EBRD financing for energy efficiency in buildings Bratislava Workshop 2017

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What is the EBRD?



- An international financial institution, with the mandate to promote transition to modern and well-functioning markets in 36 countries from Central and Eastern Europe, Caucasus, Central Asia and the Southern and Eastern Mediterranean.
- Owned by 65 countries and 2 inter-governmental institutions (EU, EIB).
- Capital base of €30 billion.
- Highest credit rating (AAA/Aaa) from all three main rating agencies (S&P, Moody's and Fitch)



⁽¹⁾ Includes European Community and European Investment Bank (EIB) each at 3%. Among other EU countries: France, Germany, Italy, and the UK each hold 8.6%

We invest in 36 countries, including 12 EU Member States ("EU-12")



EBRD Product Flexibility tailored to project needs

European Bank for Reconstruction and Development

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	Debt	Equity	Guarantees	
Typical size	€10mIn + (less in less advanced countries)	€5-7mln + (less in less advanced countries)	Typically €50 ths – €50mIn	
Term	5-7 years (up to 10-15 years in case of infrastructure investments)	Typically from 3-7 years	1.5-2 (up to 3) years	
Currency	Major foreign currencies as well as local currency			
Approach	Finance up to 35% of the project (60% with syndication)	Minority stake	Mainly through Trade Facilitation Programme	
Structures	 Senior, subordinated or convertible, Project finance Floating or fixed rates 	Portage equity financeRisk equity	 Import/export operations Pure guarantees, cash advance trade finance 	
Applications	 Greenfield/Brownfield, JVs, Capex for expansion/modernization, including resource efficiency improvements Ownership change: acquisition, consolidation, privatisation PPPs, etc. 		 Issues to international banks Takes the risk of transactions of the banks in the EBRD's countries of operations 	
Exact terms depend on specific needs and market conditions				

EBRD has extensive experience in green financing, and plans to scale up even more





Energy Efficiency Banking Team

EBRD green financing – scale and results



FINANCED SIGNED 1,300+ projects and credit lines 1,000+ directly financed of €130 billion projects with green

components, and 290 credit lines to locals financial institutions for onlending to smaller projects

324 projects in EU-12

€23.1 billion

of green financing

For projects with a total value

In 2014-2016 green financing represented 36% of EBRD's total business, up from only 15% in 2006.

EUR 5.9 bn in EU-12

REDUCED **85** million

tonnes of CO₂/year

Emission reductions equal to twice the annual energy userelated emissions of Sweden

+annual water savings of 0.2 km³ since 2013 equal to a third of Londoners' water use

16 m tonnes in EU-12

The EBRD's integrated programme



TECHNICAL ASSISTANCE	PROJECTS AND INVESTMENTS	POLICY DIALOGUE
 Technical assistance (TA) instruments include: Energy audits Feasibility studies Trainings and capacity building Energy and sustainability certification Energy management system Support with developing sustainability focused corporate policies Support from in-house as well as procured experts 	 Well-structured financing instruments Eligibility criteria Eligible clients Energy performance criteria Financing Directly to clients Through local financial institutions (PFIs) Through energy service companies (ESCOs) Through energy utilities 	 Policy dialogue with national authorities business and professional associations e.g. Green Building Council Help prepare primary and/or secondary legislation, or help build relevant capacity, namely: Energy Performance in Buildings Directive (EPBD) National Calculation Methodology for energy consumption on heating, cooling, etc.

EBRD's financing channels





FINANCING VIA PARTNER INTERMEDIARIES









Typical Financing Products for Green Measures in Buildings

- Dedicated credit lines (Financing Facilities) through local financial or other intermediaries (any buildings)
- Larger scale PPP framework programs (greenfield and brownfield public buildings)
- Sustainable property funds (commercial and private residential buildings)
- Sustainable retail (commercial buildings)
- Structured financing: EPC/ ESCOs/ Forfaiting (residential, public buildings)
- Labelled green property bonds (commercial/public buildings)

EBRD green financing in Buildings

MunSEFF (2010-2015) and SlovSEFF (2007–2012) Residential Sector

MunSEFF

Total of 402 sub-projects

- 219 residential
- 114 municipal building EE
- 69 municipal infrastructure EE

Out of 183 municipal projects, 46 implemented by ESCOs

Emissions reductions over 15,000 tCO2/yr

Delivered energy savings (heat and electricity) of 58.1 GWh/year

Portfolio-wide primary energy saving cost of EUR 54/ MWh

SlovSEFF

500 sub-projects

Grant Incentives – 10-15% of Ioan amount Average Savings – 34% against baseline Total Share of CO_2 Emissions Reduction – 23%

Eligible Sub-projects:

- building envelope insulation
- efficient boilers, micro-cogeneration
- heat substations and heat meters
- balancing of heat systems
- individual heat consumption measurement systems
- new double-glazed windows
- new radiators
- urban renewable energy systems

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Boosting residential energy efficiency in Bulgaria

PROGRAMME

The Residential Energy Efficiency Credit Line aims to increase financial intermediation for energy efficiency in Bulgaria's residential sector.

Bulgaria's economy is the most energy intensive in the EU, and its energy trade balance was affected by the closure of the Kozloduy nuclear power plant.

REECL has been operational over 10 years providing credit lines and project origination capacity building to 8 banks. This enabled the processing of over 50,000 small energy efficiency loans.

STRUCTURE OF THE FACILITY

EBRD credit lines 2006-2010	€ 43 million
EBRD credit lines 2011-2015	€ 40 million
Grant support for incentive payments	€ 15 million
and technical assistance resources	€4.5 million
from the Kozloduy International Decommissioning	Support Fund

MARKET DEVELOPMENT APPROACHES

Lists of Eligible Equipment and Materials (LEME) and of suppliers /installers (LESI) facilitated rapid assessment of numerous smallscale loans, as well as the enhancement of supply and competition among technology providers and retailers.

The incentive payment scheme targeted affordability and market penetration barriers for advanced technologies. It was structured on a gradually decreasing basis, with caps of up to 20% of loans.

RESULTS TO DATE

- The financing volume of the over 50,000 loans, including 122 for full-building renovation, supported investments in heat pumps, glazed windows, walls insulation, biomass-based heating and solar-thermal and PV.
- Annual electricity-equivalent savings of 237 GWh represent 2% of the Kozloduy closed generation capacity
- 240,000 tonnes of CO₂ estimated emission reductions equivalent to the annual footprint of 55,000 Sofia residents.

EBRD structured loan to Lithuanian state agency (VIPA) for residential efficiency

THE PROBLEM

 Residential energy efficiency investments have often long payback periods. Shorter loan tenors make it often unaffordable for residents

THE INNOVATIVE SOLUTION

- Lithuanian agency VIPA provides long term credits and related investment grants upon completion.
- VIPA provides clear procedures and processes and contract templates, as well as oversight, risks for residents are reduced.

THE EBRD'S ROLE

- Structure the project that does not require a sovereign guarantee and provided debt.
 Benefits of this structured loan
- Reduce energy intensity (LT= 2.5 x EU average).
- Address demand of >€5 billion for retrofiting residential buildings. 61% of the population live in Soviet era building that need refurbishing.

ESCO facility intermediating EBRD finance: forfaiting performance based deep retrofits in Latvia

THE PROBLEM

• Owners of existing building stock (residential and public) struggle to initiate, implement and finance deep retrofits.

THE INNOVATIVE SOLUTION

- The Latvian Baltic Energy Efficiency Facility (LABEEF) provides long term finance and reduces transaction costs (less risk) for ESCOs and building owners:
 - it provides investment guidelines for implementation and contracting.
 - it offers forfaiting for implemented and performing ESCO projects.
- ESCOs have certainty that after successful implementation and technical performance, LABEEF provides long term financed.
- Building owners have no additional costs and risks, as ESCOs are paid based on performance and take implementation and technical risks.
 THE EBRD'S ROLE
- · Helped structure the project and provided debt.

Verified Results in Latvia

Before and after photographs of Latvian EPC projects

- Performance based retrofits in 15 buildings with 359 apartments implemented
- No defaults since implementation in 2009.
- Buildings will last >30 years.
- No increased cost for residents means no increase of affordability risk.
- 54% energy savings on average.
- EU TC is preparing EnPCs EUR 40m capex

- There are 39,000 multi family buildings
- 95% of residential buildings built pre-1992
- 98% consume >200 kWh/sqm*year
- Reconstruction requires approx. EUR 40 billion – ESCO projects only EUR 8 billion = business opportunity

Resource efficiency in retail – Shwarz Green Stores Program in Poland and Serbia

CLIENT

Lidl (Serbia) and Kaufland (Poland), part of Schwarz Group

PROJECT

Green retrofits of stores in Poland, new green stores as part of business expansion in Serbia

FINANCIAL STRUCTURE

EBRD loanup to EUR 200 mof which GETup to EUR 130 m

TECHNICAL ASSISTANCE

- Assessment of Kaufland and Lidl store models to evaluate Best Available GET Technologies
- Supply chain sustainability gap analysis, scoping and delivery of technical support to local suppliers (and potential suppliers) for Lidl in Serbia

EXPECTED IMPACT

- Energy savings: 23,600 MWh/year
- Emission reductions: 20,200 tCO₂/year

GET ELEMENTS

- LEED Gold certification for logistics centre in Serbia
- LED lighting and EMS
- Cascade cooling systems
- Refrigeration with heat recovery

Hines Poland Sustainable Income Fund

THE CLIENT

Hines is a privately owned global real estate investment firm with locations in 185 cities in 19 countries. Hines has a commitment to sustainability.

THE PROJECT

EBRD helped develop, and invested in this Fund – it is the 1^{st} Green Property Fund in the EBRD region.

Investing in commercial property in Poland, the Fund will create value through active asset management, including systematic introduction of sustainability measures and sustainability certification.

FINANCIALSTRUCTURE

EBRD equity investment Fund Value at final closing EUR 50 million EUR 155 million

TECHNICAL ASSISTANCE

- Support in setting up green lease policies
- identifying cost-effective sustainability measures within the Sustainability Management Plan for selected assets.

INTEGRATING SUSTAINABILITY MEASURES IN MANAGED ASSETS

- building infrastructure upgrades and improvements
- professional facility management with strong focus on energy/water saving and waste reduction
- Tenant engagement through green lease policies and dedicated Building Management Committees
- Sustainability policies embedded in Fund mgmt, with qualitative and quantitative targets
- LEED/ BREEAM certification
- Sustainability performance will be linked to the Management Company's remuneration.

Public Lighting in Novigrad, Croatia

Implemented measures

- Lighting design
- Demounting of old luminaires (High pressure Sodium / Metal halide/ Mercury)
- Installation of new LED luminaires
- Project documentation verified
- Technical inspection and Energy certification

Economic data

Total number of street lights	1,684
Total energy consumption (street lighting)	762,244 kWh
Energy savings	57%

Energy cost savings	33,062	EUR/ year
Maintenance savings	19,080	EUR/ year
EnPC contract period	98	months
Total ESCO fee offered by	460,526	EUR
the most preferred bidder		

- Designed according to ISO 23045/2008 ("Building environment design – guidelines to access EE of buildings");
- GTC is a co-founder of the Green Building Council Croatia (GBC Croatia)
- Avenue Mall Osijek chosen as a showcase GBC Croatia example
- An international GBC consultant engaged for a workshop with the GTC team
- Best practice& techinques adopted
- E & Resource Efficiency as an evaluation criterion during tendering;
- Energy & Resource Efficiency assessment;
- Energy class A building (DE: 96.64 kWh/m2, SH: 20.06), better by 32% than the reference baseline

- Among the first 3rd generation shopping malls in Croatia
- 37,000 sqm GBA above ground, 27,000 sqm underground garage
- Use of local contractors and consultants, self managed by GTC team

Energy Efficiency in the Adana PPP Hospital, Turkey

CLIENT

ADN PPP Saglik Yatirim, a consortium of Turkish company *Rönesans Holding* and international firm *Meridiam*, will design, build and manage the Adana hospital campus.

PROJECT

Part of a national PPP programme, the project will implement advanced energy efficiency techniques:

- Advanced thermal protection, low-emissive glazing
- Building integrated solar thermal and solar photovoltaics installation
- Set of water saving techniques: water saving sensor control taps, rain water harvesting
- Efficient boilers and chillers and waste heat recovery
- On-site combined cooling, heating and power generation (CCHP)

TECHNICAL ASSISTANCE

- EBRD is providing technical assistance to PPP Hospitals in Izmir, Konya, Etlik-Ankara in Turkey
- EBRD has provided assistance to private hospitals in Moldova, Albania and Azerbaijan in the past.

FINANCIAL STRUCTURE

The EBRD was key to securing a \bigcirc 433 million financing package for the project and is the largest lender.

Extended financing facility €215 m EBRD finance with 18 year maturity €115 m

 Of which GET components 	€75 m
Loan syndication (15 year)	€100 m
Parallel financing	€120 m
Total project value	€550 m

EXPECTED IMPACT

- Emission reductions: 60,000 tCO₂/year
- Energy savings at 25% better than the national benchmarks
- Water savings equivalent of 4.6 Olympic size swimming pools