Lessons Learnt from UNECE Experience with Policy Reforms and Their Implications for Financing Energy Efficiency Projects

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ESCWA Regional Seminar on Enabling Policies for Financing Energy Efficiency Investments
14-15 April 2014, Tunis - Tunisia
Energy Efficiency Projects in UNECE

- Financing Energy Efficiency and Renewable Energy Investments for Climate Change Mitigation (FEEI)
- Global Energy Efficiency 21 (GEE21)
  - B. Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development
- Energy Efficiency in Housing

Cooperation with UN Regional Commissions and other UN agencies
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:**

3 European Union countries: Bulgaria, Croatia, Romania
4 South-Eastern European countries: Albania, Bosnia and Herzegovina, 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
Financing Energy Efficiency Investments for Climate Change Mitigation (FEEI) Project (cont.)

Project Milestones:


- **Four International EE Forums, a number of Policy Seminars and Workshops**

- **Case Studies:** 12 in the Regional Analysis; 11 developed by the participating countries

- **Capacity building activities: several business development courses**
Financing Energy Efficiency Investments for Climate Change Mitigation (FEEI) Project (cont.)

Project Milestones:

- A candidate lead investor and investment fund manager for the future investment fund has been identified.

- The countries and the Investment Fund Designer have collected information on over 400 potential projects for financing from the future fund.

- Network of local teams of energy efficiency managers in the participating countries; fully functional website for the project: [http://feei.info/eng/background](http://feei.info/eng/background)

- The Mid-term Evaluation of the FEEI Project gave an overall assessment of the project as moderately satisfactory and recommended the project supporting institutions to resume disbursement of funds for successful completion of the project.
Business development courses under FEEI Project

• Business Development Training Workshop (Tomsk, Russian Federation, 17-18 June 2010)

  – Skopje, FYR Macedonia (29-30 June 2011) – for Albania, Bulgaria, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, and Serbia (http://www.unece.org/energy/se/docs/eneff_feei_skopje_june2011.html)

• Seminar ‘Energy Efficiency in Public and Private Sectors: Practical Approaches and Methods’ (Astana, Kazakhstan, 14 March 2012)

• Seminar ‘Sustainable Energy and Investments’ (Dnipropetrovsk, Ukraine, 11-12 April 2012)
National Case Studies of Policy Reforms to Promote Energy Efficiency Investments

• Experience in practical implementation of policy reforms
• 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, which were a result of specific policy reforms
• Potential for promoting successful policies more widely on a national basis
• Recommendations for adoption of a similar approach in neighbouring countries
• Available at: http://www.feei.info/eng/Policies/Best_Practices
Global Energy Efficiency 21 (GEE21) Project

Launched in 2008 – support from Russian Federation


Publication Financing Global Climate Change Mitigation (http://www.unece.org/index.php?id=13167)


Two subsequent projects:

A. Analysis of Advanced Technologies in Energy Efficiency and Renewable Energy in the Framework of Global Energy Efficiency 21 Project and Preparations of Recommendations on its Application with Special Emphasis on Central Asian Region (supported by Russian Federation)

B. Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development (funding from UN Development Account)
GEE21 – UN Development Account Project

Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development (2012-2014)

- Implemented by five UN Regional Commissions and DESA (UNECE – lead agency)

Objective

- Capacity building for development of EE investment projects. It will assist UN RCs to strengthen capacities of their member states to attract investments in EE projects in the context of climate change mitigation and sustainable development

Expected accomplishments

a) Improved capacity of national project developers, energy experts and middle-level managers in developing countries and countries with economies in transition to develop energy efficiency investment projects in private and public sectors

b) Improved regulatory and institutional framework for promotion of new financing mechanisms for energy efficiency projects

c) Increased financing for investments in energy efficiency projects, including through innovative financing mechanisms
Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development (2012-2014)

Main activities

• **Five regional trainings** in project development, finance and business planning
• **Development of an investment project pipeline** (inventory of energy efficiency project proposals)
• **Five regional workshops** to analyze investment project pipeline
• **Fifteen case studies** on the experience of policy reforms
• **Five policy seminars** focusing on policy reforms to promote financing of energy efficiency investments
• **End-of-the-project global workshop** to bring together officials from the regions along with major domestic and foreign investors to encourage greater investment flows into the EE projects
Policy seminars on policy reforms to promote financing of energy efficiency investments


Case Studies:

- Croatia: Successes of Systematic Energy Management in Croatia (UNDP)
- Tajikistan: Analysis of the Policy Reform Impact on Application of Energy Efficient Light Bulbs (ESCAP)
- Thailand: Promoting Energy Efficiency Investment for Sustainable Development in Thailand (ESCAP)
- China: Promoting Industrial Energy Efficiency Policies in China (ESCAP)

Website: http://www.unece.org/index.php?id=32843

Case Studies:

• Armenia: Co-generation Based District Heating Restoration Project in Avan District of Yerevan City (UNDP)
• Georgia: Municipal Energy Efficiency Policy Reforms in Georgia (UNECE)
• Belarus: Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus (UNDP)
• Azerbaijan: Analysis of the Policy Reform Impact on Sustainable Energy Use in Buildings (UNECE)

Website: http://www.unece.org/index.php?id=32843
Analysis of national case studies on the experience of policy reforms in beneficiary countries in UNECE, ESCAP, ECLAC, ESCWA and ECA regions

- information on EE policy and regulatory frameworks at the national level
- review and analysis of the national case studies
- policy and regulatory aspects that countries would need to deal with when attracting and implementing investments
- energy efficiency benchmarking
- conclusions and recommendations related to enhancement of EE policy reforms in participating countries
- recommendations on collaborative policy reforms measures that UN RCs can undertake to catalyze new EE investments in the regions
Training Seminars on Business Planning of Energy Efficiency Projects

Regional training seminars:
- Almaty, Kazakhstan (3-4 April 2013)
- Istanbul, Turkey (20-21 June 2013)

• Organized jointly with ESCAP and CAEESP/USAID (in Almaty) and UNDP (in Istanbul)
• Over 80 project developers and owners from 23 countries trained
• 18 presentations on progress in developing project proposals
• *Inter-regional Workshop on Energy Efficiency Investment Projects Pipeline, Bangkok, Thailand, 23-24 April 2014*
Training Seminars on Business Planning of Energy Efficiency Projects (cont.)

Business Development Course – Sample Programme

• Types of Investments in EE and RE
• Financial Plan (Cash Flow, Risk Analysis)
• Business Plan – Introduction
• Profit Projections
• Schemes and Sources of Financing
• Presentation of Project to Financial Institutions
• Business Plan – Sample
• Risks as Viewed by Financial Institutions
• Work in Groups. Review of Presentations
• Individual Consultations
Training Seminars on Business Planning of Energy Efficiency Projects (cont.)

CONTENT of the Business Planning Course CD-ROM

- Bankable Energy Efficiency Projects
- Guide to Project Finance Business Plans
- Investor Requirements for Project Finance
- Market Research
- Presenting Project Business Plan to Financial Institutions
- Sample Project Identification Form
- Criteria for the Selection of Investment Project Proposals

Indicative Project Pipeline

28 projects from 17 countries:

Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, China, Croatia, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Pakistan, Philippines, Serbia, Tajikistan, Thailand, The former Yugoslav Republic of Macedonia, Turkmenistan, Ukraine, and Uzbekistan
Analysis of Success Factors and Barriers for Energy Efficiency Investments Projects

Success Factors

• Existence of appropriate legislation, norms and standards, government programmes and policies
• Support from international donors (soft loans, grants)
• Support from regional and municipal authorities and national government
• Support from local population
• Willingness of company/organization managers to implement energy efficiency improvements
• Experience from previous projects; best practices and lessons learnt
• Participation in business development training courses
• Huge potential for Waste Heat to Power (WHTP) technology
Success Factors (cont.)

• Possibility to repay and service loans with savings generated from improved efficiency
• High level of project profitability
• Clear understanding of cost savings and reduction of GHG and other emissions
• Conduct of energy audit
• Implementation of energy management
• High prices of resources (need for savings)
• Co-financing by local/national authorities
• Interest from investors
• Availability of local materials
• Overall economic growth
Analysis of Success Factors and Barriers for Energy Efficiency Investments Projects (cont.)

Barriers

• Low awareness of residents, municipal authorities, financial institutions about benefits of EE projects
• Difficulties with obtaining loans (specifically, for local communities/municipalities)
• Lack of specific energy efficiency project financing by commercial banks
• Lack of experience in implementation of similar projects
• Lack of ESCOs
• Lack of specific policies, programmes, legislation, by-laws; inconsistencies in their implementation and enforcement
• Problem with using savings from EE measures by local authorities
Barriers (cont.)

- Administrative barriers, bureaucracy (e.g. problems with obtaining permits and licenses)
- Lack of domestically produced EE equipment
- Lack of public financing
- Political and economic instability; inflation; problems with currency conversion
- Low energy costs
- Lack of skills in preparing business plans
- Lack of energy audits; lack of information on potential for EE and energy savings
Recommendations

- Implementation of pilot projects
- Public awareness campaigns (benefits of EE measures, adoption of a more sustainable lifestyle)
- Capacity building, trainings for local commercial banks, businesses, municipal authorities, condominium owners
- Finding right balance between own investments and loans
- Detailed professional energy audit
- Setting priorities by municipal authorities in implementation of projects
- Market research
Analysis of Success Factors and Barriers for Energy Efficiency Investments Projects (cont.)

Recommendations (cont.)

- Adopt governmental Action Plans and improve coordination of EE policy between ministries and agencies
- Ensure ownership rights for land
- Coordination with local authorities
- Assessment of potential for fuel and energy savings; assessment of actual energy use
- More financial and other support from government
- Cooperation between local and foreign experts
- Learning from experience of implementation of similar projects
October 2014. Venue and exact dates TBD

End-of-the-project global workshop for Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development project will bring together officials from the regions along with major domestic and foreign investors to encourage greater investment flows into the EE projects.
Thank you for your attention!

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http://www.unece.org/energyefficiency.html