



Strategic Elements to Enable Energy Efficient Building Sector

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Outline

- **UNECE FEEI project**
- **Legal and institutional frameworks:**
 - ✓ **Overview of existing policy frameworks**
 - ✓ **Barriers to investments in EE projects**
 - ✓ **Recommendations for policy reforms**
- **Energy Saving Measures**
- **Financial mechanisms to support EE projects:**
 - ✓ **Examples from national case studies**
- **Energy Efficiency Investment Fund**





Financing Energy Efficiency Investments for Climate Change Mitigation (FEEI) Project

Long-Term Objective:

Promote an investment environment for self-sustaining energy efficiency and renewable energy projects to be developed and financed to reduce greenhouse gas emissions

Activities:

- Source of financing with dedicated investment funds
- Institutional and policy reforms
- Trainings to help establish bankable project proposals
- Establishing network of energy efficiency managers

12 participating countries:

2 European Union countries: Bulgaria, Romania

5 South-Eastern European countries: Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Serbia

5 countries of Eastern Europe and Central Asia: Belarus, Republic of Moldova, Kazakhstan, Russian Federation, Ukraine

Website: <http://feei.info/eng/background>





Regional Analysis of Policy Reforms to Promote Energy Efficiency and Renewable Energy Investments

- A wide-ranging regional assessment, including analysis of policy framework, existing barriers and case studies to overcome the barriers
- Provides recommendations to develop & implement policy reforms to support market formation and foster a favorable climate for investments in EE and RE
- Interactive approach with involvement of NCs/NPIs and other experts

Full electronic version (in English) is available at UNECE and FEEI project websites:

http://unece.org/energy/se/pdfs/eneff/eneff_pub/EE21_FEEI_RegAnl_Final_Report.pdf

http://feei.info/assets/cms/File/Regional%20Analysis_Final%20Report.pdf

Executive Summary published in English and Russian





Barriers to investments in EE and RE projects

Based on findings of the Regional Analysis and the Workshop on Case Studies on Overcoming Barriers to Investments into EE and RE Projects through Policy Reforms, 10-11 November 2009, Kiev

Legal, institutional and administrative barriers, including:

- Need for increased transparency of execution of decisions (Belarus, Bulgaria, Kazakhstan, the former Yugoslav Republic of Macedonia);
- Insufficient managerial and practical experience in taking EE improvement decisions (Russian Federation);
- Standards, labeling and equipment certification are not used sufficiently (Russian Federation, Ukraine);
- Low enforcement of EE decisions taken on the national level, complicated regulatory network, absence of by-laws and operational instructions (Ukraine);
- Lack of cooperation between different ministries and agencies involved in energy policies as well as between authorities at the national and locals levels.





Barriers to investments in EE and RE projects (continuation)

Economic and financial barriers, including:

- State interference with establishment of prices and energy tariffs not covering all expenses of economic agents (Ukraine, Croatia, Russian Federation, and Kazakhstan);
- Insufficient infrastructure for transmission and distribution of energy (grid losses, lack of adequate grid connection, lack of metering);
- Requirement for improvement of tariff policy (Belarus, Serbia, Bosnia and Herzegovina, Russian Federation);
- Limited state funds to finance energy saving initiatives and programs (Ukraine, Croatia, Russian Federation, and Kazakhstan);
- High interest rates applied by local banks to medium- long-term loans and restrictive requirements for collaterals.

Lack of awareness, human capacities and professional skills, including

insufficient political commitments to implement necessary policy reforms, staff training for improvement of professional skills, low population awareness on energy efficiency (Bulgaria, Bosnia and Herzegovina, Russian Federation, Belarus, Serbia, Ukraine).





Recommendations for policy reforms to overcome the identified barriers

- Development and improvement of policy frameworks;
- Monitoring of policy implementation;
- Transparent procedures for tendering, authorizations, grid connections;
- Spatial planning for renewable energy projects;
- Metering and consumption-based billing;
- Establishment or strengthening of institutional structures;
- Energy tariff reforms;
- Provision of financial incentives for energy efficiency and renewable energy sources;
- Advanced feed-in tariffs;
- Increasing public awareness and dissemination of information;
- Capacity building.





National Case Studies of Policy Reforms to Promote Energy Efficiency Investments

- Experience in practical implementation of policy reforms;
- A thorough analysis of good practices and bottlenecks in the field of EE project financing and implementation;
- Examples of direct social, environmental and financial benefits coming from a specific project or series of projects given that particular policy reforms are made;
- Case studies in building sector (Croatia, FYR of Macedonia and Serbia).
- Available at: http://www.feei.info/eng/Policies/Best_Practices





Energy Performance Assessment

- Energy Analysis + cost-effective energy saving measures
- Working Group on Investment Project Development Standards
- International Performance Measurement and Verification Protocol (IPMVP) - common terms and methods to evaluate performance of EE projects
- One of the benefits of IPMVP: enhanced building rating under the LEED system and others to encourage sustainable design of new buildings and operation of existing buildings + encourage buildings to have M&V programme
 - ✓ Volume I: definition of M&V, fundamental principles, framework for M&V Plan, details of an M&V Plan and savings report.
 - ✓ Volume II: a comprehensive approach to evaluating building indoor environmental-quality issues that are related to ECM design, implementation and maintenance.
 - ✓ Volume III: M&V methods associated with new building construction, and with renewable energy systems added to existing facilities.

Available at: www.evo-world.org





Financial Mechanisms to Support EE Projects

- Specific policy intervention to stimulate private sector investment & financing by financial institutions
- Major instruments: fiscal measures, subsidies, market-based support instruments (such as quota and feed-in systems); energy audits and feasibility studies, institutional finance
- Examples from national case studies:
 - ✓ Fiscal measures: exemption from tax on buildings for projects financed by the Bulgarian Energy Efficiency Fund;
 - ✓ Subsidies: Croatian subsidized installations in households (biomass boilers, solar thermal collectors and geothermal heat pumps);
 - ✓ Energy audits: energy efficient projects in the residential sector in the FYR of Macedonia + governmental subsidies;
 - ✓ Institutional finance: allocation of funds by the European Agency for Reconstruction in Serbia (scheme: 75% of grant, 25 % of finance by project owner).





Energy Efficiency Investment Fund

Bringing a “business as usual” fund by further market formation in the UNECE region

Targeted capital: € 250 million: public–private partnership, equity and mezzanine financing

Targeted countries: 12 countries participating in the FEEI project

Investment terms:

- Market standard terms for projects
- Market standard terms for investors

Examples of projects

- Cogeneration, fuel switching, boilers refurbishment, district heating rehabilitation, street lighting renovation
- Renewable energy: wind, solar, bio fuels, biomass
- Energy efficient technologies

Bundling schemes for smaller projects e.g. ESCOs, local partners or other SPVs (Special Purpose Vehicles)

Create a mechanism for active interaction also with development and commercial lenders

Implement a project support framework for the generation of market standard project documents





Thank you for your attention!

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<http://www.unece.org/energy/se/eneffic.html>

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