

Minutes

Subject	Seminar: Modern, energy efficient buildings: new construction and refurbishment
Place	Riga
Date	13 - 14 December 2011
Reporter	Maria Zhevlakova

About this report

This report gives an overview of the seminar/expert meeting, which was organised by the partner consortium BEF Latvia, BEF Germany and BEF Russia (CTC-SPb) on 13-14th of December, 2011, in Riga.

The main objectives of the event were:

- to introduce, share and discuss technical, financial and legislative issues of best practices of increasing residential buildings energy efficiency, using the examples existing in Riga;
- to strengthen network of the specialists from Russia, Germany and Latvia and to assist their further cooperation.

General feedback from the participants

The seminar program received a very positive immediate feedback and also very positive comments in one-two months after the seminar.

The participants noted a number of highly useful and emotionally positive features, such as:

- Perfect organisation and clear structure of the program;
- Friendly and supporting environment;
- Very practical and applicable content of the presentations
- Opportunity to network, both with Latvian and German experts and members of the Russian group.
- Good and useful hand-outs.
- Balance between site visits and presentations.

#1 Site visit: New energy efficient multi storey dwelling house (Vienibas gatve 192)

- received award of the very energy efficient new building of 2010 in a competition organised by Latvian Ministry of Economics, Latvian Ministry of Environmental Protection and Regional Development and magazine "Latvijas Būvniecība"). More information see in the Annex 1.
- Main interest of the participants to this site referred to the technologies used and the pros/cons of managing such a house comparing with others.



#2: Presentation Main principles of energy efficient planning – from planning to passive house

- There were some questions about technical aspects of the refurbishment of the houses. For example, the participants asked about the ventilation systems in the houses refurbished by IWO and whether heat recuperation is in place.

#3: Presentation Easy method to evaluate buildings taking into account ecological, economic and social aspects

- The presentation of this method based on Excel tables was introduced and received an interest and positive feedback by the participants. The participants asked about the approach to building evaluation: what is the maximum score and whether this reflects the ideal state of the building.
- The explanation by BEF expert: "It is close to impossible for the building to get a highest score, which counts 80. This tool is developed to make an energy performance of the building easy to understand and visual. The tool uses different colours to mark problematic zones (red) or issues or the areas/issues which are in good conditions (green). This is very helpful for decision makers, so that they can judge where the effort is to be made, and see how the red spots turn into green ones after taking measures. The data can be uploaded by any person, who is familiar with the condition of the building. The evaluation programme can be used to make this information available for all inhabitants and owners. This tool can be also used for refurbishment project evaluation and comparison, as the tool helps visualize and prioritise the measures.

#4: Second site visit and presentation: Good practice example of refurbishment of existing building increasing its energy performance in Riga at Rigondas gatve 7

- This part of the seminar program was not only highly appreciated by the participants, but also created a good basis for further cooperation.
- The presentation of the innovative insulation material, which was used for the building refurbishment, was particularly interesting for the participants.
- A follow-up visit of a material producer to Kirovsk municipality (Leningrad region) was organised in January 2012. Managing company "Olga", Kirovsk municipality and the company which was involved into building refurbishment started negotiations about possible cooperation and application of the presented technology in Kirovsk.



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- Following the site visit, a presentation illustrates some more specific issues about this example. During the discussion afterwards, some questions were raised:
- 5 • Q. *How is the amount of heat consumed distributed among the inhabitants?* A. heaters in apartments are equipped with meters and regulators. 30% of billed energy is calculated according to the actual consumption (by allocators), and 70% - by average consumption divided to square metres of the apartment.
- 10 • Q. *What solution was applied to modernization of ventilation system?* A. We could not complete the modernization of ventilation, as there is an improper installation of the panels, and some the ventilation shafts do not match. Probably, it was worth installing the new windows with micro ventilation, but they are more expensive and we could not afford them.
- 15 • Q. *How did the inhabitants react to the suggestion to invest in refurbishment of the building? Did any of the people refuse?* A. It was difficult to convince the people that the refurbishment is for their common benefit. However, we were lucky, as all the inhabitants know each other and there is a basic trust between the people and there is a manager. We organised several meetings and discussed the terms for loan. Everybody supported. An important issue is that the people have to learn to use the building properly after it has been refurbished. Special effort should be made to teach the inhabitants. Sometimes this process can take up to three years.

#5: Presentation Organisation of building refurbishment process in cooperative association of flat owners “BĀKA-2”

- The presentation was focused on the automatic real-time metering of energy consumption, which allows good energy management, avoiding peaks in consumption and preventing accidents.

#6: Presentation Cooperation between various stakeholders in order to increase energy performance of buildings

- Most of the questions by the participants referred to the Latvian rules, requirements and practice of energy auditing for the houses.
- Mr. Golunovs explained the seminar participants, that according to the EU legislation, all buildings where the owners are being changed, or which are included into refurbishment plans are obliged to make an energy audit. However, Latvia has not adopted this legislation yet. A main driver for the Latvian building owners to complete the audit is that the audit report has to be submitted to obtain a bank loan for refurbishment. This is especially relevant where the building owners want to apply for EU funding.
- The Russian participants of the seminar were very much interested in finding out more about ESCO contracts in Latvia and how they work.
- The expert explained that there are no real examples of energy service contracts working in Latvia yet, but there is a belief that energy service companies will develop, and the contracts will be in place, and this process will be aligned with increase of prices for energy.

#7 Presentation Introduction to the project „Increasing energy performance of buildings in North-West Russia”

- No further discussion was raised from this discussion

#8 Working groups: “How to increase energy performance of existing buildings in St. Petersburg in the nearest 10 years?”

The participants discussed the ideas and opinions about various issues of increasing energy efficiency. The summary of this discussion is given below.

How to improve energy efficiency by residential buildings in North-West Russia?

1. What we don't have to do:
 - Hope that somebody else will come and solve everything.
 - Subsidise energy
 - Build unrealistic hopes and forecasts, formulate unclear targets.

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- 2. What can be done:
 - Demonstrate real costs of energy;
 - Improve information dissemination and educate various target groups.
 - Comply with legislation.
 - 5 • Give more freedom in decision making to the premises owners.
 - Share best practices and successful experiences by specific buildings and municipalities.
 - To implement pilot show case project in each district, to inspire others.
 - To develop a detail step-by-step instruction for association of flat owners.
 - 10 • To lessen bureaucratic obstacles and to ease the process of getting permissions and agreements from the authorities.
 - To stop wasting energy where the energy is not needed.
 - To improve a dialog between citizens and authorities.
 - 15 • To improve transparency and accountability of the policies.



Working groups



20 Presentation during the event

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Description of the building visited during the first site visit “Dienvidu pakavs 2”.

In 2011 the building “Dienvidu pakavs 2” received the award of “The very energy efficient new multi-apartment dwelling house 2010” in Latvia. The competition was organized by the Latvian Ministry of Economics, Latvian Ministry of Environmental Protection and Regional Development and magazine "Latvijas Būvniecība".

Address	“Dienvidu pakavs 2”, Vienības gatve 192, Rīga, Latvia	
Project developer	“Pilsētņēmēju institūts URBAN ART” Ltd., www.urbanart.lv	
Total investments	17 142 857 EUR	
Construction finished	In 2008	
Total area	17 224 m ² (including garage and balconies)	
Total heated area	13 926 m ²	
Total area of flats	10 026 m ²	
Windows	Wooden frame	
Walls	Ferroconcrete load bearing walls and ceilings; 250 mm ceramic blocs KERATERM (http://www.lode.lv) blocs used for outer walls	
Insulation	<ul style="list-style-type: none"> • Walls of ceramic blocs are insulated with 80 mm rock wool PAROC boards • Ferroconcrete walls are insulated with 100+50mm rock wool boards • Bathrooms located at outer walls additionally insulated from inside with 50mm rock wool boards • Cellar (depending on location) is insulated with 100+50 mm or 80 mm or 100mm rock wool boards Outer walls of the cellar are insulated with extruded polystyrene insulation boards (XPS) 70 mm (above the ground surface up to the depth of 1.2m) and with 50 mm (below 1.2m depth).	
Energy consumption of the house	For heating: 42.0 kWh/m ² /year For hot water: 9.9 kWh/m ² /year For hot water recirculation 17.9 kWh/m ² /year	

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Energy supply	Central district heating “Rigas Siltums” Temperature of heat carrier 118/70-80/60°C Modern, efficient 2 pipe heating system. Heat cost allocators in each flat allowing assessment of individual heat consumption.	
Ventilation	Mechanical, automatic pressure regulation. Incoming fresh air to bathrooms is organized through controlled opening in the outer wall connected to radiator. In each flat there are temperature and humidity measuring devices.	
Hot water supply	55°C	
Project description	<ul style="list-style-type: none"> • Multi-apartment residential building, Individual project, U shape, 9 sections, 4-7 stores, internal yard and playground. Flats in the upper floors have wide terraces. Wide staircases, elevators from ground floor up to 7th floor. • Ventilated facades using TRESPA METEON Satin Antracite Grey finishing plates. http://www.baltimex.lv/?page=frameset 	
Public procurement	Green public procurement has been applied including environmental criteria for purchases of construction elements and lighting,	
More information	Laimdota.Snidere@UrbanArt.lv	

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