RETROFITTING OF HOUSING AND ENERGY EFFICIENCY MEASURES

EXPERIENCE OF LITHUANIA

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75% of EU’s housing stock is currently not energy efficient.

Vice-President of Energy Union
Maroš Šefčovič
THREE MAIN QUESTIONS

1. Why building renovation is so important in every country?

2. How to achieve the best result with limited resources?

3. What is the main reason for success?
Lithuania key statistics:
• Population – approx. 3 mln.
• 66% of population lives in multi family buildings built before 1993
  (> 38,000 multi family buildings and > 800,000 apartments)
• 97% privately owned, only 3% municipal rental stock
• 65% of buildings supplied by district heating system

Problems:
• poor Soviet construction standards and little maintenance
  – inefficient heating systems and engineering equipment
  – bad quality windows, roofs, seals between panels
  – huge energy losses
→ most buildings in poor condition, lack of proper management

> most of Lithuanian households are not satisfied with their homes
Main goals are:

Expand housing possibilities for all social groups

Ensure effective use of existing housing, maintenance, upgrading and modernization, including the national use of energy resources

Strengthen the capacity of the housing sector in the housing market

Approved at January 21, 2004 by the Lithuanian Government

English version available on the internet site www.am.lt

- Program for modernization of multifamily buildings (approved in 2004)

- Program for social housing development (approved in 2004)

The Programme aimed to:

- increase energy efficiency in multi-apartment buildings;
- ensure that cumulative annual heating costs and return on investment cost after the renovation do not exceed the heating costs which was before renovation.
There are two models for housing modernisation in Lithuania

1. Home owners on their own initiative prepare investment projects, take a loans and implement modernisation

*The main problems of this model:*
- lack of homeowners initiative
- fear to take a loan
- mistrust on the results after the upgrading
2. Investment projects are implemented based on the Energy efficiency programmes approved by the municipalities:
- investment projects are prepared on the municipality initiative;
- projects are implemented by the Programme administrator appointed by the Municipality;
- loan is taken by the Programme administrator;
- programme administrator organizing procurement, taking all the responsibilities on the implementation and financial management.
NEW PROGRAMME PARTICIPANTS

**National:**
- Ministry of Environment / Ministry of Energy/ Ministry of Finance / JESSICA Holding Fund, managed by EIB
- Housing Energy Saving Agency (HESA)
- Financial institutions administering JESSICA funds (selected by JESSICA Holding Fund managed by EIB)
- Central Procurement Office (CPO)

**Local:**
- Municipalities (Programme preparation, approval, appointment of Programme Administrator, supervision of implementation)
- Programme administrators (Housing Maintenance company or other responsible company)
- Engineering – consultant companies (Investment Project preparation, supervision of works)
- Contractors, Home-owners
LITHUANIAN SUCCESS FORMULA
SINCE 2013-1595 BUILDINGS RENOVATED
MORE THAN 2000 IN THE PROCESS
Some examples Mazeikiu str. 3, Vieksniai

Year of construction: 1980
Number of apartment: 12
Heated area: 601 m²

Implemented: central gas boiler, insulation of walls and roof, installed heat cost allocators
Investment: EUR 172,000

Energy savings: 79%, Class B
Building built in 1964.
Number of apartments: 101
Heated area: 5.671 m²

Implemented: insulation of walls, roof, windows replacement, glazing of balconies, modernization of heating system
Investment: EUR 608.000

Energy savings 70,14%
class B.
Some examples Marijonu str. 31, Panevezys

Year of construction: 1958
Number of apartment: 35
Heated area: 2525 m²

Implemented: central gas boiler, insulation of walls and roof, installed heat cost allocators, solar collector
Investment: EUR 384,000

Energy savings: 65%, Class B
Some examples Ozo str. 22, Vilnius

Year of construction: 1982
Number of apartment: 36
Heated area: 2305 m²
Implemented: insulation of walls and roof, glazing of balconies, windows replacement, modernized heating system (one pipe system into two pipes system, balancing)

Investment: EUR 326,000
Energy savings 68%, Class C
Year of construction: 1980  Number of apartment: 22  Heated area: 1227 m²
Implemented: central gas boiler, insulation of walls and roof, installed heat cost allocators, solar collector, heat pump
Investment: EUR 389.000
Energy savings 72%, Class B
WHY BUILDING RENOVATION IS SO IMPORTANT IN EVERY COUNTRY?

WHAT THE FIGURES SHOW?

Energy efficiency of buildings is a triple win!
Experience from energy efficiency upgrading projects in multifamily buildings shows that a combination of measures:

- replacement of windows and external doors,
- insulation of external surfaces: roofs and walls,
- modernization of heating substations and balancing of heat systems

reduce energy consumption by around 50-70 %.
2. GOOD FOR THE COUNTRY'S ECONOMIC GROWTH

- The energy efficiency Programme investment value more than **700 million Euros** (*JESSICA Holding Fund with private investment of commercial banks, State budget*);
- Currently renovation projects are implemented by **300** small or medium construction companies (creates new jobs);
- Investments in the renovation process is about **10%** of the total investment in the construction sector in the country.
3. GOOD FOR PLANET: LOWER CARBON EMISSIONS, RESOURCE CONSERVATION

- After modernization possibility to reduce energy consumption up to 50-70%.
- By implementing the Programme also are solved environmental protection issues (reduction CO² emission, urban environment, cities regeneration plans, etc.)

The analysis of implemented projects shows that after the building renovation savings are more than 100 MWh/year and reduction CO2 - 23.4 t.
2. HOW TO ACHIEVE THE BEST RESULT WITH LIMITED RESOURCES?
POSITIVE SOLUTION – FINANCIAL INSTRUMENTS!

- Continuity
- Re-use
- Attraction of private investments
- Multiplication of investments

Lithuanian experience
2007-2013 – first experience setting up Jessica for EE in residential housing, Jeremie for SMEs
2014-2020 – strategic focus on the continuation of established FIs and expansion to other sectors
Lithuania - one of the first countries in the European Union which uses the initiative of JESSICA for the improvement of energy efficiency in multifamily buildings.

JESSICA (Joint European Support for Sustainable Investment in City Areas) is an initiative of the European Commission in cooperation with the European Investment Bank (EIB) and the Council of Europe Development Bank (CEB) in order to promote sustainable investment and growth of jobs in Europe’s urban areas.
JESSICA Fund in Lithuania
2007-2013

Jessica Holding Fund (managed by EIB)

- Bridge Financing
- Contingent Loans

Urban Development Funds

- Repayments

Final Beneficiaries
- Individual owners of apartments
- Administrators
- Higher education institutions

Investment Committee

Housing and Energy Saving Agency
Grant and Technical Assistance

Signatures with Final Beneficiaries per source of
HOW THE JESSICA MECHANISM WAS SET UP?

Negotiations and signing of Financing Agreement with EIB to manage Investment Fund

EIB for 1st call for Expressions of Interest

EIB selects financial intermediaries

~ 9 months

4 months
FUND (EIB)

- 700 mln. Eur

Financial Intermediaries

- Maturity – 20 years
- Interest rate – fixed for the entire loan period at 3% p.a.
- Insurance – no loan insurance requirements
- Guarantees – no third party guarantee requirement
- Self-financing – bank may require a down payment (not more than 5%)
- Maximum monthly instalment – determined for each multi-apartment buildings

Standards of energy efficiency after upgrading

Technical support, administration

TS &A

Procurement

JESICCA HOLDING FUND MODEL
FUNDING CONDITIONS FOR RENOVATION OF MULTI-APARTMENT BUILDINGS

Energy performance certificates

- Majority of home-owners vote for modernisation **50%+1**
- Constructed before **1993**
- at least Energy Efficiency **Class C**
- **100%** of costs for technical documentation
- **15%** of modernisation costs if at least **20% of energy savings** achieved
- additional **20%** if energy savings **40%** achieved (Climate Change Programme support)
- **100%** of all costs for low income households
No additional payments to owners of apartments after the upgrading
No collateral, however:

Statutory protection mechanism which may have an effect of quasi-security:

- The loans **are included into the register of legal persons**;
- In case of sale of the apartment, under the law, the proceeds must **firstly be used to cover outstanding amounts of the loan**. This is ensured through notarization of the sale agreement;
- The payments under the modernization loans for the highest-risk final beneficiaries (**socially disadvantaged persons**) are 100% covered by the State.
HOW IT WORKS FROM BENEFICIARIES SIDE?

Financial mechanism. Process

- State support
- EC after refurbishment
- Contractor works
- Technical project
- Technical supervision
- Investment plan
- EC before refurbishment
- Preliminary proposal
BIG DISAPPOINTMENT: THE PROGRAM DIDN’T FLY…

- Chronic distrust of population in Government;
- Failed public relations program;
- Apartment owners poorly organized;
- Large share of owners on fixed income;
- Many low income people were eligible for heating bill compensations, and had no incentive to join the program.
WHAT NEXT IN 2014-2020?

2007-2013
- MoEn / MoF
  2007-2013 JESSICA
- EIB
- Financial intermediaries

2015-2016
- MoEn / MoF
  2014-2020 TRANSITIONAL INSTRUMENTS
- Managers of financial instruments

2016-2020
- Fund of funds – Legal entity
  - First loss capital
  - Funds of investors
- Financial intermediaries
- Fund manager
  - Investors: Pension funds, banks

PROJECTS
DESIGN AND SET-UP

2007-2013 Jessica Holding Fund
• Enabled efficient management of multiple Financial Intermediaries and managed to attract private financing
• Considered to be a success, with demand for financing outstripping supply
• Strong momentum has been established with the project pipeline continuing to expand

• 2014-2020 Jessica II Fund of Funds
  • Guaranteed continuation of the governmental programme and existing project pipeline
  • Attracted more financing from the Financial Intermediaries

• 2014-2020 Leveraged Fund
  • A guarantee financial instrument structured to attract additional funds from private sources
  • Expected leverage of 1:5
Fund of Funds Lithuania (2014-2020)

- *Ex-ante* finished in December 2014.

- Continues objectives of JESSICA Holding Fund in the new 2014-2020 programming period.

- Fund of Funds established in **May 2015** with **EUR 150m** of ESIF funds – EIB’s first mandate for DFIs.

**1st and 2nd Selection Procedures results:**
In total **EUR 178m** of ESIF and pre-financing signed with Šiaulių bankas
Up to **EUR 120m** under negotiations with the FIs

**Results as of September 2016:**
550 projects (circa 13,200 households) signed for
EUR 147m and circa EUR 92m disbursed
JESSICA HOLDING FUND IN LITHUANIA FOR SUSTAINABLE INVESTMENT IN CITY AREAS

Environmental
- Stimulate sustainable development, reduce energy pollution

Social cohesion
- Contribute to higher quality of life and public environment

Economic
- Generate substantial savings of households in the medium term
PERSPECTIVES- INOVATION AND HIGHER ENERGY EFFICIENCY CLASS
In order to the Energy efficiency improvement programs to include not only the renovation of separate houses or public buildings, but also upgrade the entire neighborhoods and their environment, as well as infrastructure, in the near future it is expected quarter renovation project.
IT IS GOOD IDEAS, BUT IS IT POSSIBLE TO DO?

Whether you think that you can, or you think you will not be able to do, both options are correct.“

Henry Ford
3. WHAT IS THE MAIN REASON FOR SUCCESS?
REAL COOPERATION WITH MUNICIPALITIES

Partnership and team work is the main condition for success.

Local and regional authorities are the key players where theory is moving to practice, place there legal requirements becomes practical actions with visible results.
Suitable financial instrument/model:

- No additional payments to owners of apartments after the upgrading (energy savings 40-70%);
- 100% of all costs covered for low income households;
- If low income households vote against renovation they take away compensation for heating.
- No collateral is required.
Optimism is the best Way to see life
I am an optimist. I have no ideas what is the reason to be something else.

Winston Churchill
THANK YOU VERY MUCH FOR YOUR ATTENTION!

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