Energy Saving Measures in Residential Buildings in Bulgaria

Financing Energy Efficiency Seminar
Brussels, 6 November 2012

Bulgarian Housing Association
Bulgaria brief

- Territory – 111,000 m²
- Population – 7.4 million
- Sofia – 1.2 million
- 73% urban population
- EU member since 2007
Housing stock status

✓ Total dwelling stock 3887.076 (2011)
   74.6% inhabited, 24.7% uninhabited, 66% in cities, 65% in multi-storey apartment buildings
✓ 97.5% owner occupied, 2.5% municipal rentals
✓ Availability
   1.9 inhabitants per dwelling, 18.1 m² living surface per capita
   491 dwellings per 1000 inhabitants
✓ Affordability
   Share of housing costs in disposable income 18.4%
   Total housing cost in Purchasing Power Standard 165.6
   Residential Mortgage dept to GDP ratio index 12.6%
Housing dynamics
Energy quality

- 65% of the housing stock built 1950-1990
- Average energy consumption 150-300 kWh/m²
- Large amount (12,000) of prefabricated multi-story buildings in deteriorated condition containing 800,000 dwellings in 120 residential estates
- Insufficient housing stock maintenance
- Urgent need for renovation and upgrade of energy efficiency status
- Current renovation rate under 1% of existing stock
A sample large housing estate

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The Passive Tree House in Varna
National policy

- National Housing Strategy (2004)
- National Program for Renovation of Condominium Housing Stock in Bulgaria (2005)
- New Energy Strategy of Republic of Bulgaria until 2020 (June 2011)
- National Action Plan on Energy Efficiency (2011-2013) aiming at 3% reduction of the end energy consumption for the period
- National Long-term Program for Energy Efficiency until 2015
- National Action Plan for the Energy from RES
National legislation

- Condominium Law (2009)
- Law on Energy Efficiency (2008) which improves the certification process based on the experience from the last five years
- Law on Energy from Renewable Sources (2011)
- National Information System for Energy Efficiency
- Secondary legislation regulations with ordinances
  - Indicators on energy consumption and energy performance of buildings
  - Conditions and procedures for energy efficiency assessment and certification of buildings
  - Energy efficiency, heat conservation and energy retention in buildings
  - Regulation for technical passport of buildings

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Incentives and subsidies

- Exemption from property taxes for owners of buildings with certificates A&B categories as per Energy Efficiency Law
- Programs for subsidizing of energy efficiency audits
- EBRD Credit line for energy efficiency in households (REECL 1&2) with 35% of subsidy on the chosen renovation measures
- Operational Program Regional Development (2007-2013) – EU structural funds in support of the National program for energy efficient housing renovation with 50% of subsidy on the compulsory package of renovation measures (launched on 1st of July 2012)
Energy targets

✓ Foreseen energy performance level
  The level of energy efficiency renovation is prescribed by the existing legislation introduced in 2004 as transposition of EPBD. The package of renovation measures mostly concerns the building envelope and the building systems. Renewables are rarely included.

✓ Foreseen energy performance level
  According to the existing legislation the expected level of energy efficiency level for the housing renovation activities is 100kWh/m² per year.

✓ Current status of energy performance certification
  The total number of issued certificates by the end of 2010 is 1,102 after an auditing process of 12 million m² floor area of which less than 50 are for residential buildings.
Bottom-up driven refurbishment activities
The first pilot energy efficient refurbishment of condominium housing in Bulgaria
“Ad-hoc” renovation activities

- Energy efficiency renovation activities for the insulation of separate building parts by the apartment owners
- Wasting of scarce resources
- Prevention of further renovation activities at the scale of the entire building
Market driven renovation
Zahama Fabrika pilot project

✓ Project approach
Flexible, bottom up oriented, end-users friendly and managed by specialized non-governmental organization, 50% energy savings, Certificate for energy efficiency category A

✓ Financial scheme
Renovation costs covered by energy savings for heating afterwards, no increase of running costs after renovation, soft loan facility without subsidies, renting of the upgraded under roof space
Help with European funding
Subsidised schemes for energy efficient refurbishment of housing stock in Bulgaria
SHELTER project

Financing model

- 60% of the building design drawings and the building envelope insulation costs were covered by a subsidy from the state budget. The remaining 40% were covered by the apartment owners.

- 80% from the RES costs were covered by EU FP6 Concerto program. The remaining 20% were covered by the apartment owners.
FRESH project

Obstacles preventing the application of EPC in the energy efficient refurbishment of condominium housing in Bulgaria:

☑️ Potential EPC partner is ready to get involved in covering only a part of the total renovation costs of a comprehensive refurbishment program based on EPC (building systems plus insulation of building envelope)

☑️ Companies would like to cover the building system costs (1/3 to maximum of 50% of the total costs)
Financial feasibility

The remaining costs to be covered by:

✓ Own resources/loans available for homeowners – in the majority of cases it is hard to expect that homeowners will secure the necessary own funds/loans due to a great diversity of income level of residents in condominiums – non realistic assumption

✓ Subsidy – several subsidy programs are targeted at the refurbishment of condominiums up to the extent of 50% of costs – the only working scenario
Current financing opportunities

The opportunities for subsidised co-financing tools from the European institutions that can be used in combination with EPC in renovation schemes in Bulgaria are:


✔ REECL 2 Housing Refurbishment Credit Facility offered by EBRD
OPRD – EU Structural Funds

Ruling authority - Ministry for Regional Development

25 mln EUR subsidy

6.5 mln EUR loans/guarantees

50% subsidy

Housing Policy Department

Guarantee Fund

50% guarantees/housing loans

50% renovation financing by HOA through loans/equity

Housing Renovation

Loan repayment

HOA

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Major obstacle

✓ The lack of sound legal entity representing the apartment building to be refurbished

This is the first activity, subsidized by EU Structural Funds that has to deal with a big amount of beneficiaries – the apartment owners. There is no tradition of properly functioning HOAs that are supposed to be the targeted beneficiaries. The newly introduced Condominium Law (2009) has not been applied in full potential and does not provide yet a sound practice for the establishment of HOA as a legal body at building level capable to manage refurbishment activity.
ESCO – a feasible solution

ESCO companies could act as beneficiaries for condominium housing refurbishment projects, subsidized by Structural Funds (OPRD) as follows:

- ESCO is signing EPC contract with HOA of the building to be refurbished provided that a subsidy is granted
- ESCO is covering renovation expenses by bank loan
- ESCO is implementing the renovation and is further managing the building until the EPC contract expiration
- Refurbishment subsidy is disbursed to ESCO after the renovation has been implemented and approved by the OPRD authority
ESCO participation advantages

- Established legal body capable to manage all stages of a multi-story housing refurbishment project
- Natural interest in control over the quality of executed renovation works
- Ability to raise in advance the necessary funds for refurbishment activities - credibility for lending/granting institutions and ability to collect own money back through EPC contract
- Capacity for a large scale renovation activities
Conclusions

✓ The problem with long payback period and problematic feasibility of the comprehensive refurbishment under EPC can be solved by subsidy support offered by the EU Structural funds.

✓ EPC could channel the utilization of Structural funds dedicated to refurbishment of existing housing in a simplified way allowing better control over efficiency of subsidy spending. Actually the homeowners remain the final beneficiary of the renovation subsidy disbursed through ESCO without being involved directly which would be difficult for a condominium homeowners’ association.
The application of this model should be accommodated with the experience gained in the implementation of EPC based models for refurbishment of condominium housing in Eastern Europe. Such experience can be observed in the practice of EBRD supported housing renovation activities in the Baltic states.

Housing management company (for the Bulgarian case its duties may be handed over to ESCO)

Relevant rules for utilization of EU Structural fund must be adopted by the Government allowing the inclusion of ESCO as a contracting party
Recommendations

The efforts of the public authorities should focus on the improvement of the legal framework in regard to the use of EU Structural Funds and other available subsidies for EPC based housing refurbishment:

- Improvement of PPP regulations allowing ESCO companies to act on behalf of HOAs as beneficiaries
- Amendments of Condominium Act and Taxation Act
Thank you for your attention!

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