



REMOVING BARRIERS TO RESIDENTIAL ENERGY EFFICIENCY IN CENTRAL AND EASTERN EUROPE

FINANCING HOUSING RENOVATION IN LITHUANIA

WORKSHOP

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Ukraine

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BASIC FACTS ABOUT THE LITHUANIAN HOUSING

- ❑ more than 800,000 apartments;
- ❑ more than 38,000 multifamily buildings;
- ❑ average space heating intensity - 160 kWh/m²/ degree-day

Major imbalances:

- ❑ **Tenure:** 97% private, only 3% municipal rental stock
- ❑ **Standards:** most in poor condition, lack of proper management
- ❑ **Problems:** inefficient heating systems and engineering equipment, bad quality windows, roofs, seals between panels

Energy Efficiency Housing Pilot project

(initiated by the Lithuanian Government and World Bank)

- ❑ Provision of loans for technically and economically attractive packages of energy efficiency measures
- ❑ Development of energy consulting services
- ❑ State support to low income families
- ❑ 30% state grant

Results:

- ❑ Renovated more than 730 multifamily buildings;
- ❑ Invested more than € 20 million
- ❑ Average comfort adjusted savings of 24 %
- ❑ Annual savings in all renovated multifamily buildings around 100 GWh worth € 3 million
- ❑ Annual reduction of CO₂ emissions of 21,500 tons



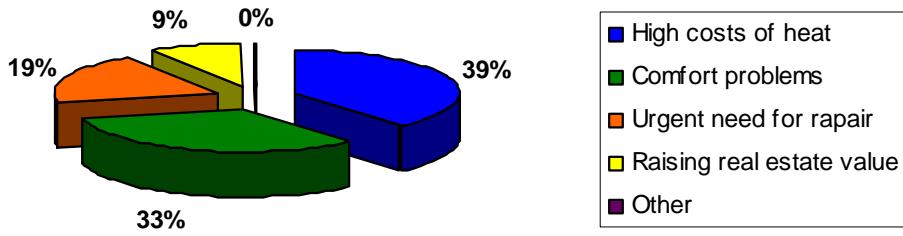


MEASURES

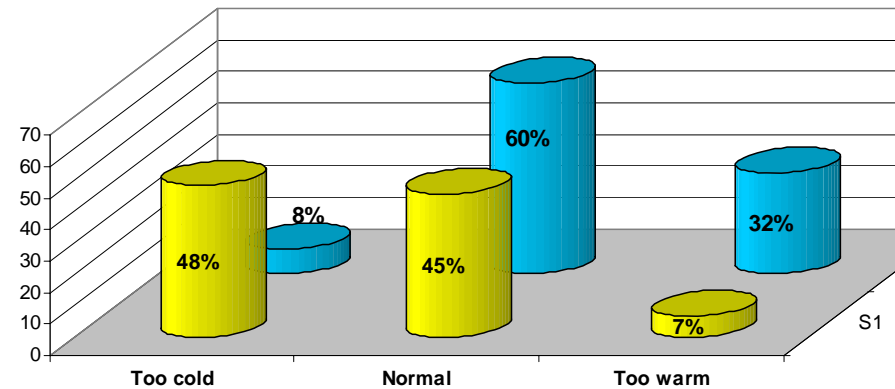
- ❑ Targeted information campaigns on energy efficiency opportunities in multifamily buildings (special project newsletter distributed via direct mail, TV, radio, conferences and special trainings);
- ❑ Five regional advisory centers of Housing Agency consulting homeowners on technical, legal, financial and organizational issues and assisting them in all stages of the project;
- ❑ Comprehensive capacity building program for energy consultants.

MONITORING RESULTS OF 100 RENOVATED BUILDINGS

Incentives to implement energy saving measures



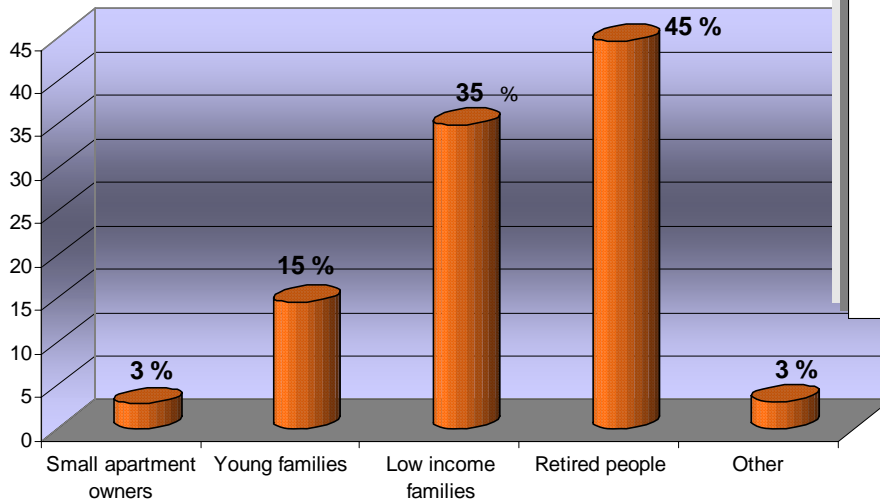
Thermal comfort in apartments before and after renovation



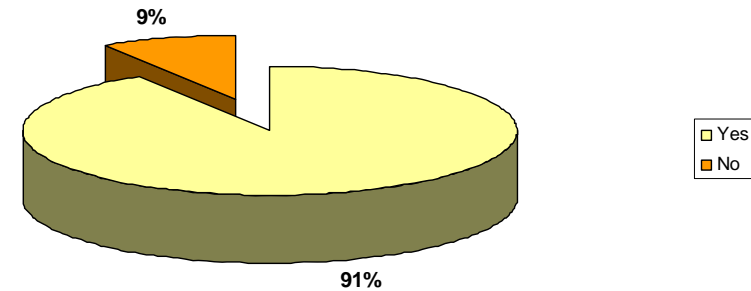


MONITORING RESULTS OF 100 RENOVATED BUILDINGS

The most hesitating household groups regarding the EEHPP loan



Would householders recommend other HOAs to take the EEHPP loan





FINANCIAL AND SOCIAL ASSESSMENT

- ❑ Average simple payback period for 100 monitored buildings amounted to 10.5 years;
- ❑ More than 60 percent out of 250 surveyed families indicated that loan repayment represents an insignificant or negligible burden on their family budgets;
- ❑ No defaults, as of October 2005;
- ❑ 56% of the surveyed families indicated reduced expenditures for heat, 48% improved indoor comfort, 30% improved building appearance.

Reduction of the bills for energy \approx loan repayments + increasing comfort



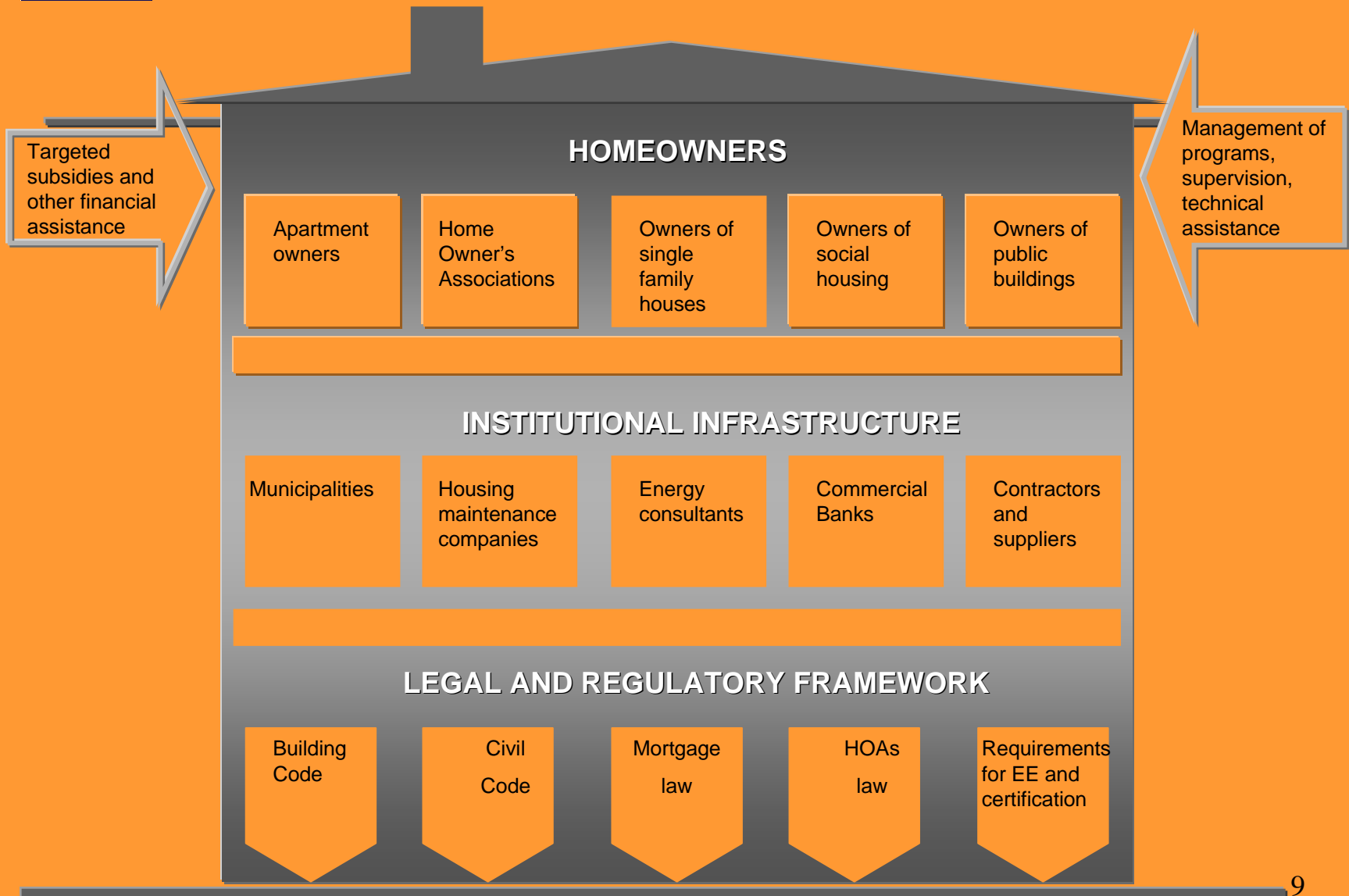
LESSONS

The EEHP project success required integration of:

- ❑ tailored legal framework allowing homeowners associations to obtain loans without mortgage;
- ❑ affordable financing consisting of the long term loan and the state grant;
- ❑ comprehensive support via regional advisory centers of Housing Agency;
- ❑ enhanced public awareness of energy efficiency opportunities;
- ❑ improved services of local energy consultants.

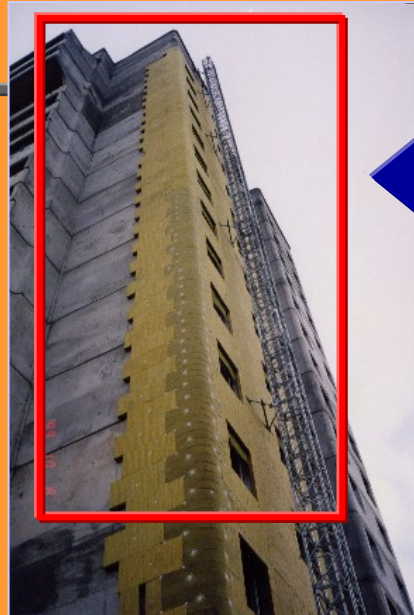


HOUSING ENVIRONMENT





SUCCESSFULLY IMPLEMENTED PROJECTS



220,000 €

Wall insulation, roof,
new windows, glazing
of balconies,
modernization of
heating substation

617 MWh/ year → 330 MWh/ year

Energy savings – 46%

Year of building: 1986

Number of apartments: 64

Heated area: 4864 m²

Investment - 45 €/ m²

SUCCESSFULLY IMPLEMENTED PROJECTS



205.000 €

Insulation of walls and roof, new windows, new heating substation, individual heat cost allocation system

Energy savings – 65%

439 MWh/year → 154 MWh/year

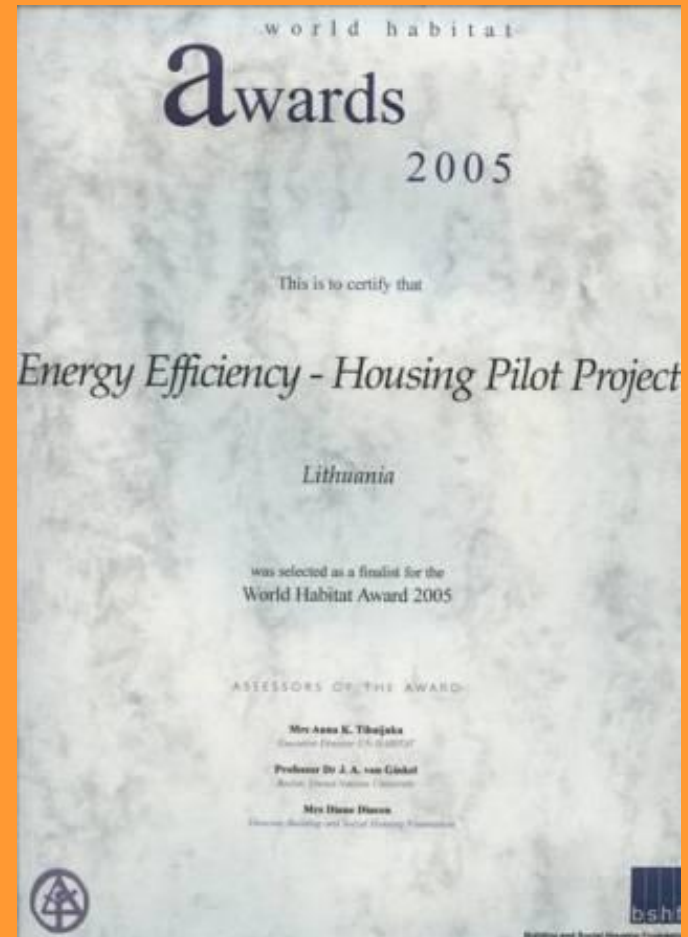
Year of building : 1972
Number of apartments: 60
Heated are: 3171 m²

Investment - 65 €/ m²

More information on
the EEHP project:

www.cpma.lt

www.bkagentura.lt





LITHUANIAN HOUSING POLICY

Lithuanian Housing Strategy

approved at January 21, 2004 by the
Lithuanian Government

English version available on website: www.am.lt

**Program for refurbishment of
multifamily buildings**

Approved September 23, 2004

**Program for social housing
development in 2004 - 2006**

Approved June 9, 2004

**Public information program on
housing policy for 2004 - 2006**

Approved October 18, 2004



PROGRAM FOR REFURBISHMENT OF MULTIFAMILY BUILDINGS

Implemented since 2005:

- Building evaluation and proposals (energy audit and investment proposal);
- Decision on the implementation;
- Financing by own funds or commercial loans without mortgage *(by insuring or guaranties provided by Insurance or Guaranty Companies)*;
- Implementation of modernization measures;
- State support to low income families *(by covering payment in advance and insurance fee, also by covering repayment of the loan and interest rate)*;
- State grant *(0%, 15% or 30% - depending on implemented energy efficiency measures)*.

Housing Agency is responsible institution for the implementation



PLANS IN THE NEAR FUTURE

	2006	2007
State support funds (planned) in mln. EUR	2,6	4,4
Renovated multifamily buildings (expected)	350	600
Investment (expected) in mln. EUR	13	20,3
Expected energy savings after modernization (GWh/year)	31	52,5
Expected savings of homeowners expenses for energy after modernization in mln.EUR/year	1	1,6



PLANS AND EXPECTATIONS

Amount of multifamily buildings renovated by implementing Energy Efficiency Housing Pilot project – 700 buildings with investment of 20 million €

Pipe line – more than 30.000 multifamily buildings with investment of 3 billion €

Expected results of the renovation until 2020:

- Renovated more than 70% of multifamily buildings build until 1994;
- 30% of energy savings;
- Annual savings around 1.700 GWh worth € 55 millions
- Annual reduction of CO₂ emissions of 365,500 tons