *Country coordinating partners (REC/BEF/Sofena)* discussed next steps under WP-2:

Reflections on the findings from the survey:

Role of the municipalities is not clearly described in the 2006 Directive on Energy end-use efficiency and energy service, therefore municipality awareness for its implementation is very low, as secondary legislation is either missing or very recent, thus results were not very surprising to the partners. It even showed that EU-membership does not guarantee successful implementation, as seen on the case of Croatia, which has a more advanced transposition status of the two directives than most other project countries.

Situation in Poland shows that some municipalities implement the 2002 Directive by own initiative, when the legal binding legislation is missing, while in Estonia green procurement requirements are included into public procurements procedures only at the technical design stage. In Romania and Hungary a miscommunication among central and local government was mentioned as main cause for the lack of implementation.

Next steps - using results from the survey for the publication and national events in countries:

The publication should consist of two parts – overview of legislation on local level; and recommendations for municipalities, including country-specific issues. Official EC report on implementation 2002 Directive could be used as a basis for comparison with real situation at implementers' level. Criteria and categories should be developed for the selection of good practice examples.

2-3 national dissemination meetings should be organised in the next project period. It is important that national workshops don't cover only one WP issues, but should be coordinated with other WPs, because we address the same audience. Expected outputs from the national workshops should be uniformed, which enables comparison among the project countries. Dissemination meetings should raise a question of measures to be implemented for stimulating implementation of the two Directives, based on the results of the survey. Recommendations as outputs from national events could be used in the publication as well.

c) *International experts & state agencies - Recommendations to municipalities*

The group was rather diverse with participants representing governments, energy agencies, architectural offices, universities and international organizations, including both the stakeholders that enact legislation and those who implement them were represented in the group. The following recommendations to municipalities were defined:

DO-s and DON'T-s in the implementation of legislation, with regard to Energy Certification and Building Permits:

While EPBD sets clear obligations for the municipalities, ESD gives bigger freedom to them, therefore participants came up with more ideas regarding the ESD.

	<i>ESD</i>	<i>EPBD</i>
<i>What to do?</i>	<ul style="list-style-type: none">▪ Raise the level of their awareness and engage themselves – be proactive▪ Look for existing financial resources▪ Join forces with other stakeholders, working partnerships with other municipalities, engaging suppliers▪ Apply a holistic approach; while tackling energy efficiency they should at the same time improve deprived environment, public transport, and consider social aspects.	<ul style="list-style-type: none">▪ Employ energy experts, and adapt the language to be understandable to citizens

ESD**EPBD**

What not to do?

- Avoid doing nothing, even if the Directive doesn't require to do anything
 - Avoid selling own property without control.
- Don't stop at the application of energy certificates - they are only informing on the energy performance of the building, and not about the consumption habits of its user.

Reflecting the 2006 Directive on Energy end-use efficiency and energy services - term "shining example":

- Shining example is a case that serves as a beacon; one worth to follow not only by municipalities but also by citizens; one that contributes to spending less energy overall and less money from the municipal budget. In that context, Münster created a 'culture' that is promoting energy efficiency, which other municipalities could adopt. However, it's not enough to have good examples, but to see and share good practices.
 - Community approach is crucial: citizens should be actively involved.
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In continuation of the day, **Mr. Peter Matthew** (*Department of Communities and Local Government, UK*) presented experience, successes and challenges in energy certification of buildings in the UK. He explained a complex infrastructure that was developed by the responsible Department (equivalent of Ministry) to support the further implementation of EPBD directive:

- creation of a whole set of methodologies and software tools to calculate and do certification for different building types (15 schemes);
- training programs for new Energy Assessors;
- development of accreditation schemes, including consumer redress;
- Quality Assurance arrangements
- domestic and non-domestic registers for lodging EPCs and DEC (Display Energy Certificates).

Mr. Matthew stressed that EPCs for homes are considered most important type, as they explain energy use down to lighting, heating, hot water, and include non-technical recommendations (measures and costs) based on current performance. On the other hand, DEC is considered better than EPC, since public buildings are obliged to display DEC, and in this way the Local Authorities that are in charge of implementation should lead the way as examples. Local Authorities have access to the registers, and a duplicate copy of your EPC certificate can be obtained.

The system was set up in such a complex way in order to ensure product and process quality – there was already software for other regulation schemes, now new one was needed to reflect different building types. The ministry has set up the scheme independently, although LAs, industry and the public were informed (but not consulted) of all requirements before launching the scheme. One of the instruments used was the Home Information Pack (HIP) providing information about EPCs and application requirements before committing to buying/selling a home.

Further challenges in implementation are expected in terms of updating software and skill/expertise, accreditation of experts, motivating people to act upon recommendations from their EPCs. As financial incentives are main tool to attract people to start using EPCs, UK promotes inclusion of EE into the market system (EE value of property). Mr. Matthew concluded by informing that the last part of EPBD was transposed in UK in late 2008, therefore there are reservations to the announced introduction of the new EPBD version, namely regarding its prematurity, additional burdens for countries, and lack of application of subsidiarity principle.

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Mr. Mustapha Aanzi (*First Regional Energy Agency - EREA, the Netherlands*) presented the Dutch experience with energy efficiency criteria in public procurement processes related to buildings. He presented EREA as an agency that was created initially from an IEE project in 2007,

by merging of two previous agencies, and as a public institution that 'practices what it preaches' by implementing integrated solar panels on the walls of their building - and not on the roof where no-one can see them - as well as 5 wind energy turbines between two main roads, as evidence for people to see Energy Efficiency in practice. The Agency provides customised info on their website, searchable according to the profile of the user, region of habitation, and type of information.

As municipalities in Netherlands own only public-service buildings (no apartment buildings), Mr. Aanzi presented the tools available to them:

- public law - Building Decree allows no stricter regulations for local level, with recent exceptions for district heating systems; subsidy schemes at all levels
- private law (financial incentives or fines)
- EPC (Energy Performance Coefficient, Dutch standard is currently 0.8, or 75 kWh/m².a)
- EPL (Energy Performance for Locations) - based on active use of energy

For addressing old stock of houses, there is a local subsidy scheme for private owners, to stimulate investments in refurbishment. In conclusion, Mr. Aanzi gave a couple of examples of energy management for municipal buildings, which involve constant control and improvement, smart metering, as well as sustainable procurement. Municipal target for sustainable procurement is set at 75% by 2010, and 100% by year 2015.

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Day 2 - Friday, April 24, 2009

Review of Day 1 - Ms. Fammler made a short summary of the topics addressed on the first day of the workshop, and gave a preview of the second day.

Session III - HOLISTIC HOUSING PLANNING FOR ENERGY OPTIMIZED MUNICIPALITIES

Ms. Christiane von Knorre (*Auraplan, Germany*) presented a historical development and current practices of energy efficient housing estate planning in Germany, from 19th century onwards, through a comparison between actual towns and some architectural ideas, starting with a metaphorical overcrowded "fossil towns" and increasing consumption of fossil energy, and progressing towards urban development as a new task: how to deal with expanding cities and create healthy cities with separate functions.

Ms. von Knorre then explained the development of building regulations in Germany, which in 19th century were not specific enough in relation to density and again created over-crowdedness, up until the building policy regulation of 1863, which regulated minimum density and maximum heights of buildings, and in consequence changed the faces of towns. She then presented further legislative development since 1918 (*Reformarchitektur*) and the development of the city of Hamburg in the form of *Fingerplan* (architect Schumacher), where main town core should develop along the transport lines. Although the urban sprawl of the 1960ies disabled furthering of these principles, today there is again motivation for Hamburg to overcome fossil town reputation - proclaimed as "dream town" of 2011, with many car-free zones and green areas.

Although there are no energy efficiency aspects in these planning regulations, Ms. Von Knorre explained several types of planning (*steering*) instruments available to municipalities everywhere - physical planning, environmentally sound transport concepts, regulation of energy supply, land use contracts, special grants/subsidies, national requirements for better energy standards... - that could enable implementation of EE measures in municipalities. She informed that German national legislation since 1960 requires municipalities to develop zoning plans & detailed urban development plans, and invited feedback from the other countries present, to establish compatibility of different physical planning levels across the project's target region, which could be the basis for influencing energy efficiency approach. It turned out that many types of plans under different

names exist and that land use plans (types of development) are determined by the state, however **detailed planning** is in the competence – and under influence - of municipalities. In CEE region density is prescribed at local level detailed planning (Lithuania, Croatia, etc.), while Dutch municipalities can decide on the tenant types, which in turn also can influence density. In Germany, every housing type has specific requirements regarding light exposure, square footage etc. so it enables municipalities to influence density and other aspects that can affect energy efficiency.

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Ms. Birgit Wildt (Münster) expanded her earlier presentation by presenting specific experience of her municipality with holistic planning at local level. She informed of the details of the town's 1996 strategy for new buildings, which consists of energy-conforming general development planning, low-energy standards stipulated in private land purchase and urban building contracts, and district heating combined with local CHP plants. General development planning decisions are made on the basis of planning concepts submitted via public tender, which have to satisfy criteria related to building type and location, density, environmentally sound heat supply, solar energy exploitation, use of renewables, definition of heat demand, while municipality can introduce requirements additional to those prescribed by the law. Thus costs of CHP energy supply (district heating - municipal company) to residents of Münster in relation to other energy costs in Germany are lower; however municipal company also has to work on marketing this product to citizens.

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Further, representatives of three CEE municipalities presented their experience, successes and challenges in housing estate planning:

- **Mr. Justinas Kilpys (BEF Lithuania)** presented the project 'Renovate the Housing - Renovate the City' implemented in Vilnius, where refurbishment was made on over 50 dwellings (insulation improvement etc.), and a collective heat metering was installed. Costs will be paid back to the bank in the form of heating bills over next 15 years – the change will not be felt by tenants, but there will be financial savings after the loan is paid back. However, in a similar case in Ljubljana (Slovenia) non-individual payment caused that only 20% energy was saved on heating, instead of planned 50% because of behaviour of individual flats/tenants.
- **Mr. Mario Perković (Koprivnica, Croatia)** presented the experience with land management through the Business Zone to be developed on municipal area, aimed at stimulating entrepreneurship and avoiding deterioration of existing facilities in the area, where municipality buys off the land and invests in land development and infrastructure, deciding on suitability of interested buyers. However, no specific EE-requirements are posed on entrepreneurs yet, but energy efficiency aspects are found in site functionality (maximum use of space, green buffer zones), and sustainable mobility scheme (restricted individual traffic, public transport on site, parking management to reduce pollution). The same principles will be applied in new residential zones. He also presented the successful public transport/ management scheme - a well developed cycling tracks system throughout the town, with 2.5m per citizen (European Mobility Week Champion).
- **Mr. Abraham Lehel Antal (Romania)** presented the Romanian National Thermo-Rehabilitation Programme through the case of Sfântu Gheorghe municipality, where 18 flat blocks (410 apartments) were thermally refurbished through a Public Procurement procedure, financed equally by the Ministry of Regional Development and Housing, Local Council, and Owners Association, at a costs of 1.3 million EUR, while expected heating cost savings are 20%, with a return of investment in 6-7 years. The Ministry plans renovation of 22,000 more apartments in 2009 under the same programme, for which 50 million EUR has been secured from the State budget. The current energy consumption (heating) ranges from 180-240 kW/h, and the goal is to get under 100 kW/h. The apartment buildings can join the programme through Owners Association, provided that there is consent from at least 51% tenants. However, challenge is for the owners to cover their part of the costs; although the distribution of costs is made according to flat size, costs to repay the investment are high (cca 1.000 EUR).

The many mentioned examples are signals that refurbishment is still a big issue in CEE on a large part of housing stock that is so energy-inefficient (not only new housing).

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Discussion in small groups - *Energy efficient housing estate planning possibilities in municipalities: Challenges and possible solutions*

Based on cases/experiences presented during the workshop, the task for small groups was to think about possibilities to influence behaviour of investors in municipal territory, either by applying/enforcing standards and/or legislation, or by imposing certain requirements upon investors (private or public) even if municipality is not owner of the land in question. The municipal influence possibilities should be considered in the framework of following 5 general types of *steering instruments* for behaviour change at local level:

- Land ownership – e.g. land use or sale contracts
- Financial instruments - e.g. tax reductions, subsidies, grants
- Permitting – e.g. conditions in the permits, location permits
- Energy supply service – e.g. restricting some type of fuels, by-laws, conditions in contracts
- Regulation by physical planning – e.g. decisions, plans, general binding rules

The participants were divided in groups according to their interest in/experience with one of the 5 steering instruments, and discussed how to adapt it according to energy-efficiency requirements for housing estate planning at local level, how feasible they are in a particular country, and which potential obstacles can be expected in its application.

During the coffee break, participants had the chance to look at Country Poster Session, which included 5 best practice examples of housing estate planning at municipalities from Estonia, Latvia, Bulgaria, as well as graphical presentations of historical developments in physical planning legislation in the 11 project countries in relation to energy efficiency.

Results of the small groups discussions are listed below, according to 5 topics.

■ *Land ownership*

- *There is a variety of existing instrument types available, e.g. land price discounts, compensation fund, Public-Private Partnership, public involvement*
- *For municipalities it is a new tool, applicable but with obstacles that hinder the efficiency*

The discussions started from the example of Münster/Germany, and the efficient use of this instrument in planning. However, in CEE region, land ownership as instrument has been discussed at municipalities' level, but the municipalities frequently do not own land, and there is also lack of money for buying land and obtaining bank loans. However, some possibilities to avoid the money problem were identified, such as public/private partnership, successfully applied in Bulgaria in different municipality projects.

Finding the investors is also considered an issue, since time-consuming negotiation process is involved, as well as negotiating with private owners, especially in case of buying different pieces of land of different ownership: one person not wanting to sell can stop the whole process.

Still, some additional instruments could be implemented: discount of the land price, funds for compensation of the owners, involving the public in the decision-making process. Opposite to this, obstacles are created by complicated contracting procedures, new legislation not implemented or understood properly. The question remains: Planning is municipality's choice, but HOW?

■ *Financial incentives*

- *Instruments mainly at national government level, but local level at large do not see these as suitable for short term period, due to low municipal budgets*

Possibilities are seen in decreasing permit fees as incentives to implementing EE-projects (promotional measure rather than economical); reduction from land taxes, guarantee system against interest rate growth (Estonia); discounts for land prices (Netherlands), promotion of public-private partnerships where private developers could develop EE-project, municipality provides a guarantee for investment payback, while users pay discounted price for energy supply (NL); municipal co-financing of building renovation cost, municipal decrees on lower municipal fees (Croatia). However, public-private partnership options in CEE are still unused - rather vague conditions and long contracts that are difficult to uphold, municipalities missing the enforcement experts. Participants of the group did not support the idea to use the “stick method” (fines and charges) to promote energy efficiency measures implementation.

■ **Permitting**

- *It is the last step in building process and thus the effect very much depends on preconditions set in earlier stages, predominantly physical planning*

Generally the municipalities are issuing building permits, but more or less it's just an administrative procedure, a formality. Energy-performance part of the documents (which are submitted when applying for a permit) are generally derived from already existing national/local legislation, while building orientation and location depends on the area's detailed physical plan, so construction permits can not go against these. Physical plans and national legislation should support energy efficient and holistic planning from the start. Anyhow the group tried to identify some chances in permitting which could help energy efficient and holistic planning:

- „fee free for CO2 free” - buildings complying with certain EE criteria get permits free of charge
- the corresponding certificate could guarantee to the owner other tax incentives (e.g. reduction in property tax)

■ **Energy supply**

- *Tools include contracting obligations (use of energy source, owners agreements, program for energy saving), but the main obstacle is lack of trust that the investments are profitable*

Most suggestions were related to the process of contracting between municipalities/energy suppliers, house-owners and tenants.

- Type of contract in which the tenant is contractually bound to pay the fixed amount for the temperature upkeep in the flat. The house-owner is then motivated to lower the energy costs by raising the house energy standard.
- The municipality sells the building-plots with obligation for the client to build the houses with alternative energy sources.
- „Green energy“ – The energy supplier (mostly the electricity companies) buys up the energy from local sources (e.g. from small water plant, cogeneration units). The problem is mostly the preference of suppliers to fixed prices towards energy producers
- Contractual obligation to investors to use alternative fuel

Other opportunities include EE training programs in which trainers are paid from profits of the EE saving programs; motivation from previous successful projects; local heating plants (CHP); metering of consumption; subsidies for individuals.

Obstacles to applying these suggestion were found mainly in:

- lack of awareness
- lack of trust that the „green energy” investments will enable money savings in the long term
- interest of the energy suppliers (energy suppliers mainly focused on the profit)

■ **Physical planning**

- *Theory is in place, but the problem is lack of state overview/enforcement at local level*
- *Often there is disbalance between interests of investors and general public*
- *To increase the efficiency of implementation, awareness of public and municipal planners at municipalities needs to be raised*

Identified problems:

- urban development plans are general and don't require to provide energy efficiency solutions, and lack of clear „secondary legislation“ (guidelines and standards) for urban development planning
- state administration not actively involved in implementing state of the law and legal provisions at the level of local urban development planning
- weak legal tradition in dispute solving in urban planning, and unclear ownership of land due to historical reasons (nationalisation), plus a complex structure of the land ownership - large number of small scale landowners
- no clear rules or established legal practices in implementing common interest vs. private ownership in the field of land and real estate ownership
- people are not aware of the benefits of energy efficient urban planning or they lack basic understanding how it should be integrated into urban plans, as it is much more complicated to provide quantitative evidence of financial and environmental benefits of EE at the level of urban planning, than at individual building level
- local administration is acting in favour of investors, and far less supportive to individuals and groups that are proposing alternative EE-oriented solution, and to public in general
- lack of knowledge and capacities to manage public participation in urban planning

Recommendations:

- increase awareness raising on the importance of adequate spatial planning and how energy efficiency directly and indirectly affects life quality in municipalities;
- assure state administration support to local urban development planners by providing clear and precise standards and guidelines
- invest in capacity building (education, networking, support institutions) of the local authorities on EE spatial planning and housing, and integrating EE criteria in physical planning
- provide support to certain stakeholders (residents, small investors, NGOs) to understand the substance of the urban planning process and articulate their expectations and demands both by substance as well as according to the legal procedures (communication with EE experts and legal experts)
- provide support to local authorities to manage active public participation
- develop financial support schemes to (small) communities to develop urban development plans professionally and timely

- *A positive example* - master plan for Bratislava (Slovakia) claimed it's not possible to integrate EE in planning process. As a reaction, students of Technical University prepared an alternative master plan "Bratislava as a solar city" focusing on energy efficiency.

Conclusions and next steps

In summary of the event, Ms. Fammeler repeated the main points mentioned during the 2 days of lectures and working group discussions.

ENERGY-EFFICIENCY LEGISLATION IMPLEMENTATION AT LOCAL LEVEL:

- Although Directive 2002 is transposed in all target countries, implementation in many countries has just started, and municipalities do not yet have a clear picture on their role and duties; therefore experience exchange at international and also national level is a good tool.
- However, there are doubts that such pro-active role of municipality as presented for the town of Münster can be applied in many municipalities in CEE voluntarily.
- Public awareness raising activities are being implemented and seen as important; however, the incentive of a public opinion as being “modern” if having energy-efficiency targets is not yet a common tool
- Municipalities seem satisfied that a certification system has been established; however, it is important to stimulate further improvements recommended by the certificates

- The question if municipalities can set stricter standards than required by national law remains open – competition rules and market conditions are questioned - however, examples show that creative solutions can be easily found (land purchase and sale, energy efficiency programmes)
- Full time energy experts or information officers are most essential investment of a municipality.
- The 2006 Directive is too new to draw conclusions about implementation, not even transposed in all target countries; national regulations don't explicitly state the municipal role as “shining example”, therefore **the legislation alone cannot motivate municipalities to act.**
- Energy efficiency criteria for public procurement should be incorporated into national legislation to stimulate their implementation.

ENERGY-EFFICIENT HOUSING ESTATE PLANNING:

- There is an observed difference in using “planning” as tool to influence substantially energy efficiency at municipality - between Münster, that is considering various aspects into its development plan: location, construction technologies, energy source, supply of utilities etc., and CEE municipalities that seem to consider only height or density aspects
- Holistic (integrated) planning needs to be introduced further – therefore municipal pilot projects in INTENSE that will take into account holistic planning aspects could create frontrunners in CEE region
- Despite the needs to impact new development areas, e.g. new housing or commercial areas, the **energy inefficiency of existing building stock** is extremely high and amount for a large share of the total stock – therefore **refurbishment** of existing building stock is a very important issue for municipalities/countries to lower their energy consumption, and can probably reach much higher percentage of CO2 reduction.

Overall the event was considered a great success by participants. A number of applicable ideas were presented, and among the project partners there is a lot of experience and knowledge to share, and a lot of work to do in introducing energy efficiency principles into municipal planning and practice.

Next steps – project activities:

- Study visit on best practice examples for technical solutions (WP3), June 15-19, 2009, Germany – Hannover, Freiburg
- Inception report to EACI (WP1) end July 2009
- Seminar for coordinating partners on best practice adaptation criteria (WP3) in September 2009
- Study visit on best practice examples for holistic planning aspects (WP4), Sept 28 - Oct 03, 2009, Germany – Hannover, Frankfurt
- Next INTENSE partners meeting (WP1) - Oct 14-16, 2009, Riga

The event closed at 13.15 on Friday, April 24. Sightseeing tours to the nearby Moravian karst caves and to Brno were organised in the afternoon for the interested participants.