MoREEFF: Financing Mechanism for Warmer and More Energy Efficient Moldovan Homes

http://moreff.info/
Outline:

I. MoREEFF Overview
II. Biomass Market in Moldova
III. Implications and Features of MoREEFF Biomass Projects
IV. MoREEFF Implemented Projects
V. Q&As session
MoREEFF Overview

- Sustainable Energy Financing Facility Targeting the Residential Sector;
- Creates Awareness among Participating Banks (PBs), Sub-borrowers, Installers/Technology Suppliers, Housing Management Companies, Housing Associations, Contractors, Developers, ESCOs;
- Develops Financing Skills of Sub-borrowers and PBs;
- Addressees:
  - National energy security;
  - Compliance with the objectives and priorities of the EU-Moldova Association Agreement and EU Energy Performance of Buildings Directive 2010/31/EU;
  - Improvement of economic competitiveness of Moldova;
  - Reduction in greenhouse gas emissions;
- Good Demonstration Effect and Green Credentials.
MoREEFF Structure

European Bank
for Reconstruction and Development

Credit line 35 mln. Euro

Financial Institutions

Investment incentives
11 mln. Euro

Beneficiaries (Moldovan Families)
MoREEFF Eligible Home Improvements

- Energy efficient windows
- Insulation of walls, roofs and floors
- **Efficient biomass stoves and boilers**
- Efficient gas boilers
- Solar water systems
- Heat pump systems (including air-conditioners)
- PhotoVoltaics
- Upgrading of building service systems
MoREEFF Application Process

**Step 1**
- Selection of technology, installer, bank

**Step 2**
- Loan application
- Loan approval
- Project implementation

**Step 3**
- Grant application
- Project verification
- Grant payment
MoREEFF in Numbers

**Total number of projects**: 1607 = 6.086.373 Euro

**Total amount of incentive grants** = 1.680.889 Euro

**Savings**: 13 072 MWh/y

**CO2 reduction**: 2 967 t/y
Key Drivers for Successful Implementation of Biomass Technologies

- Market of biomass technologies
- Demand for biomass
- Affordability and societal acceptance of new technologies
- Availability of financing
- Fuel producers and suppliers
Biomass Market and Technologies

• Moldovan market of biomass grows continually

• Local manufacturers of biomass-fired equipment has been established across the country

• The entire fuel supply chain is local

• 91 biomass equipment suppliers included in MoREEFF List of Eligible Installers

• 1,012 biomass-fired heating products approved in MoREEFF List of Eligible Materials and Equipments
MoREEFF Criteria for Biomass Technologies

• High-efficiency logwood stoves/ furnaces/boilers
• Size - 10-400 kW output
• Efficiency (based on LHV):
  Manual fed systems: >60%
  Automatic fed systems: >70 %
• Conformity Requirement:
  CE Marking
  Moldovan Building Codes and Standards
MoREEFF Implications for Biomass Market in Moldova

• Installer/Supplier eligibility criteria - select reputable and capable companies
• Technology eligibility criteria – stimulate the uptake of high performance biomass fired equipment
• Market price monitoring and project verification disciplines market actors and guarantees best deals for end-users
• MoREEFF marketing tools help sale points
• MoREEFF consultation and training contribute to the increase in quality of customer service and craftsmanship.
Sample of MoREEFF marketing tools
Societal Acceptance of Biomass in Moldova

- Brick stoves – traditional heating source in Moldova
- Transition from brick stoves to biomass boilers easily acceptable
- Biomass ensures autonomy
- Transition from gas fired systems (back) to biomass
- Accessibility of fuel (proximity of forests, supply points)
- Storage availability (ample covered and open space).
Demand for Biomass Technologies in Moldova

• At the moment – the cheapest fuel in Moldova
• Fuel available locally
• Quality of fuel is from medium to high
• Price for natural gas is increasing
• Demand for biomass fuel is increasing
• Natural gas supply network does not cover the entire country
• Biomass ensures autonomy and comfort
• In combination with other energy efficiency measures increases comfort and sustainability.
Biomass Fuel Price Evolution

Prices Evolution (MDL)

Source: Market study (internet announcements and telephone conversations)
Financing – essential for successful implementation

Consumers

Accessibility?

Loan

Incentive

EE Technologies (more expensive)
MoREEFF – a leverage for sustainability

- MoREEFF works closely with all key stakeholders:
  • Financial Institutions
  • Market actors (installers and suppliers)
  • Final beneficiaries
- Lending enhances affordability of EE equipments
- Grant from donors incentivise population to invest
- Market actors make the best use of the opportunities for marketing and promotion of high performance technology
MoREEFF Biomass Projects Peculiarities

- Biomass boilers are used for heating in family houses
- Average investment = 40,000 MDL (2,000 Euro)
- Chisinau, Balti – largest cities with FIs and Installers available
- Popular measure for both rural and urban areas
- Transition from traditional stoves to high efficiency pellet-fired boilers and stoves → *increase in energy efficiency from 20%-40% to 75% - 90%*
- In combination with other eligible measures (i.e. energy-efficient windows, wall insulation, solar heaters, fuel demand could be cut down by over 100%
Combination of MoREEFF Home Improvements

- Biomass boiler + Gas boiler, 15 projects
- Biomass boiler + EE windows, 3 projects
- Biomass boiler + Wall Insulation, 3 projects

MoREEFF
Distribution Map of Biomass-fired Systems Financed via MoREEFF (by number of projects)

Chisinau – 52
Balti – 11
MoREEFF Lessons Learned

• Commitment of all the key stakeholders proved essential for the successful implementation of MoREEFF
• Each actor of the chain shall obtain benefits
• Eligibility criteria serve as both filter and stimulator
• Verifications are good disciplinary tool
• The market for biomass technologies is relatively well established
• Biomass technologies are accepted and their efficiency is easy to calculate by common users
• Householders started to recognise the benefits of energy savings and improved comfort of living
• The demand for home improvements measures is increasing, incl. biomass technologies.
MoREEFF Implemented Projects

Windows replacement, Orhei
MoREEFF Implemented Projects

Biomass boiler, Chisinau
MoREEFF Implemented Projects

Biomass boiler, village Capriana, Straseni district
MoREEFF Implemented Projects

Wall and ceiling insulation, biomass boiler, village Cosernita,
MoREEFF Implemented Projects

Biomass boiler, Basarabeasca
MoREEFF Implemented Projects

Biomass boiler and heating system,
village Truseni, Chisinau municipality
MoREEFF Implemented Projects

Biomass Boiler, Singera
Questions & Answers

FACILITATEA DE FINANȚARE A EFICIENȚEI ENERGETICE ÎN SECTORUL REZIDENTIAL DIN MOLDOVA

CREDITE ȘI GRANTURI PENTRU MĂSURI DE ÎMBUNĂTĂȚIRE A EFICIENȚEI ENERGETICE DISPONIBILE PRIN BĂNCILE DIN MOLDOVA

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