



United Nations  
Economic Commission for Europe

## **Promotion of Investments in Energy Efficiency and Renewable Energy Technologies**

**Outcome of the Second International  
Energy Efficiency Forum in Dushanbe,  
Tajikistan**

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7<sup>th</sup> Ministerial Conference “Environment for Europe”  
Side Event on EE and RE Investments  
Astana, 22 September 2011





# Energy Efficiency 21 (EE21) Programme



- Launched in 1991
- Seventh 3-year phase of the Programme (2009-2012)
- General Objective: To enhance regional cooperation on energy efficiency market formation and investment project development to reduce greenhouse gas emissions in economies in transition
- Ten regional, sub-regional, country-oriented and interregional projects



# 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
  - Training to help establish bankable project proposals
  - Institutional and policy reforms
  - Establishing network of energy efficiency managers
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- **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



# **International Energy Efficiency Forum 28-30 September 2010, Astana**

**Parallel event to the Ministerial Conference  
on Environment and Development  
(MCED-6), organized by ESCAP**

**Co-organizers: UNECE, ESCAP, UNDP,  
UNEP, Government of Kazakhstan**

**EE21 Projects: FEEI, GEE21, Renewable  
energy in CIS, EE in Housing Action Plan,  
Wood Energy**

**Website of the Forum:**

**[http://www.unece.org/energy/se/docs/eneff\\_AstanaEEForum\\_Sept10.html](http://www.unece.org/energy/se/docs/eneff_AstanaEEForum_Sept10.html)**







Government of  
Kazakhstan



United Nations  
Economic Commission  
for Europe



United Nations  
Economic and  
Social Commission for  
Asia and the Pacific



United Nations  
Development  
Programme



United Nations  
Environment  
Programme



MCEP-6  
6<sup>th</sup> Ministerial  
Conference on  
Environment and  
Development

# International Energy Efficiency Forum

28-30 September 2010  
Astana, Kazakhstan

- Assessment of energy efficiency (EE) and renewable energy (RE) policy and legislative frameworks
- Analysis of international best practices in EE and RE
- Status and potential of EE and RE in various economic sectors
- Energy efficiency in the residential and municipal sector
- Ways and means of financing EE and RE investments



# International Energy Efficiency Forum Objectives



- Assessment of energy efficiency (EE) and renewable energy (RE) policy and legislative frameworks
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- Energy efficiency in the residential and municipal sector
- Ways and means of financing EE and RE investments



# Second International Energy Efficiency Forum 12-14 September 2011, Dushanbe



**Co-organizers: UNECE, ESCAP, Government of Tajikistan**

**Participants from 25 countries of the UNECE and ESCAP regions**

**EE21 Projects: FEEI, GEE21, FDI in Advanced Fossil Fuel Technologies**

**Plenary Sessions:**

- **Promoting Energy Efficiency and Renewable Energy: Global and Regional Aspects**
- **Investments in Energy Efficiency and Renewable Energy Technologies: International Best Practices**
- **Energy Economics and Financing Mechanisms: Approaches to Energy Efficiency and Renewable Energy**

**Website of the Forum:**

<http://live.unece.org/index.php?id=25461>  
[http://live.unece.org/energyefficiency/\\_welcome.html](http://live.unece.org/energyefficiency/_welcome.html)





# Second International Energy Efficiency Forum 12-14 September 2011, Dushanbe



**Workshop on Development of Energy Efficiency  
Policy Frameworks and Investments in Energy  
Efficiency and Renewable Energy Projects**

**Workshop on Attracting Foreign Direct  
Investments (FDI) in Advanced Fossil Fuel  
Technologies**

**Roundtable Discussion on the Market  
Opportunities for Promotion of Energy  
Efficiency and Renewable Energy Projects in  
Central Asia**

**Website of the Forum:**

<http://live.unece.org/index.php?id=25461>  
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## Conclusions of the Forum

- Sustainability requires that all three dimensions (environmental, social and economic) be considered by energy projects. Improving energy efficiency (EE) addresses all three concerns and is cost effective.
- Although opportunities for renewable energy use and energy efficiency improvements abound, there are still numerous barriers, including legislative and regulatory, political, financial, social, technical and human capacity and awareness.
- Transboundary problems sometimes prevent countries from making the most economically efficient decisions in terms of utilization and sharing of energy and water resources but vast opportunities exist in regional and sub-regional cooperation.





## Conclusions of the Forum

- EE strategy formulation and policy implementation in many countries indicate that there is strong political will and resources are allocated to promote EE. Creation of relevant Funds by the Governments, subsidized interest rates for loans, budgetary support at the household level, tax exemptions, and emission taxes are examples of such policies.
- Implementation of EE and RE policies would benefit from experience sharing between countries and regions and from capacity building.
- Case studies are useful tools for knowledge sharing: small hydropower plants in Tajikistan; the ENCON Fund in Thailand; the Green Technology Fund in Malaysia; the GEE21 Project; the En.lighten programme; the SMART Grid development in Kazakhstan; the co-control initiative in China.





## Conclusions of the Forum

- Renewable Energy Sources (RES) have vast potential. However, RES face a number of challenges, as they remain a lot more expensive and there is a need for additional research and development (R&D) and technological advances to make them more competitive with traditional energy sources.
- Foreign Direct Investments (FDI) in RES are dependent on favourable policies in specific countries. Policy reforms in countries with economies in transition can improve prospects for investments in EE and RES.
- Appropriate pricing, taxation and reasonably applied subsidies (energy economics) can support EE and RES development. Governments need to send correct signals to markets by setting up pricing mechanisms and developing appropriate policy frameworks.







## Conclusions of the Forum

- The Policy and Legislation Online Database to Promote Energy Efficiency and Clean Energy Technologies has been developed for countries of the Central Asian region and neighboring countries. The database is a useful universal source of legal information and a unique tool for implementing comparative analysis of legislative systems of various Central Asian countries.
- The database could support decision-making process for investments in the clean energy sector in the region. A review of a national legislative system is an essential part of every risk assessment made by investors, and the database could assist in undertaking such review.
- It is important for the database to be complete and maintained up-to-date. The sustainability of the database should be further analyzed. Its capacity to be used for assessment of market potential of energy efficiency and renewable energy technologies in the region of Central Asia and beyond should be reviewed.





## Conclusions of the Forum

- Investments, including FDI, in advanced fuel technologies are extremely important. They need a longer time horizon and political and market vision, a long-term transparent and stable framework and consistent policies on clean fossil fuel technologies. Such framework may include market solutions such as green certificates to attract investments in clean technology.
- FDI inflows in Central Asia are currently modest and primarily focus on extraction of fossil fuels and other minerals. FDI in electricity generation sector are almost non-existent due to risks inherent not only to the region but to this industry sector in general. Among the advanced fossil fuel technologies, the integrated combined cycle natural gas-fired power plants are considered most attractive.





# Third International Energy Efficiency Forum 2012



**Co-organizers: UNECE and ESCAP**

**Other partners are welcome**

**Focus on two or three topics related to  
clean energy, energy efficiency and  
renewable energy with a more in-depth  
and interactive analysis**





# Thank you for your attention!



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

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