



# Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development

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# UN Development Account Project

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

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

### Objective

- Capacity building for development of EE investment projects. Assisting 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





# UN Development Account Project (cont.)

## 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 UNECE-ESCAP region



**Fourth International Forum: Energy for Sustainable Development** (Tbilisi, Georgia, 17-19 September 2013). *Workshop on Case Studies on Policy Reforms to Promote Financing Energy Efficiency Investments and Advanced Energy Efficiency Technologies*

## Case Studies:

- Montenegro: *Analysis of the Policy Reform Impact on Energy Performance in Buildings* (UNECE)
- 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>





## Policy seminars on policy reforms UNECE-ESCAP region (cont.)



**Fourth International Forum: Energy for Sustainable Development** (Tbilisi, Georgia, 17-19 September 2013). *Workshop on Case Studies on Policy Reforms to Promote Financing Energy Efficiency Investments and Advanced Energy Efficiency Technologies*

### 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)

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# Analysis of national case studies



## 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 UNECE-ESCAP region



## 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***
- 32 projects from 17 countries presented; total value: US\$ 190 million
- 18 projects fully or partially financed; total value: US\$ 139 million





# 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*







# Analysis of Success Factors and Barriers for Energy Efficiency Investments Projects (cont.)

## 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*





# Analysis of Success Factors and Barriers for Energy Efficiency Investments Projects (cont.)

## 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*





# Analysis of Success Factors and Barriers for Energy Efficiency Investments Projects (cont.)

## 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*





# Thank you for your attention!

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