United Nations
Economic Commission for Europe

Housing Sector in Selected Countries of South-Eastern and Eastern Europe:

Potential for Financing Energy Efficiency Projects

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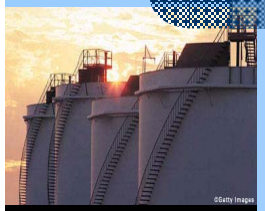
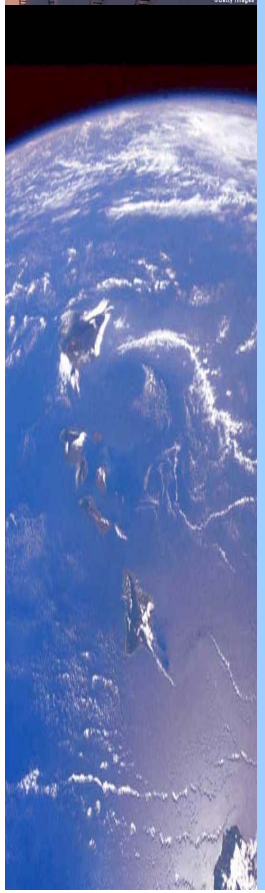
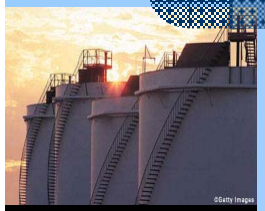
International Forum
Towards an Action Plan for Energy Efficient Housing in the UNECE region, Vienna, 23-25 November 2009

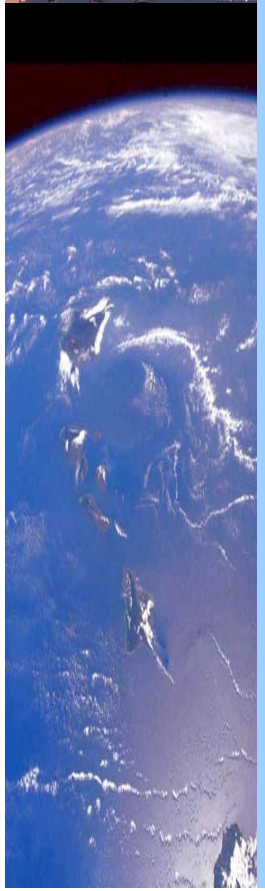




Energy Efficiency 21 Programme

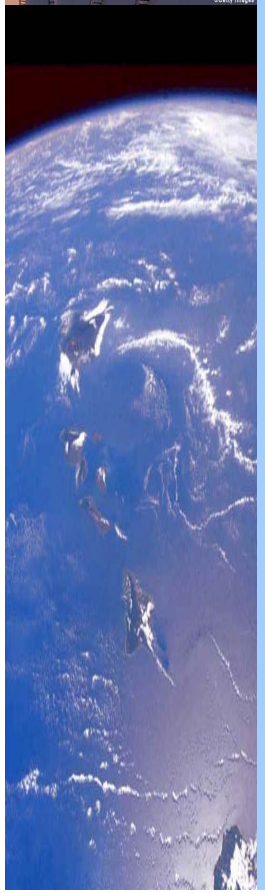
- Launched in 1991; Sixth 3-year phase of the Programme (2009-2012) started
- Main objectives:
  - **Promote municipal level projects** to enable local and concrete Energy Efficiency development
  - **Develop and harmonize regional policies** and standards to introduce the economic, institutional and regulatory reforms needed
- Regional, country-oriented and interregional projects and interdivisional cooperation activities





Selected Projects and Activities of the EE21 Programme

- Financing Energy Efficiency Investments for Climate Change Mitigation
- Energy Efficiency in Housing: ECE Action Plan for Energy Efficiency in Housing



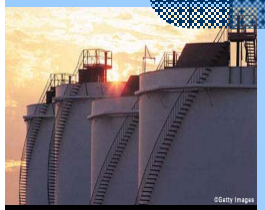
Financing Energy Efficiency Investments for Climate Change Mitigation

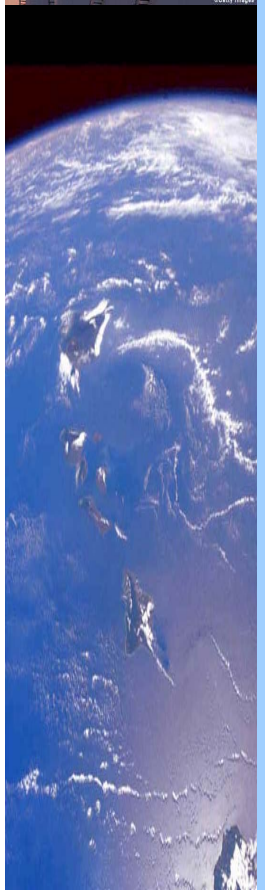
Making "business as usual" through market formation in the UNECE region

Establishment of the new Investment Fund (currently in the design phase)

Terms of transaction (preliminary):

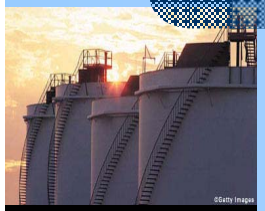
- **Targeted capital: € 250 million**
  - Public–Private Partnership
  - Equity and mezzanine financing
- **Targeted countries:**
  - EU: Bulgaria, Romania
  - South-Eastern Europe: Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Serbia
  - EECCA: Belarus, Kazakhstan, Republic of Moldova, Russia, Ukraine
- **Investment time:**
  - investment period of 4 years
  - investment term of 10 years

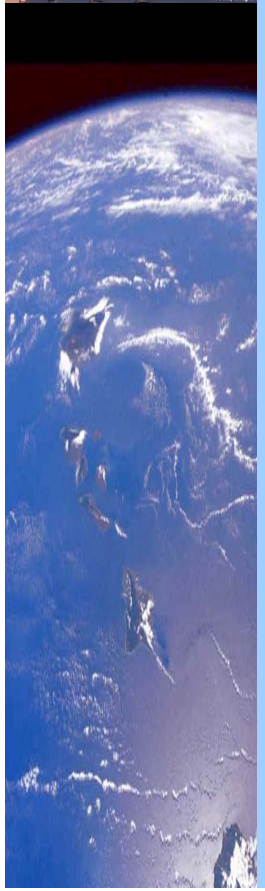




Financing modalities of the future Investment Fund

- **Examples of projects**
  - Cogeneration, fuel switching, boilers refurbishment, district heating rehabilitation, street lighting renovation
  - Renewable energy: wind, solar, biomass, biofuels
  - Clean technologies
- **Financing of big scale projects**
- **Bundling schemes for smaller projects**
  - ESCOs or other SPVs (Special Purpose Vehicles)



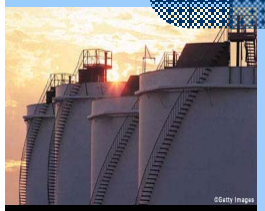


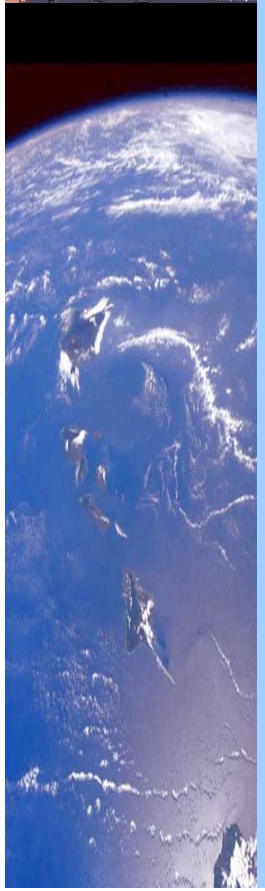
Financing Energy Efficiency Investments for Climate Change Mitigation

Investor Interest and Capacity Building Needs Report

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

National Case Studies on Overcoming Barriers to Investments into Energy Efficiency and Renewable Energy Projects through Policy Reforms

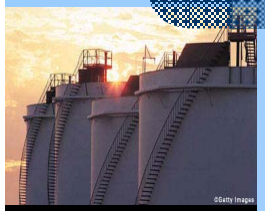


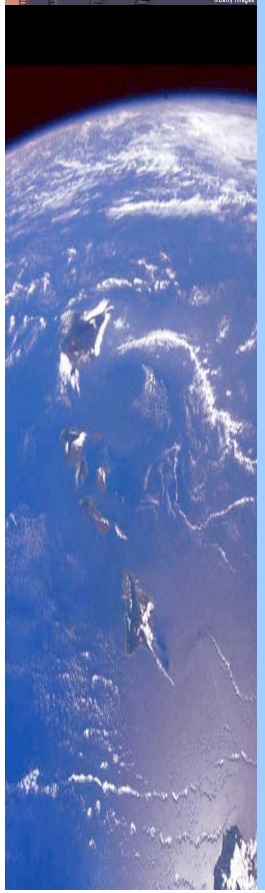


Main barriers for energy efficiency

Legal, institutional and administrative barriers

- Complexity of the regulatory framework
- Lack of secondary legislation and operational instructions
- Complex and cumbersome authorization procedures
- Absence of dedicated procurement rules
- Lack of cooperation between different ministries and agencies

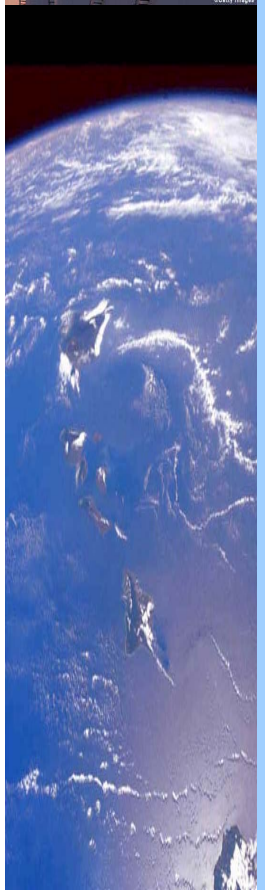




Main barriers for energy efficiency

Market inefficiencies, economic and financial barriers

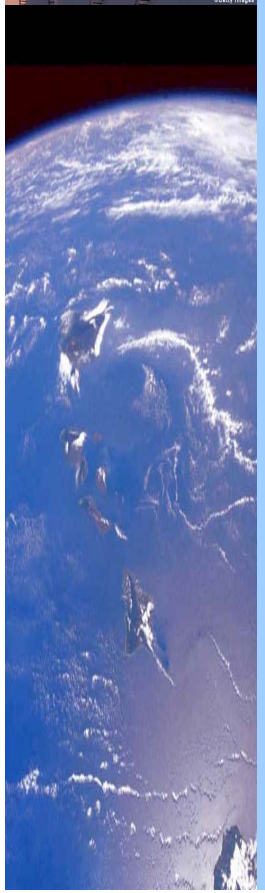
- **Energy tariffs** (electricity and heating) are often below the market price, in particular for **the residential sector**; Lack of metering (heating)
- Relatively **small size** of EE projects in housing sector
- **State monopoly** or market domination by state-owned companies is an obstacle for entry of independent operators
- **Lack of financial means** for infrastructure improvement by local utilities
- Very limited availability of public funds



Main barriers for energy efficiency

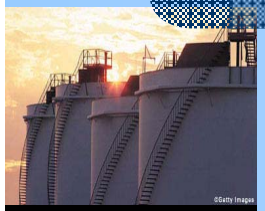
Lack of awareness, human capacity and professional skills

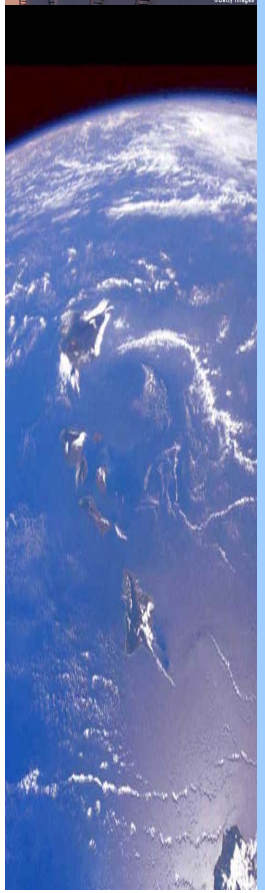
- **Lack of political commitment** to implement policy reforms
- Local authorities at the level **lack resources and expertise** for implementation of projects
- Banks **lack experience in financing** energy efficiency projects
- **Lack of training opportunities** for professionals
- **Lack of awareness** of the benefits of energy efficiency improvements **among consumers**



National Case Studies

- Russian Federation – Installation of Energy Efficiency Lighting Systems in Nizhniy Novgorod Oblast, Moscow Oblast, and Moscow
- The former Yugoslav Republic of Macedonia – Energy Efficiency in the Buildings Sector
- Serbia – Introduction of Consumption-based Billing in District Heating Services
- Croatia – Reforms to Promote Investments in RES Use in the Buildings Sector





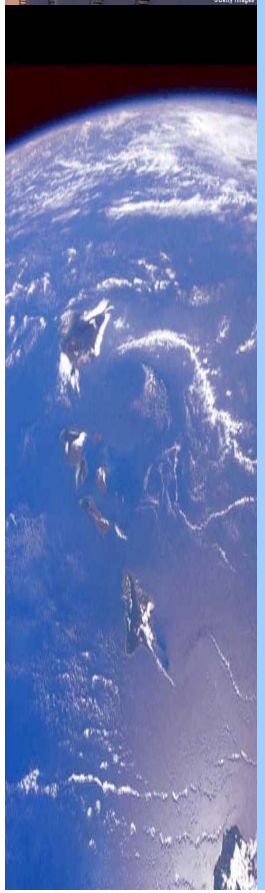
National Case Study - Serbia

Introduction of Consumption-based Billing in District Heating Services

- District Heating in 55 cities
- Installed capacity 7000 MWt_{th}
- Law on Energy (2004)

Priorities:

- Improve quality of service and reduce costs;
- Implement tariff system that promotes energy savings and covers costs;
- Support low-income households;
- Install heat metering at substations;
- Free municipal budgets from the need to subsidize district heating



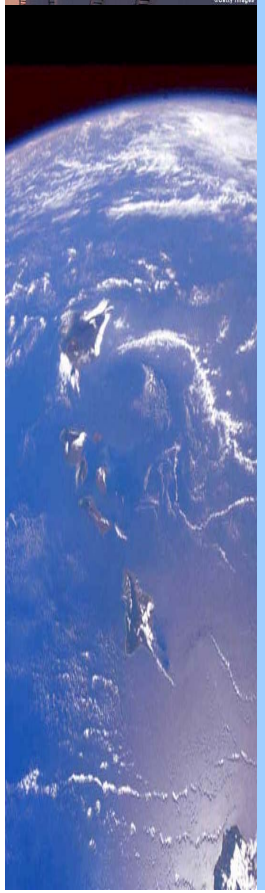
National Case Study - Serbia

Case study – Subotica District Heating System

- 3 apartment buildings of similar size
- A – reference; B – new substation; C - new substation + individual metering
- Savings in 2 heating seasons:

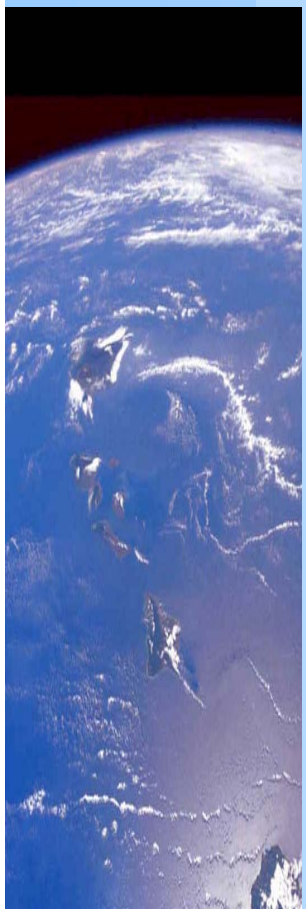
B over A – 10% heat, 18% electricity

C over A – 21% heat, 44% electricity



National Case Study - Serbia

- Justified and confirmed feasibility of the selected type of investments
- Significant savings could be achieved with introduction of individual metering and individual billing
- Possibility to achieve significant energy savings
- Possible allocation of financial resources
- Increase interest of local residents and municipal utilities in energy savings and rational energy use



Thank you for your attention !

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