The EBRD’s Sustainable Energy Initiative
& Urban sector investments

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EBRD at a glance

- International financial institution established in 1991, promotes transition to market economies in 29 countries from Central Europe to Central Asia
- Owned by 63 countries and two inter-governmental institutions
- Expanding – in 2009 added Turkey, now expanding to the southern and eastern Mediterranean region
- Capital base of €30 billion
- Invested over €9 billion in 380 projects in 2011
### Countries of prospective EBRD operations

**Southern and eastern Mediterranean**
- 31 Egypt
- 32 Jordan
- 33 Morocco
- 34 Tunisia

*In 2011 the EBRD launched donor-funded activities in the southern and eastern Mediterranean (SOMED) region, in support of the countries which are undergoing important political and economic reforms.*

### EBRD countries of operations

#### Central Europe and the Baltic states
- 01 Croatia
- 02 Czech Republic*
- 03 Estonia
- 04 Hungary
- 05 Latvia
- 06 Lithuania
- 07 Poland
- 08 Slovak Republic
- 09 Slovenia

#### South-eastern Europe
- 10 Albania
- 11 Bosnia and Herzegovina
- 12 Bulgaria
- 13 FYR Macedonia
- 14 Romania
- 15 Montenegro
- 16 Serbia
- 17 Armenia
- 18 Azerbaijan
- 19 Belarus
- 20 Georgia
- 21 Moldova
- 22 Ukraine

#### Eastern Europe and the Caucasus
- 23 Kazakhstan
- 24 Kyrgyz Republic
- 25 Mongolia
- 26 Tajikistan
- 27 Turkmenistan
- 28 Uzbekistan

*as of the end of 2007, the EBRD no longer makes investments in the Czech Republic.*
**SEI 2006-2011 highlights**

- Number of projects: **464 in 30 countries**
- SEI investments: **€ 8.75 billion**
- Expected CO2 emissions reductions: **46.6 million tCO₂/year**
- Percentage of total EBRD total investments in 2011: **29%**
Central Europe and the Baltics
2006 – 2011: € 1.6 billion
of which MEI: € 114 million

Eastern Europe and Caucasus
2006 – 2011: € 1.9 billion
of which MEI: € 180 million

Turkey
2009 – 2011: € 0.7 billion
of which MEI: € 104 million

Russia
2006 – 2011: € 2.2 billion
of which MEI: € 242 million

South-Eastern Europe
2006 – 2011: € 1.8 billion
of which MEI: € 133 million

Central Asia
2006 – 2011: € 0.5 billion
of which MEI: € 103 million

Southern and Eastern Mediterranean
Market studies
Business development
Donor support is critical to all parts of the business model:

### Technical Assistance

Examples:
- Technical /Environmental /Social Due Diligence assessments,
- Market Studies and Feasibility Studies,
- Energy Audits,
- Carbon Markets development support.

### Policy Dialogue with governments

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEI 2009-11 total</td>
<td>€ 108 million</td>
</tr>
<tr>
<td>MEI TA (project-linked and general MEI-related)</td>
<td>~ € 25 million</td>
</tr>
</tbody>
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### Grant financing donor support

Examples:
- Grant co-financing,
- Concessional finance,
- Incentive grants on EE loans.

<table>
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<tr>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>SEI 2009-11 total</td>
<td>€ 332 million</td>
</tr>
<tr>
<td>MEI grant financing (project-linked)</td>
<td>~ € 37 million</td>
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Case study: Energy Efficiency in Transport
RZD, Russia

INVESTEE
Russian Railways, a vertically integrated Joint-Stock that manages rail infrastructure and operates freight and passenger train services.

PROJECT
Investment in RZD’s Sterling Eurobond issue, through which the company is raising money to upgrade stations and services across Russia.

TECHNICAL ASSISTANCE
€ 1.2 million TA (German Government):
- energy audits for 10 railway stations
- support during the implementation of the investment plan (procurement strategies and the design of innovative financing solutions for energy efficiency through ESCO’s or PPP’s).

PROJECT IMPACT

| Estimated energy savings | 229 ktoe/year |
| Estimated CO₂ emissions reductions | 500,000 tonnes CO₂/year |
INVESTEE

The Central Asian Electric Power Corporation, a private company, holding power utility assets in the Kazakh cities of Pavlodar, Petropavlovsk and Eikbastuz.

PROJECTS

• 2009: equity investment with proceeds supporting CAEPCo’s investment programme to improve the fuel efficiency of cogeneration plants in the three cities, and to reduce the heat and electricity losses in the cities distribution systems.

• 2011: loans to the Company’s district heating subsidiaries to support their efforts of ample pipe network rehabilitation and insulation. Complemented by Clean Technology Fund concessional finance.

TECHNICAL ASSITANCE

Supporting Kazakh regulator on distribution tariffs benchmarking to improve existing tariff methodology in line with international practice.

PROJECTS IMPACT

| Estimated energy savings | 263 ktoe/year |
| Estimated CO₂ emissions reductions | 1.4 million tonnes CO₂/year |
INVESTEE

A Bulgarian Joint-Stock company responsible as concessionaire for the operation of the water and wastewater systems in Sofia. The ownership of the concessionaire is partially private and partially shared by the City of Sofia.

PROJECT

A longer-term cooperation of the Bank with the concessionaire, aiming to support its broad modernisation programme to bring the City’s water supply, treatment, sewage and waste management in compliance with EU directives.

CARBON FINANCE COMPONENT

The rehabilitation of the City’s wastewater treatment plant was funded through an EU-Phare grant and included the construction of a methane capture facility and a CHP unit for electricity and heat generation from waste gases. Thus methane emissions, with a much stronger GHG effect than CO₂ were avoided.

These GHG emissions reductions were successfully monetised into carbon credits under the Joint Implementation emissions trading mechanism of the Kyoto Protocol with the help of the EBRD Netherlands Carbon Fund.

PROJECT IMPACT

<table>
<thead>
<tr>
<th>Estimated CO₂ emissions reductions</th>
<th>200,000 tonnes CO₂/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon credits issued to date</td>
<td>440,000 ERUs (JI credits)</td>
</tr>
</tbody>
</table>
Case study: Residential Energy Efficiency
Slovak Sustainable Energy Financing Facility

PROJECT

SlovSEFF I was launched in 2007, with €60 million made available to local partner commercial banks to on-lend towards industrial energy efficiency, renewable energy, and residential energy efficiency investments.

SlovSEFF II launched 2009- additional EBRD funding of €90 million, aimed mainly at residential energy investments.

Grant from the Bohunice International Decommissioning and Support Fund of €15 million (energy audits and advice, and incentive payments targeting behavioural change towards energy efficiency investments).

PROJECT IMPACT

SlovSEFF I only:
- ~11,000 standard flats refurbished and ~33,000 people benefiting from lower energy bills and improved thermal comfort
- Average energy savings of 30%
- CO₂ emissions reductions: at least 200 kt/year
Conclusion

• What is the EBRD and where do we invest?
• What is the Sustainable Energy Initiative?
• What is our business model?
• What role of donors?
• What investments and projects do we have in the urban sector?
• The Rolling Stones are right!
Thank you for your attention

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ISTANBUL FERRIES PRIVATISATION: to boost urban transport development in Turkey

- Istanbul City – 12 million people
- Borrower – TASS, a special purpose company, established to acquire IDO - the world’s largest municipal ferry operator
  - inter & inner city services across the Bosphorus and the Marmara Sea
  - 51 mln passengers a year
  - 3 types of operations (fast ferries, sea buses, and conventional ferries) across 14 main routes
  - 52 vessels and 35 ferry terminals
- Project: financing acquisition of IDO
…to achieve safer, cleaner, more efficient and more reliable ferry operations

- Total Investments–USD 861 mln
- 2 EBRD Loans of USD 150 mln: (i) USD 100 mln senior loan, tenor of 12 years and (ii) USD 50 mln mezzanine loan, tenor of 7 years
- Co-financing with 5 Turkish banks: Garanti Bank, Is Bank, Vakif Bank, Denizbank and TSKB
- Introduction of new demand-driven ticket tariffs, creation of new routes and intermodal passenger transportation services
- TC: gender and equal opportunities
Municipal infrastructure energy efficiency
Sustainable transport: Istanbul Ferries (Turkey)

DESCRIPTION
Senior loan to main ferry operator in Istanbul

FINANCIAL STRUCTURE
EBRD € 122 million
  of which SEI component € 23 million
Denizbank loan € 96 million
Vakiflarbank loan € 96 million
Garantibank loan € 96 million
Isbank loan € 96 million
Sanai loan € 96 million
Akfen Holding € 22 million
Souter Investments € 22 million
Sera Gayrimenkul € 22 million
Other € 22 million
Total project value € 690 million

ESTIMATED ENERGY SAVINGS
25 ktoe per year

ESTIMATED CO₂ REDUCTIONS
60 ktonnes CO₂ per year

FINANCIAL LEVERAGE
5.7: 1 Total investment: EBRD finance
Case Study: Warsaw Trams – 2010 (Poland)

- Total Project cost approximately PLN 1.9 bln (€ 468 m), the Project encompasses:
  - acquisition of 186 articulated, low-floor trams;
  - modernisation of 29 kilometres of tram tracks and related infrastructure;
  - construction of a new tram line to Tarchomin. EBRD finance: Senior loan of PLN 200 million (€ 49.2 m equivalent)
- EBRD is supporting the Tram Company developing a carbon credits transaction (through Joint Implementation mechanism)
- GHG emission saving: 30,000 tonCO2/y
Surgut Waste Water Infrastructure Development

- **Client:** Surgut Municipal Unitary Enterprise “GorVodokanal”, a water and wastewater operator owned by the city of Surgut, responsible for provision of water and wastewater services to the city residents.

- **Project description:** upgrade of the wastewater collection and transportation infrastructure to allow further urban development and construction of affordable housing in the new district of the City.

- **EBRD Finance:** Long term loan facility to the Company of up to RUB 1,600 million (~ EUR 35.6 million).
Pulkovo Airport Concession
Finance

- **Client:** Northern Capital Gateway, owned by VTB Capital, Fraport AG Frankfurt Airport Services Worldwide and the Copelouzos Group.
- **Total project cost:** EUR 1.2 billion;
- **Financiers:** VEB, EBRD, IFC, NIB, Eurasian Bank, Black Sea Trade and Development Bank and commercial banks

**Project Description:** Build, expand, finance and operate the Pulkovo airport facilities (with the exception of cargo terminal and business aviation) under the terms of a PPP agreement with the City of St Petersburg and Pulkovo Airport Company, for a period of 30 years.

As the first PPP in the airport sector in Russia involving a well known international airport partner, this is a landmark transaction and the Bank’s role in structuring this project is widely acknowledged and appreciated by the Russian authorities.

- **Project Impact:** Flagship project for St Petersburg that addresses key transport need; High standards in terms of building energy efficiency and energy management that go substantially beyond what is required under current legislation.

Signed in 2010
City Centre One shopping mall in Split

- Total costs: €136 million. EBRD financing: €34.2 million, including €4.6 million of sustainable energy investments.
- E2C2 engaged through an energy audit, cost benefit analysis and international certification of the building.
- Nearly passive energy building with energy performance better by 60%.
- Enhanced sustainability will be documented by international BREEAM certificate.
- Best available techniques applied including:
  - Photovoltaic installation of 136 kW capacity and 1,012 sqm area
  - High performing heat pumps
  - Heat recovery
  - Building management system
  - Low emissive glazing
  - Variable speed drives of fans, pumps and drives
District Heating Projects in other EBRD countries of operation

- **Russia: Taganrog DH (2010)**
  - Loan of RUB 350 million (€8 million) to Taganrog Teploenergo, a private DH company.
  - To finance company’s expansion to other districts of Taganrog
  - EBRD loan to finance construction of five new state-of-the-art boiler houses.

- **Ukraine: Ivano-Frankivsk DH (2009)**
  - Loan of EUR 11.7 million to Ivano-Frankivsk Teplo-Komunenergo, a DH company wholly-owned by the City
  - To finance priority capex aimed at reducing energy losses, reduce gas and electricity consumption and improving quality of service of heat and hot-water supply system in certain areas in the City.
EBRD Credit Line: €155 million
  • Financially intermediated by 8 local Bulgarian banks

KIDSF Grant Support (over 95% EU contribution): €35,2 million
  • Technical Assistance: €13.5 million
  • Incentives to Sub-Borrowers and Banks: €21.7 million

Results to date
  • Number of sub-loans: 121
  • Total disbursements: €82.7 million
  • Average size of sub-loans: €683,000
  • Electricity equiv. saved: 868,000 MWh/year
  • CO₂ emissions reduction: 553,000 tons/year