
Energy Efficiency 21

Financing Energy Efficiency Investments for Climate Change Mitigation

Consultative Meeting in Geneva, 18-19th December 2008

Draft Reports on the Assessment Missions
Bulgaria - Moldova - Romania

Bulgaria

Mission held in Sofia on the 21-23rd October 2008

EE and RES identified activities

- Bulgarian Energy Efficiency and Renewable Energy Credit Line (*for industry, set up by EBRD in 2004*)
- Residential Energy Efficiency Credit Line (*for residential, set up by EBRD in 2005*)
- Bulgarian Energy Efficiency Fund (*loan, guarantees and technical assistance, set up in ppp in 2004*)
- Kozloduy International Decommissioning Support Fund

Public and private sector investors interest

- Ministry of Economy and Energy and Ministry of Finance welcome the UNECE initiative. Interested in future project developments (tender results).
- Public institutions and Private companies already active in EE and RES are interested in taking part in future project activities (*BEEF, Enemona,...*)
- Private sector and utilities:
 - large scope of activities for EE in industry and building stock.
 - typical project size envisaged for fund seems oversized for Bulgarian market.
 - interest for equity financing in Bulgaria but mostly for RES projects.

Regulatory framework

- EE is a matter of high priority at national level.
- Primary and secondary legislation for EE and RES are developed.
- However, measures have been recently introduced in Bulgaria and relatively little is yet known in terms of impacts.
- Good opportunities to exploit indigenous RES but the current penetration of renewables is still very low. The feed-in tariffs are under revision.

Project development environment

- The country recovered from a severe economic and financial crisis in 1997.
- EE is still not a matter of great concern in industry. EE action plans may soon become mandatory.
- Large investments required in Municipal infrastructure to comply with EU environmental directives (well beyond financing capacity)

Financial environment

- According to the EBRD-World Bank Business Environment and Enterprise Performance Survey, in 2005, new investments in the corporate sector are mostly financed on internal funds (Internal funds: 65%, Formal borrowing: 21%, Equity: 0%)
- Commercial banks dominate the financial sector. Though growing in importance, the Bulgarian capital market and non-bank financial intermediaries remain underdeveloped compared to the banking sector.
- Specificities and interest of equity and mezzanine financing should be explained further to distinguish the fund from other financing mechanisms available.

EE and RES Investment Project Development skills

- Good technical skills exist in Bulgaria, both on energy efficiency and renewable energy issues.
- A number of organizations have participated in donors funded projects. Many of these projects have supported the capacity building of these organizations. Some ESCOs have been created.
- Beyond existing capacity to identify and assess potential EE or RES projects, the capacity to develop fully bankable project proposals, corresponding to financial institutions standards and practices, is rather restricted to a limited number of actors.

Equity and Mezzanine Business Development skills

- Capital market development faces particular challenges arising from banking sector dominance and finding local comparative advantages.
- Experience on Equity and Mezzanine finance limited
- Nevertheless, the mission showed that some country experts may have the ability to serve as project developers and intermediaries for fund managers

Moldova

Mission held in Chisinau on the 4-6th November 2008

EE and RES identified activities

- Little donors financing activity identified in EE and RES in Moldova.
- USAID has four completed projects, relevant with the UNECE project, and may share its experience
- EBRD is working of the implementation of a credit line dedicated to energy efficiency in Moldova, based on the experience of similar EE credit lines in Bulgaria and Ukraine.
- Several CDM projects are already implemented and several more are under preparation. Future UNECE project activities could be related to these CDM projects experience.

Public and private sector investors interest

- Ministry of Economy and Commerce and Ministry of Ecology and Natural Resources welcome the UNECE initiative. Interested in future project developments (tender results).
- Some public institutions and NGOs may be interested in taking part in future project activities.
- World Bank and the Swedish International Development cooperation Agency (SIDA) are interested in future project developments.

Regulatory framework

- However a primary legislation on EE and RES exists in Moldova, no secondary legislation has been passed yet.
- Energy efficiency legislation is more declaratory than operational. Economic incentives to stimulate EE actions have to be established.
- National energy policy is still focused more on the industrial than the residential sector
- Lack of financial and human resources to support the creation of an Energy Conservation Agency.

Project development environment

- Since 1990, Moldova has experienced a very difficult transition to a market economy.
- All sectors have big energy efficiency potentials. However, lack of financing and low energy prices (not reflecting costs) is a barrier for EE measures by all types of consumers.
- In current conditions, it may be difficult to implement measures in Households and Public sectors.
- Lack of financing in Industry leads to a concentration on core business activity and little interest for energy efficiency investment opportunities.

Financial environment

- According to the EBRD-World BEEPS 2005, new investments in the corporate sector are mostly financed on internal funds (Internal funds: 72%, Formal borrowing: 15%, Equity: 0%)
- Banking sector:
 - Dominant in the financial sector, but still relatively small
 - Lack of product diversification and inadequate lending and crediting policies are limiting the efficient development of new banking services
 - Uncertainties in policy implementation by the authorities complicate bank operations, and increase costs.
- Capital markets on the whole are underdeveloped and shallow.

EE and RES Investment Project Development skills

- Some technical skills exist in Moldova, both on energy efficiency and renewable energy issues.
- Though the experts encountered showed good understanding and capacity on EE and RES issues, they experience shortness in financial and human resources to concretely implement actions.
- Institutional stability is required and the existing normative-legislative framework must be extended.
- The market conditions were not favorable for the development of energy service companies (ESCOs) in Moldova until now.

Equity and Mezzanine Business Development skills

- Liquidity on the markets is constrained by the absence of nonresidents investors. Capital markets on the whole are underdeveloped and shallow.
- No experience on Equity and Mezzanine finance could be assessed during the mission.

Romania

No mission in Romania
Assessment based on existing documentation

EE and RES identified activities

- Romanian Energy Efficiency Fund (REEF)
(loan and technical assistance, set up in 2004 with seed money from GEF)
- Romanian Industrial Energy Efficiency Company
(ESCO capitalized by EBRD, set up in 2003)
- Romanian Energy Efficiency and Renewable Energy Credit Line
(integrated package of loans, grants and technical assistance for industrial companies, set up in 2008 by EBRD)
- As a Member State of the EU, Romania also benefits from co-financing through structural funds.

Public and private sector investors interest

- No assessment mission could be made in Romania.
- Existing initiatives and regulatory framework suggest EE and RES is a matter of concern.
- One of the priorities since 2007 is the harmonization with the European Union's energy policy.
- However, initiatives may suffer from Romanian historic position as an energy producer.

Regulatory framework

- Romanian Agency for Energy Conservation (ARCE) created in 1990 and reinforced in 2000.
- Within harmonization process with EU legislation, EE is a matter of high priority at national level.
- Primary and secondary legislation for EE is developed. However, measures have been recently introduced and relatively little is yet known in terms of impacts.
- As Romania has significant fossil fuel resources (coal, oil and natural gas), the development of RES has not been a primary concern until now.

Project development environment

- Romania steadily converges towards the EU in income, competitiveness, and living standards, but the gap remains large.
- EE in industry has been promoted since 1991. However potential remains large.
- Residential sector has very high potential for energy conservation (35 to 50% of the sector TFC).
- Large investments required in Municipal infrastructure to comply with EU environmental directives (well beyond financing capacity)

Financial environment

- According to the EBRD-World BEEPS in 2005, new investments in the corporate sector are mostly financed on internal funds
(Internal funds: 70%, Formal borrowing: 15%, Equity: 0%)
- Experience from Romanian Industrial Energy Efficiency Company (RIEC) showed that Project finance was still not very well understood in Romania.
- Financing schemes are mostly on-balance sheet financing, or sovereign guarantees for large state-owned projects.

EE and RES Investment Project Development skills

- Experience suggest that good technical skills exist in Romania, both on EE and RES.
- A number of organizations have participated in donors funded projects. Many of these projects have supported the capacity building of these organizations. Some ESCOs have been created.
- However, capacity to develop fully bankable project proposals may be limited.
- Experience from RIEC showed lack of preoccupation and competence in EE project finance at local banks level (assessment procedures, application forms, etc)

Equity and Mezzanine Business Development skills

- Experience on Equity and Mezzanine finance limited
- Experience from RIEC showed a need for capacity reinforcement for EE project development and evaluation, both for project developers and bank officers.

Thank you

ICE - International Consulting on Energy
6, rue de Verdun
93450 L'Île-Saint-Denis, France
(+33) 1 49 22 00 64
ice@iceconsultants.com



Bulgaria Energy background

- Energy intensity of Bulgaria is nearly 2 times higher than the EU-27 average (Bulgaria: 0,32toe/1000\$_{ppp} in 2005)
- Industry is the greatest energy consumer, followed by transports and residential sectors (respectively 32%, 27% and 20% of the Total Final Consumption)
- Large part of electricity in final consumption; extended use of electricity for heating by residential and tertiary users.
- Modest hydroelectric resources; significant wind and solar resources; sizable reserve of geothermal energy.

Moldova Energy background

- Energy imports reach 98% of total consumption
- Energy intensity of Moldova is nearly 3 times higher than the EU-27 average (Moldova: 0,45 toe/1000\$_{ppp} in 2005)
- Residential sector is the greatest energy consumer, followed by industry and transports (respectively 40%, 21% and 15% of the Total Final Consumption)
- Energy consumption in industrial processes is high and energy losses are substantial.
- 75% of the dwellings in Moldova supplied by district heating systems but faces serious financial crisis

Romania Energy background

- Romania has significant reserves of solid fuels, petroleum and gas.
- Energy intensity of Romania is nearly 40% higher than the EU-27 average (Romania: 0,22toe/1000\$_{ppp} in 2005)
- Industry is the greatest energy consumer, followed by residential and transports sectors (respectively 33%, 31% and 17% of the Total Final Consumption)