International Seminar:
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Multi-family Building Energy Efficiency in Latvia:
Experience and Future Opportunities

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The Seminar was organised in the framework of a Baltic Sea Region NGO Cooperation Project. More on the project: [http://www.inforse.org/europe/se_buildings_project.htm](http://www.inforse.org/europe/se_buildings_project.htm)
MULTI-FAMILY BUILDING ENERGY EFFICIENCY IN LATVIA: EXPERIENCE AND FUTURE OPPORTUNITIES

Kristaps Zvaigznītis

Building and Energy Conservation Bureau - ESEB
WHO WE ARE AND WHAT 20 MINUTES WILL COVER

- Who we are?
- Latvian multi-family building stock
- What is deep renovation?
- SUNShINE project
- The value of stakeholders working together
WHO WE ARE?

We advocate on behalf of residents:

• Our goal is to ensure citizens with long-lasting homes: safe, healthy and warm
• Only possible with deep renovations
• Proposed solution: Energy Performance Contracting (EPC)
LATVIAN MULTI-FAMILY BUILDING STOCK

In total 54,5M m²
RENOVATION RATES AND FINANCING IN LATVIA

- **2009-2013** EU funds were available – up to 50% grant
- **740** implemented projects (average savings 40%)
- Total EU funds financing - **63M EUR**

- **150M** for next period 2014-2020:
  - Up to 50% grant
  - Energy consumption for heating <90 kWh/m² year
  - Renovated ~1700 buildings
WE HAVE TO ACT NOW!!!
HOW TO SAVE OUR HOMES?
DEEP RENOVATION

Building fabrics
Roof
Windows and doors
Space heating and domestic hot water
Balcony and loggias
Staircase and entrance repair
Ventilation system
Integration of renewable energies
Even if residents could do something, this is what they (and you) face
Owners are right and have the right: they need guarantees

- LT Safety
- Health
- Affordability
- Comfort

Guidelines

Quality
ENERGY PERFORMANCE CONTRACTING (EPC)
HOW DO 15 BUILDINGS DO OVER 6 YEARS?

The diagram shows the energy consumption in kWh/m² year for different buildings over 6 years. The categories include:

- **Space heating**
- **Circulation losses**
- **DHW (Domestic Hot Water)**

The buildings listed are:

- Ex-ante 13 Gaujas Street Valmiera
- Ex-post 31 Kovarnu Street Cesis
- Ex-ante 6A Caunas Street Cesis
- Ex-post 17B Saules Street Cesis
- Ex-ante 8A Viestura Street Cesis
- Ex-post 10A Viestura Street Cesis
- Ex-ante 5 Vilku Street Valmiera

The energy consumption data is represented in the chart for each category.
AND WHAT WOULD HAPPEN WITH SCALE?

Soviet Era buildings renovations industrialised

Decreases in costs due to:

- scale
- repetition and industrialisation
- grouped purchasing
- decreased transaction costs
- lower financial costs
SUNShINE

Save your building by saving energy

Towards 202020 m² of deeply renovated multifamily residential buildings
FINANCIAL MECHANISM

Apartment Owners

1-3 years

3 – 20 years

EPC providers

Equity
Debt

Investors
Banks

FUND - LABEEF

Equity
Loan

Investors
Development institutions/Pension Funds

FORFAITING

Execution Risk

Payment Risk
CHALLENGES

- COORDINATING ALL STAKEHOLDERS (POLICY MAKERS, RESIDENTS, POLICY MAKERS, HEATING COMPANIES, HOUSE MAINTENANCE COMP. ETC.)
- MAKE CHANGES IN THE BEHAVIOR IN LONG-TERM (raise awareness, brake the stereotypes)
- CHANGE THE TRADITIONAL BUSINES MODELS
WORKING TOGETHER –
THE CASCADE OF STAKEHOLDER BENEFITS

Citizens and stakeholders:
• Solving the housing crisis: 4 guarantees for 15-20 years: heat costs reduction, healthy microclimate, quality and comfort
• Building lifetime extended by 30-50 years
• Property values rise
• Lower liabilities

Project promoters / builders:
• Continuous work flow for the next 20 years
• Skilled Workforce
• Knowledge and models for export
WORKING TOGETHER –
THE CASCADE OF LOCAL AND STATE BENEFITS

Municipalities:
• Well-organized, attractive and safe urban environment
• jobs => return people who have moved
• additional taxes

Country:
• Pensions funds stay at home
• Energy security
• economic development
• Reduction of CO2 emissions
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