




United Nations Economic Commission for Europe



Financing Energy Efficiency Investments for Climate Change Mitigation



in South, Eastern Europe and Central Asia

Programme Energy Efficiency 21 (EE21)

Wood Energy workshop
Timisoara
16-17 September 2008



UNECE Programmes

- Economic Cooperation and Integration
- Environmental Policy
- Housing and Land Management
- Statistics
- ***Sustainable Energy***
- Timber and Forestry
- Trade
- Transport

EE 21 programme





Energy Efficiency 21 Programme and its contribution to energy efficiency implementation



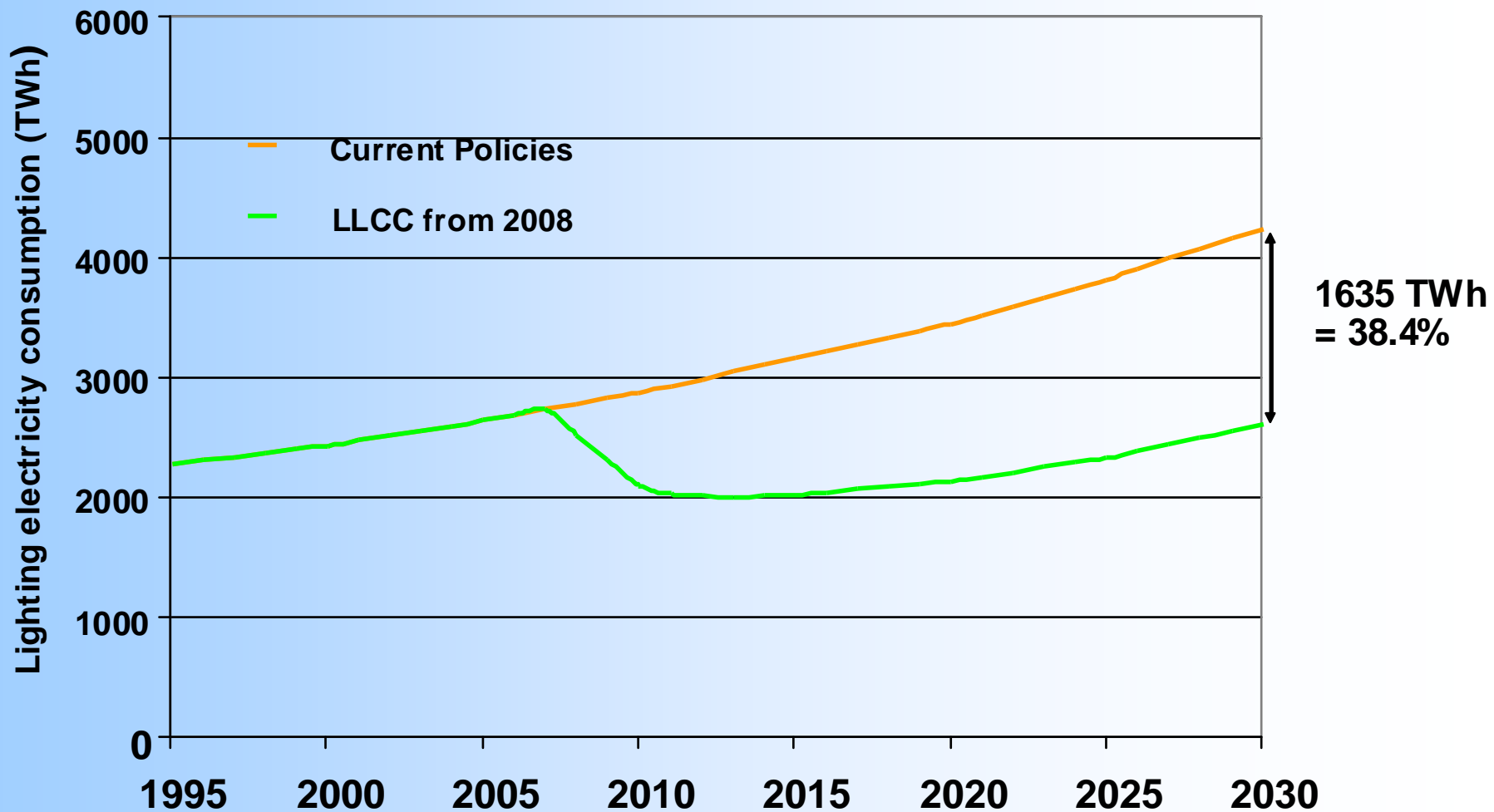
Objectives of the EE21 programme

- ☞ Enhance regional cooperation
- ☞ Promote and finance municipal projects
- ☞ Develop regional policies and standards

6 on-going sub-regional projects



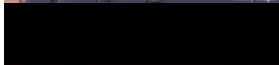
Energy Efficiency: Lighting, An Example of Cost-Effective Savings



(source: IEA, 2007)



Energy efficiency policies and measures are financially viable



Financial savings from EE policies and measures exceed by far the initial extra investment cost for consumers*



- In average, each 1 \$ invested in a more efficient electrical equipment, appliances or buildings avoids a 2 \$ investment in the electricity supply sector
- The payback period of the additional demand-side investments is very short: from 1 to 8 years

* IEA, World Energy Outlook



Energy Efficiency market potential Eastern Europe and Central Asia



- Reducing the energy efficiency gap by half would save 600 million tonnes of oil equivalent (Mtoe)
- The saving potential of the Russian Federation is 360-400 million tonnes of oil equivalent



6 on-going sub-regional projects

- **Financing Energy Efficiency Investments for Climate Change Mitigation**
- The Regional Network for Efficient Use of Energy and Water Resources in Southeast Europe (RENEUER)
- Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus
- Biomass Energy for Heating and Hot Water Supply in Belarus
- Green Labels Purchase
- Development of Coal Mine Methane Projects in Central and Eastern Europe and CIS





Project: Financing Energy Efficiency and Renewable Energy Investments for Climate Change Mitigation

● Co-financing

- United Nations Foundation: **US\$ 2 million**
- Fonds Français pour l'Environnement Mondial
US\$ 2.5 million
- Global Environment Facility: **US\$ 3 million**

● 12 participating countries

- 2 European Union countries: Bulgaria, Romania
- 5 South-Eastern European countries: Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, Serbia
- 5 CIS countries: Belarus, Moldova, Kazakhstan, Russia, Ukraine



Project: Financing Energy Efficiency and Renewable Energy Investments for Climate Change Mitigation

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





European Clean Energy Fund – Swiss Re

Officially launched in April 2007 under the EE21 Programme mandate

- Investment capital of € 354 million, 40 % committed
- Mezzanine and Equity Capital (target IRR of 15-20 % per annum)
- 25 European Union member states

ECEF targets clean energy projects in 27 European Union countries

- Renewable energy: wind, solar, biomass
- Electricity sector: hydro-electric, cogeneration, combined cycle
- Fuel switching, geothermal, clean coal, waste-to-energy, district heating



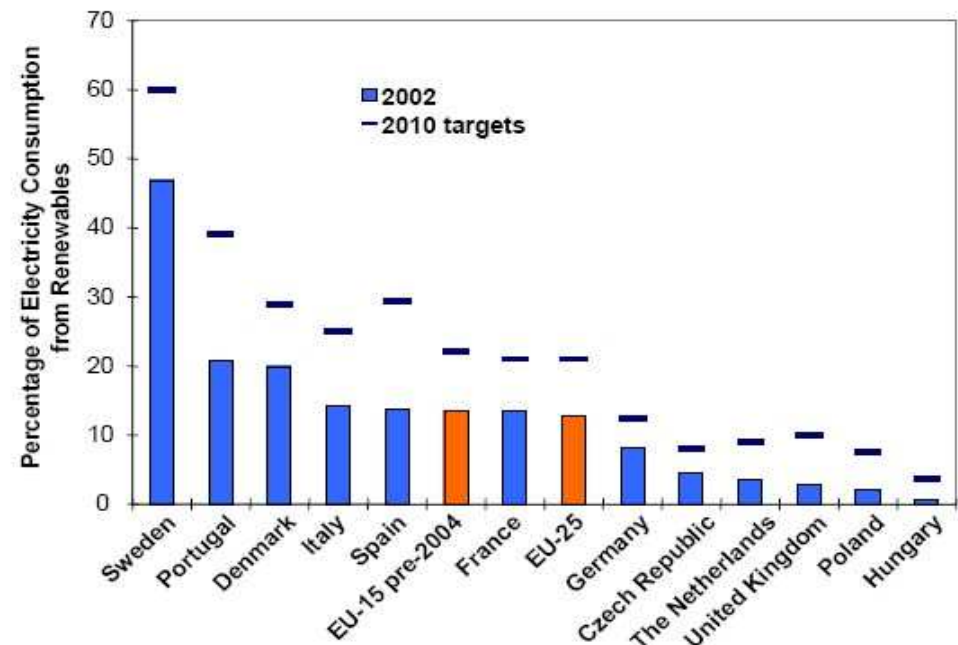


European Clean Energy Fund – Swiss Re



- The EU goal is to draw 20 % of EU-25 electricity consumption from renewables by 2010*
- Cumulative capital requirements to meet EU 2010 renewable energy generation targets to 2010 are estimated to be €155 bn**
- Sustained high fossil fuel prices combined with climate change concerns and ratification of the Kyoto Protocol enhance the demand for clean energy overall and make Central and Eastern Europe projects economically attractive

EU Targets for % of Electricity Consumption Met by Renewables by 2010 are Aggressive*



* Source: EUROSTAT

** Source: European Renewable Energy Group



Structure of the new Investment Fund



Making “business as usual” through market formation in the ECE region

Terms of transaction:

- **Targeted capital: € 250 million**
 - Public (30 %) – Private partnership (70 %)
 - Equity and mezzanine financing
- **Targeted countries:**
 - EU: Bulgaria, Romania
 - South-Eastern Europe: Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, Serbia
 - CIS: Belarus, Kazakhstan, Moldova, Russia, Ukraine
- **Investment time:**
 - investment period of 4 years
 - investment term of 10 years



Financing modalities of the new Investment Fund

- **Financing of big scale projects**
 - Minimum project size: € 20 million with a minimum investment amount of € 10 million
 - ESCOs or other SPVs (Special Purpose Vehicles)
 - ex. Fuel switching in a power plant
- **Examples of projects**
 - Electricity: cogeneration, combined cycle, fuel switch
 - Renewable energy: wind, solar, biofuels
 - Clean technologies
- **Quantifiable ecological evaluation**
 - UNEP methodology





Training and institutional reforms promotion



- Training courses organised to help establish bankable project proposals
- Regional study on:
 - ☞ the energy efficiency situation
 - ☞ investment climate in participating countries



The project will achieve:

- Reduction of GHG emissions of 10 million tonnes a year
- Considerable energy savings
- Creation of necessary standards and reforms to make energy efficiency a usual and privately financed business
- Enlargement of the EE21 programme to the other Regional Commissions
- UN Energy





Thank you for your attention !

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Energy efficiency related projects in other divisions:



- *Task force on Energy Efficiency in Housing (UNECE Environment)*
- *Capacity building on wood energy markets and improved wood energy information for better policies (UNECE Timber)*