



EBRD and Climate Change Mitigation Financing Sustainable Energy

Jan-Willem van de Ven

**Implementation of the Kyoto Protocol, Energy
Efficiency and Climate Change Mitigation
Geneva, 29 June 2005**



EBRD: *Foundations of operation*

- Apply **sound banking** principles to every project
 - We do not subsidise
- Advance the **transition** to a full market economy
 - We provide finance to promote private sector and market expansion
- Support, but not replace, private investors (**additionality**)
 - We act as a catalyst for higher and riskier involvement of private financiers



EBRD Sustainable Energy Financing

Innovative, Flexible and Market Connected

Sustainable Energy

- Energy Efficiency
- Renewable Energy
- Emissions Trading (JI, CDM, IET, ETS)

Co-financing and Technical Co-operation

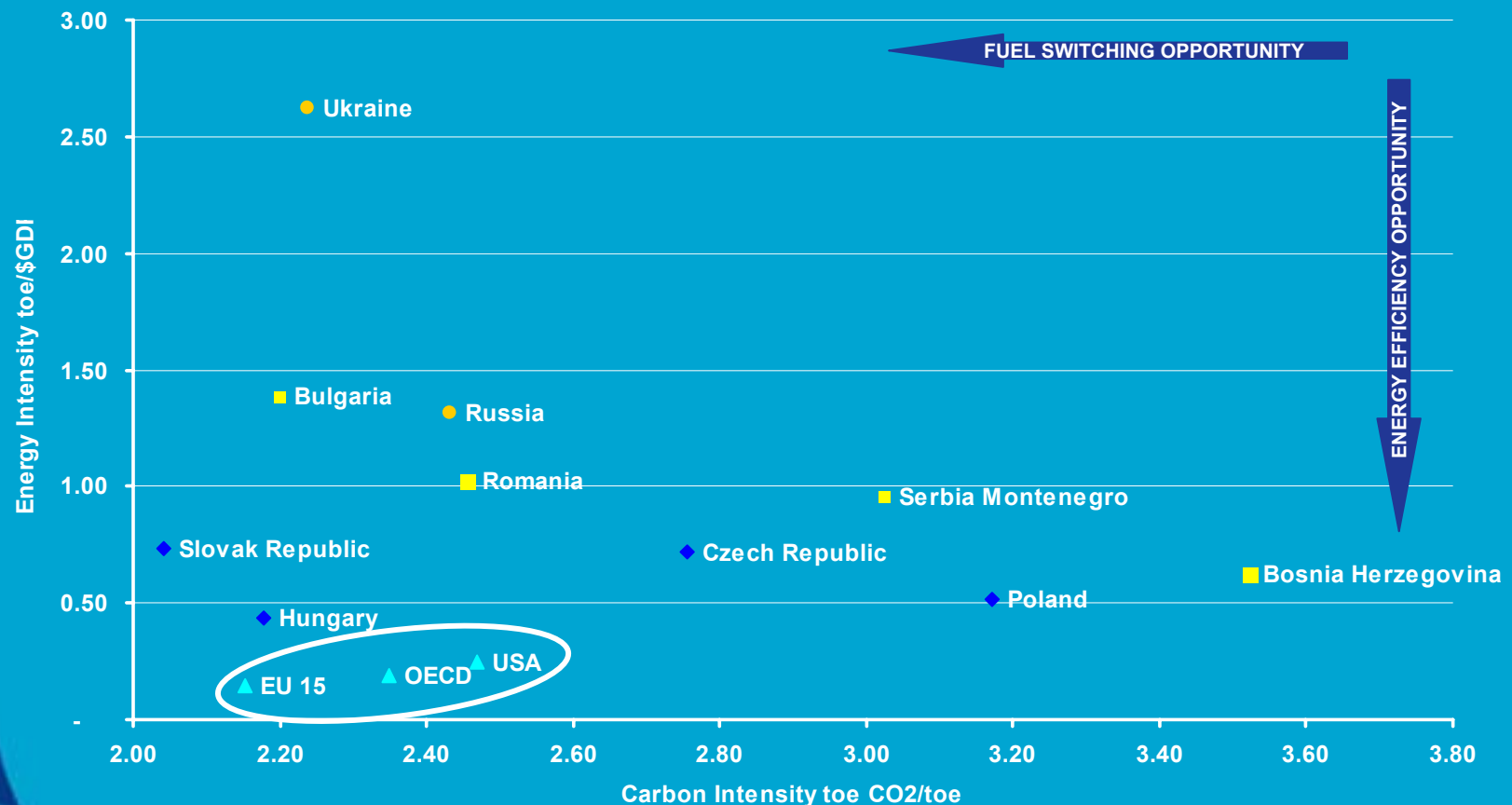
- Carbon Funds (Netherlands/MCCF)
- Energy Audits / Benchmarking
- Project Support Facilities
- Financial Incentives Structures

Financing (Private/ Sovereign)	Direct	Indirect
Equity	Projects	Funds / ESCOs
Loans		Credit Lines / ESCOs
Guarantees		



Compelling opportunities for sustainable energy in EBRD Countries of Operation

Energy and carbon efficiency: West vs East



Data source: IEA (www.iea.org/Textbase/stats/index.asp)
Ref. year: 2002



Sustainable Energy Efficiency Challenges, a few barriers:

- Energy is under-priced: mostly CIS
- Under-developed ESCO industry
- Culture of waste deeply ingrained
- Poor creditworthiness: DH in Russia!
- EE opportunities aplenty but small projects
- Banking system lacks interest or skills



Still the message: energy efficiency projects are real opportunities!

Investment Amount (€m)	Payback Period (years)	IRR	Cash Multiple
45.5	1.5	68%	14.4x
25.6	2.1	48%	4.9x
8.7	2.5	39%	4.1x
7.8	3.4	27%	2.9x
4.6	2.3	44%	4.8x
3.5	4.2	29%	3.4x
1.7	3.9	22%	2.6x



...Energy Efficiency by EBRD

The investments outlined above have been carried out in a diverse set of sectors and countries across Central and Eastern Europe and the Former Soviet Union since 2003

In each case EBRD has

- secured grant funding for energy audit;
- financed implementation of proposed measures;
- offered assistance in the structuring and purchase of emission reductions



The Energy Efficiency approach in industrial projects

NOW....

- **Screening** ALL Bank projects are screened on EE potential and classified
- **Tracking EE investments** of the EBRD: (physical energy savings, assessing CO2 emissions reduction and the prospects for carbon credits)
- **Energy Audits Programme**: supporting existing and prospective clients addressing EE (energy audits, energy management training) and financing EE investments

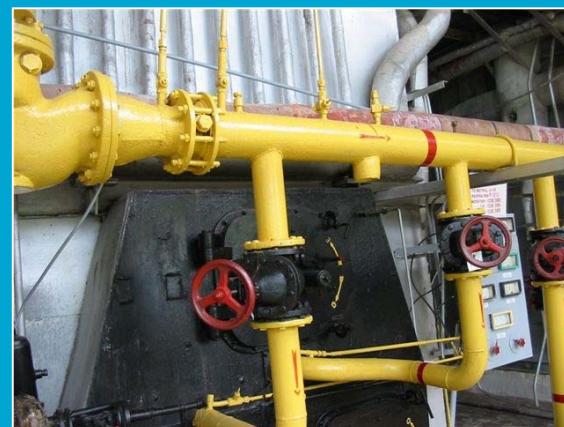
... in the (NEAR-) FUTURE

- **Benchmarking** of projects in selected industries (e.g., food processing, textile): compare findings with energy performance indicators (adapted to local conditions in the COO) and advise on best practices



Case 1: *TogliattiAzot (Russia)*

- US\$160m loan to largest ammonia producer in FSU operating 7 plants in Togliatti for revamping ammonia unit
- Senior A + B loan structure to modernise ammonia production units and finance expansion
- 20% reduction in gas consumption for Russia's largest domestic gas consumer
- Carbon reduction > 550 000 tons CO²/annum



Project will stimulate annual reductions in natural gas consumption equivalent to total monthly consumption of Switzerland, Greece or Portugal



Case 2: *Energy Alliance (Ukraine)*

- US\$10m loan to back first privately owned Ukrainian ESCO. Majority owned by Western NIS Fund (US-backed PE Fund)
- US\$5m loan from Bank was syndicated with US\$5m loan from RZB
- ESCO follows lease-finance structure giving client the full benefit of assets without up-front purchase of equipment
- First project was construction of 4MW co-generation plant fuelled by sunflower seed peels

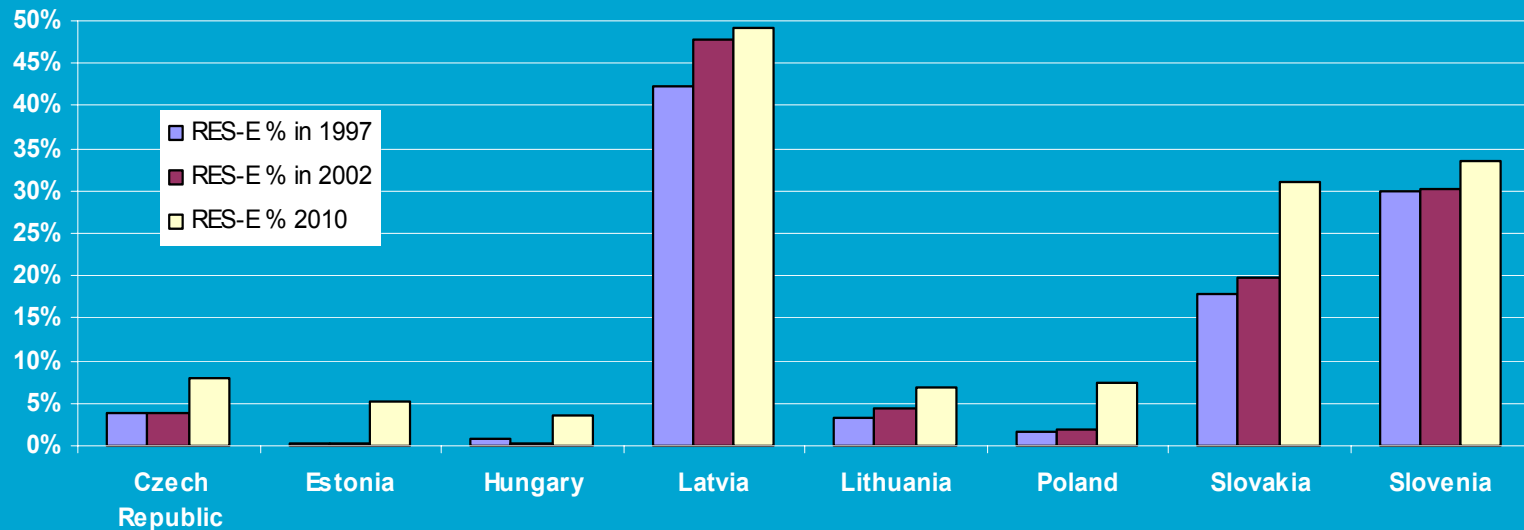


EBRD pioneered first private ESCO facilitating long-term lease-finance for clients



Renewable energy presents a challenge...

Progress Toward EU 2010 Renewable Targets



Renewable energy is lagging behind:

- Regulation insufficient to support renewable sources against subsidised cheap fossil fuels
- Shortage of risk capital to invest in renewable developers
- Red tape and monopolistic utilities frustrate grid access



Encouraging Renewable Energy by EBRD

- Catalysing projects by: renewable energy equity fund (under development), advancing credit lines, making project investments and engaging in carbon finance
- Actively engaging in policy dialogue and supporting communication, like the website www.EBRDrenewables.com
- Using technical cooperation funds to stimulate developments



Case 3: Bulgarian EE/RE Credit Line

- US\$50m credit line with Bulgarian banks for on-lending to private sector for energy efficiency and renewable energy projects
- Loan complimented with US\$10m from Kozloduy International Decommissioning Support Fund for incentives to local banks and sub-borrowers (80%) and a technical assistance package: project preparation and project validation (20%)
- 22 projects already financed, including hydro, wind, geothermal, biomass and equipment refurbishment
- See <http://www.beerecl.com>



EBRD's relationships with local financial institutions allow us to reach deeper into our markets addressing even small scale projects



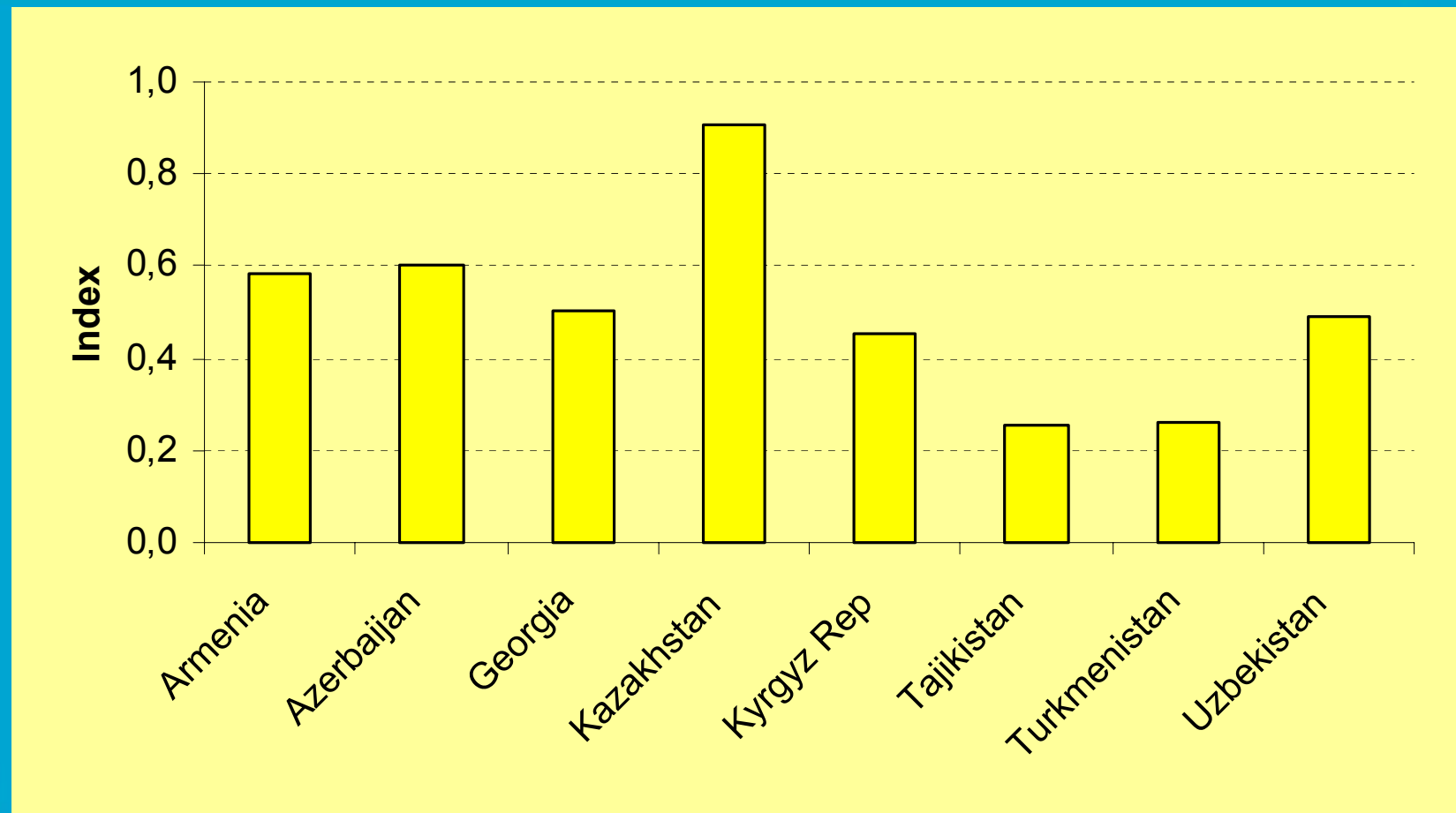
Emissions Trading Opportunities in EBRD's Countries of Operation

- JI and CDM potential; region characterised by abundant and low cost Carbon Credit potential due to high carbon intensity and low energy efficiency
- Higher carbon efficiency will make a country more competitive and less vulnerable to geopolitical disturbances
- The introduction of market based environmental instruments helps the market transition per-se.

Carbon Credits will not substitute the need for market reform and effective energy pricing!



Country Ranking for CDM (CAP-SD June 2004)



EBRD: *Monetising carbon credits*

- Netherlands Emission Reduction Carbon Fund, €32m to purchase Carbon Credits from JI projects that EBRD finances
- EBRD is creating a Multilateral Carbon Credit Fund (MCCF) which will purchase credits from JI, CDM and EU ETS projects across the Banks countries of operation
- Through MCCF the Bank will also facilitate the greening of AAU trades
- In-house expertise to guide clients through monetisation of carbon from 'PIN' to 'ERPA'



Carbon Finance expertise and purchasing capabilities enable the bank to offer a unique carbon monetisation service to its clients



EBRD's First Carbon Fund: The Netherlands

- Signed 27 October 2003
- Purpose: purchase as much CO₂ reductions as possible for the account of the Netherlands under the Joint Implementation mechanism of the 1997 Kyoto Protocol
- Budget: EUR 32 million incl. Costs
- 5 – 10 ERPA's are expected to be signed between 27 Oct 2003 until 30 Sept 2006



Case 4: PFS Carbon Deal

- First project under Dutch Carbon Fund
- Paper Factory – Stambolijski (PFS), independent and fully integrated pulp and paper mill
- Largest sack paper producer in Bulgaria owned by EBRD and IFC
- Reduction of 600 000 tons of CO² equivalent (tCO²e) 2006 – 2012



Carbon transaction will support €12 m of energy efficiency improvements



CDM Project Support Facility ETC

- Assist project sponsors to monetise their emission reductions.
- Provides follow-up on the energy efficiency audits
- Funds Available: € 240,000 from the ETC multi donor fund
- Eligible countries: Armenia, Azerbaijan, Georgia, Kyrgyzstan, Moldova and Uzbekistan have ratified the KP.
- CDM Consultancy services:
 - Preparation Project Design Document and obtaining necessary Letter of Approval from the Host Country;
 - Assistance in selling the carbon credits.
 - Validation and registration services
- First three projects being developed in Armenia, Azerbaijan and Kyrgyz Republic



How can we do more Sustainable Energy? (I)

Growth Potential and Success factors

Industrial EE, wholesale financing instruments, carbon-finance backed transactions have greatest growth potential

1/ Industrial EE

- Increase awareness at Company Board level
- Provide technical assistance for energy audits
- Involve us sooner rather than later

2/ Credit Lines

- Systematic market research
- Availability of incentives for all stakeholders (projects and Banks)
- Explore integration with Green Investment Schemes



How can we do more Sustainable Energy? (II) Growth Potential and Success factors

3/ Carbon finance-backed transactions

- EBRD can buy Carbon Credits (€32 mln Netherlands Emission Reduction Fund) from JI projects it finances
- Assistance for CDM project development can be offered (in the ETC) to prospect/existing Bank projects
- Working on the establishment of a multi-donor fund (MCCF) which will cover most CoOs; EBRD would set up an SPV to buy for private entities; possible cooperation with EIB



How to contact us

- **Jan-Willem van de Ven**

European Bank for Reconstruction and Development

One Exchange Square, London, EC2A 2JN, United Kingdom

Tel: +44 (0)20 7338 7821

Email: vandevj@ebrd.com

- **Visit our website**

www.ebrd.com

- **Contact your local office**

Call the switchboard for your local office contact details:

Tel: +44 (0)20 7338 6000

