

# EBRD Business Model and Financial Instruments for scaling up Green Economy Transition Investments

EMA Meeting in Brussels, 20<sup>th</sup> November 2017



**European Bank**  
for Reconstruction and Development

- Introduction to EBRD and Green Economy Transition
- Business Model and Key Financing Instruments and Programmes
- Programmes under development in EU-12



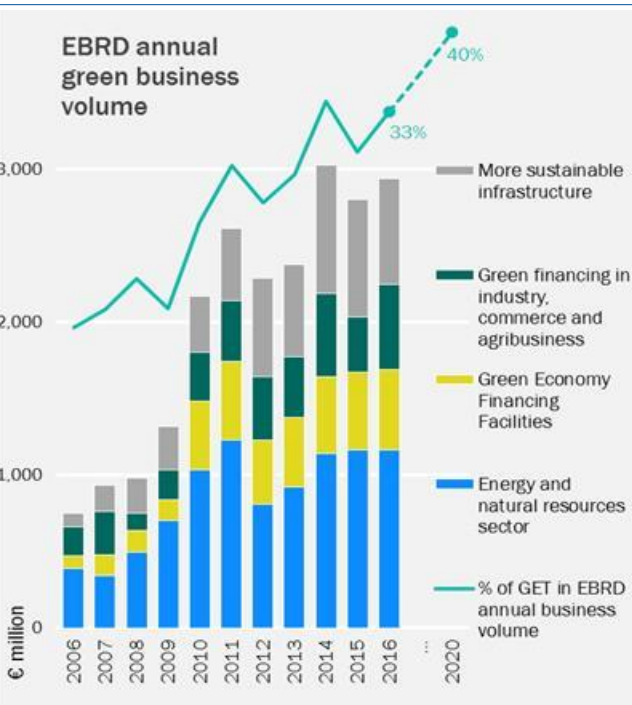
**European Bank**  
for Reconstruction and Development

- Introduction to EBRD and Green Economy Transition

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

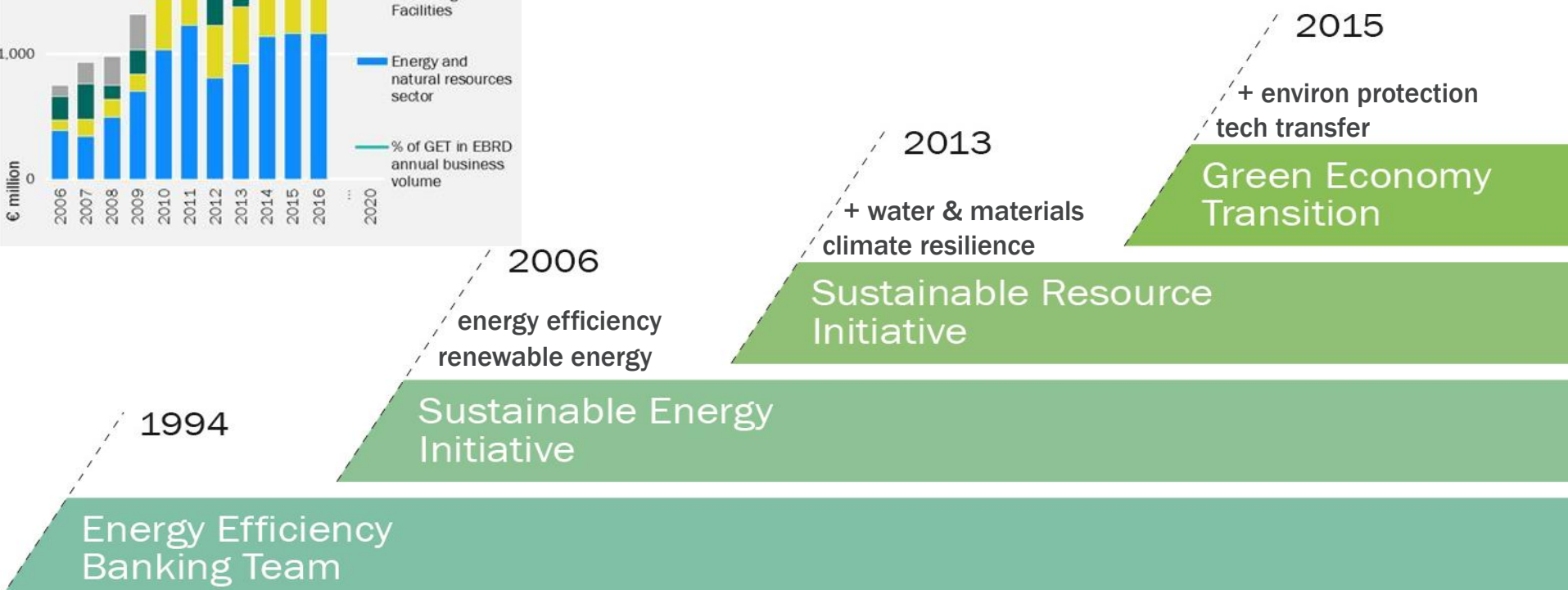


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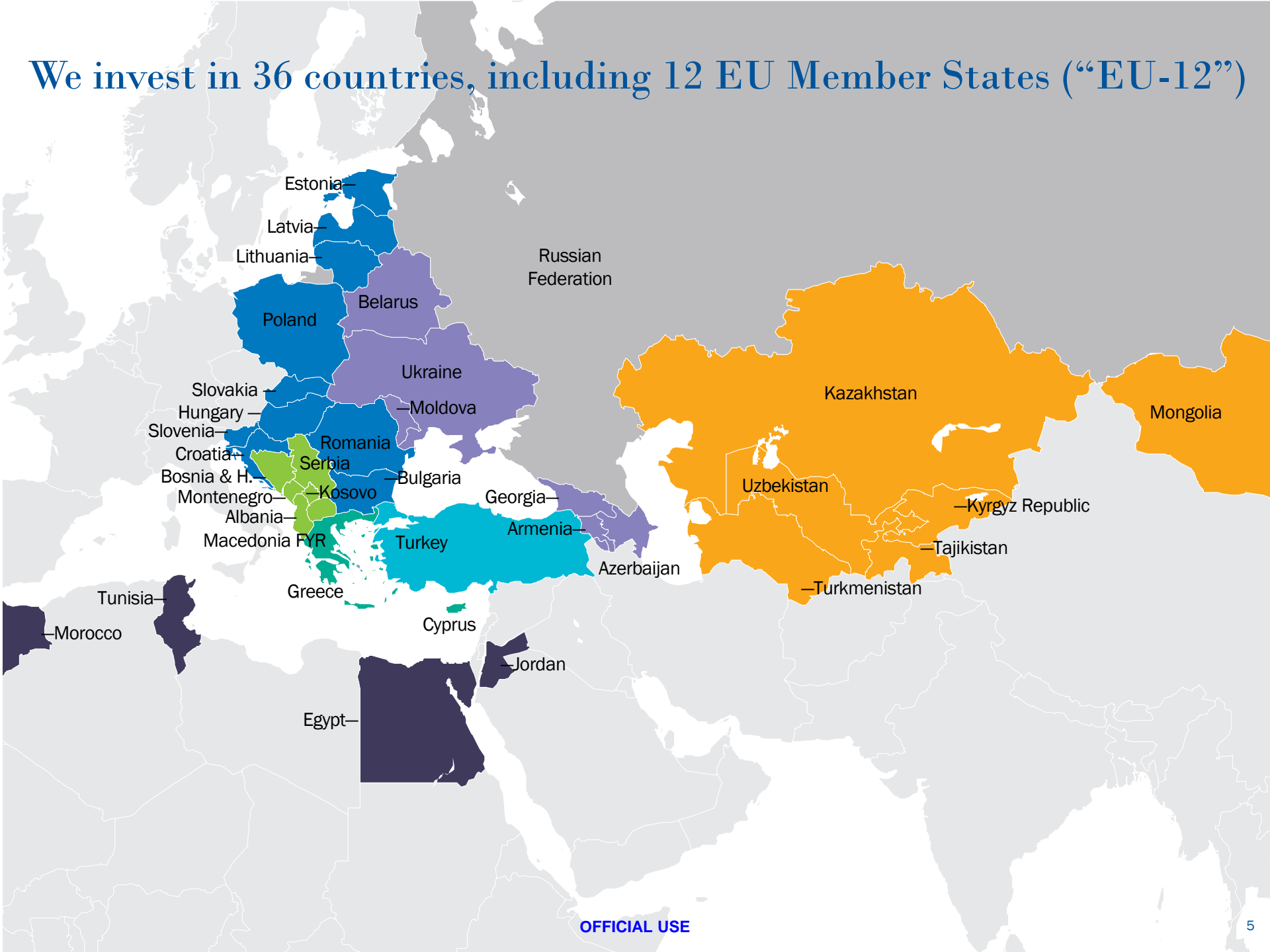
## GET Strategy:

- further scale-up
- broaden the environmental dimension
- innovation and new areas
- use more financing channels





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



# EBRD green financing – scale and results



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FINANCED

**1,400**

projects and credit lines

1,000+ directly financed projects with green components, and

290 credit lines to locals financial institutions for on-lending to smaller projects

***328 projects in EU-12***

SIGNED

**€24.7 billion**

of green financing

For projects with a total value of €145 billion

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

***€6 billion in EU-12***

REDUCED

**97 million**

tonnes of CO<sub>2</sub>/year

Emission reductions equal to twice the annual energy use-related emissions of Sweden  
+annual water savings of 0.2 km<sup>3</sup> since 2013 equal to a third of Londoners' water use

***17 m tonnes in EU-12***

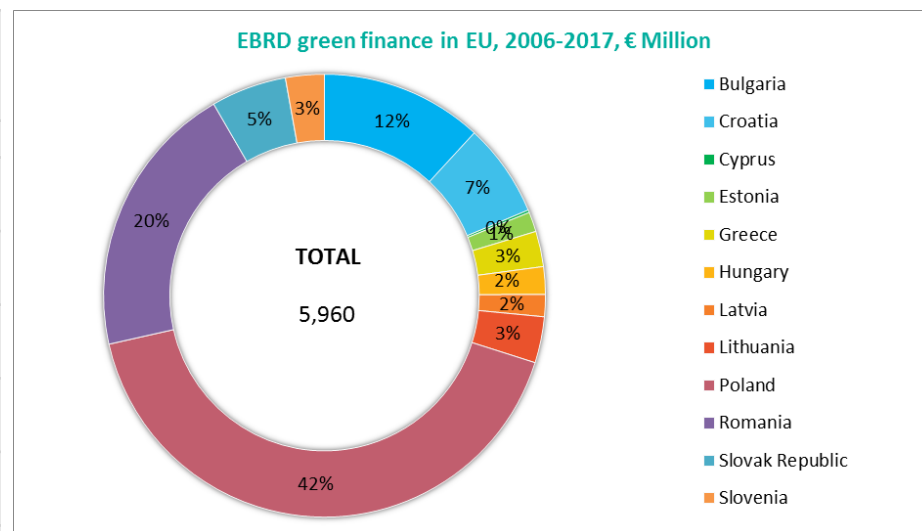


# EBRD green investment in EU-12 – by country



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Countries	Green projects	EBRD green finance	EBRD total finance	Estimated emission reductions
	No.	€ million	€ million	000s tCO2/year
Bulgaria	76	706	2,473	1,122
Croatia	32	407	2,541	1,355
Cyprus	6	11	122	15
Estonia	4	86	99	411
Greece	10	154	1,015	240
Hungary	5	120	1,405	400
Latvia	3	97	246	875
Lithuania	6	201	298	1,219
Poland	66	2,478	5,715	6,399
Romania	87	1,203	4,632	3,262
Slovak Republic	26	329	991	381
Slovenia	7	169	327	1,244
<b>Total</b>	<b>328</b>	<b>5,960</b>	<b>19,864</b>	<b>16,924</b>

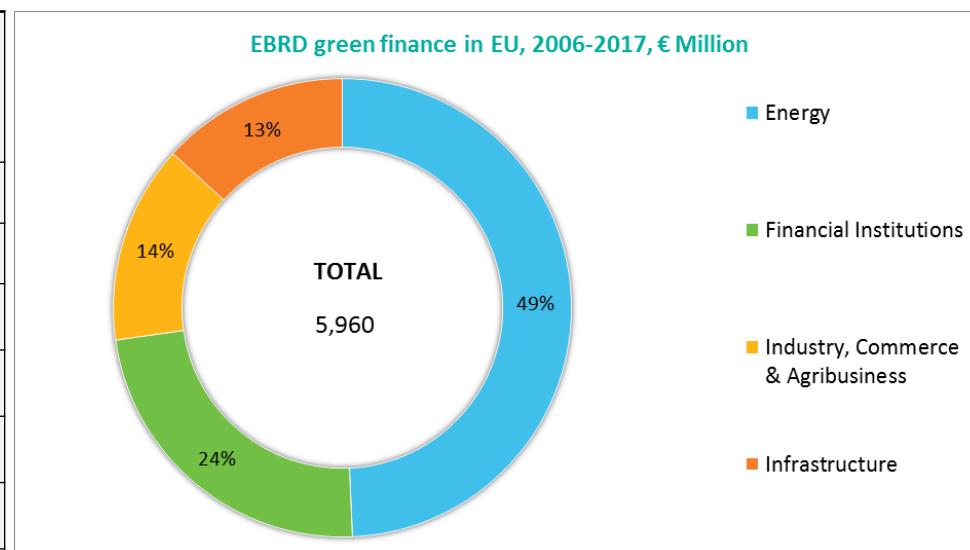


# EBRD green investment in EU-12 – by ‘sector’



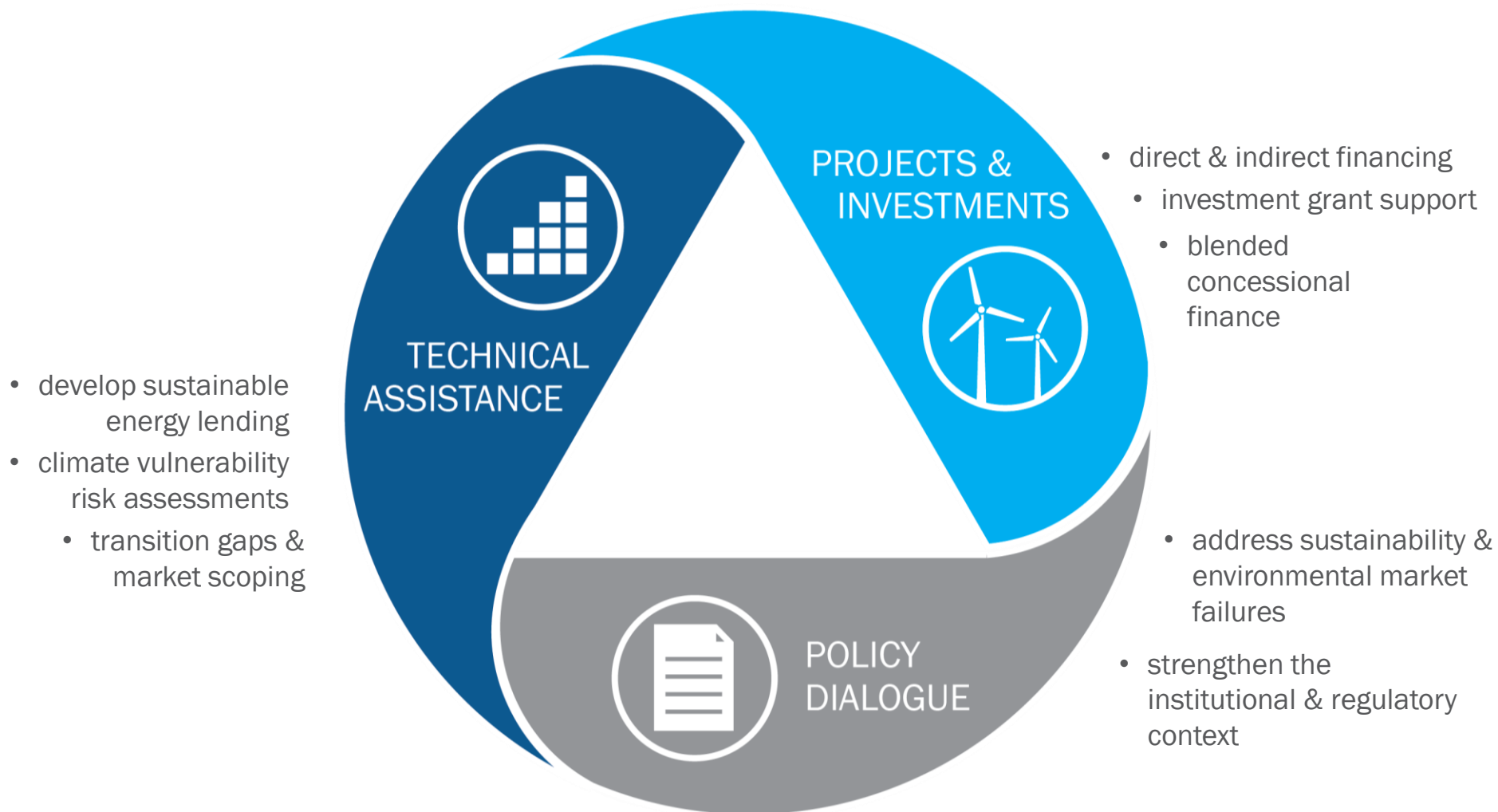
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Countries/ Sectors	Energy	Financial Institutions	Industry, Commerce & Agribusiness	Infrastructure
Bulgaria	224	288	115	78
Croatia	232	56	52	67
Cyprus	10	1	-	-
Estonia	86	-	-	-
Greece	89	11	44	10
Hungary	50	14	-	56
Latvia	85	-	10	2
Lithuania	101	-	-	100
Poland	1,297	550	365	266
Romania	665	174	158	206
Slovak Republic	-	303	26	-
Slovenia	100	-	64	5
<b>Total</b>	<b>2,939</b>	<b>1,397</b>	<b>834</b>	<b>790</b>



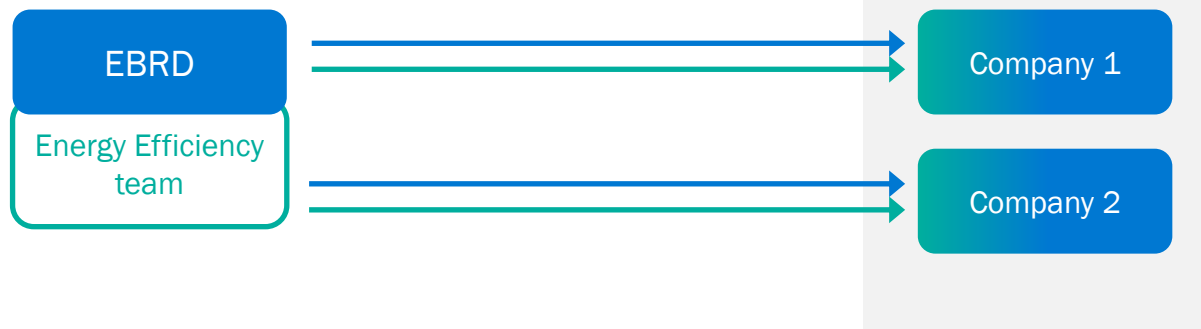


- Business Model and Key Financing Instruments and Programmes

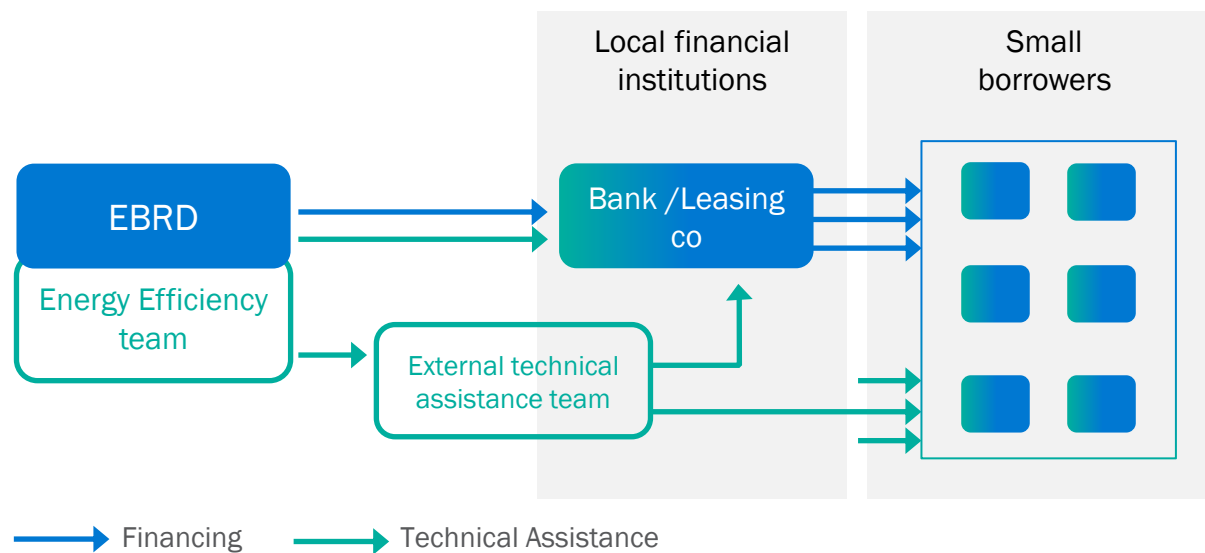


# EBRD financing channels

## DIRECT FINANCING AND SUPPORT

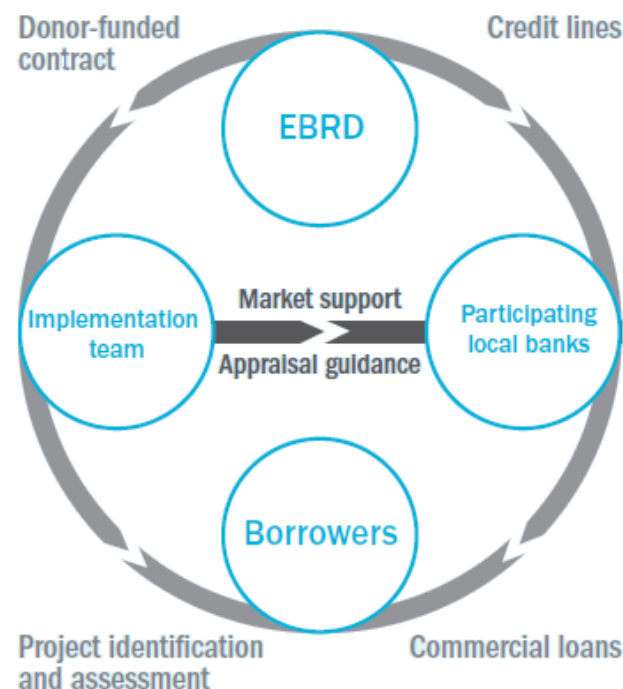


## FINANCING VIA PARTNER FINANCIAL INSTITUTIONS





- GEFFs are a good example of products that blend both public and private finance.
- Through GEFFs the EBRD extends credit lines to local financial institutions seeking to develop sustainable energy and resource financing as a permanent area of business.
- Local financial institutions on-lend funds to small and medium-sized businesses, corporate and residential borrowers.
- Finance is provided for energy efficiency and small-scale renewable energy, water and waste efficiency projects.
- GEFFs establish project implementation teams who support local financial institutions and their clients.
- GEFFs are effective in reaching a wide range of small and medium-sized business and residential clients.



## Industrial and commercial sector:

- SME/Corporate borrowers
- Vendors and suppliers of equipment



Agriculture, forestry and fishing



Food processing



Manufacturing



Commercial sector

## Residential sector:

- Individuals
- SME/Corporates in the residential sector



Individual households



Multi-family residential buildings

## Municipal sector:

- Municipalities and municipal companies
- Municipal service providers (including ESCOs)



Municipal infra and services

- Public transport
- district heating
- water supply
- waste and waste water treatment



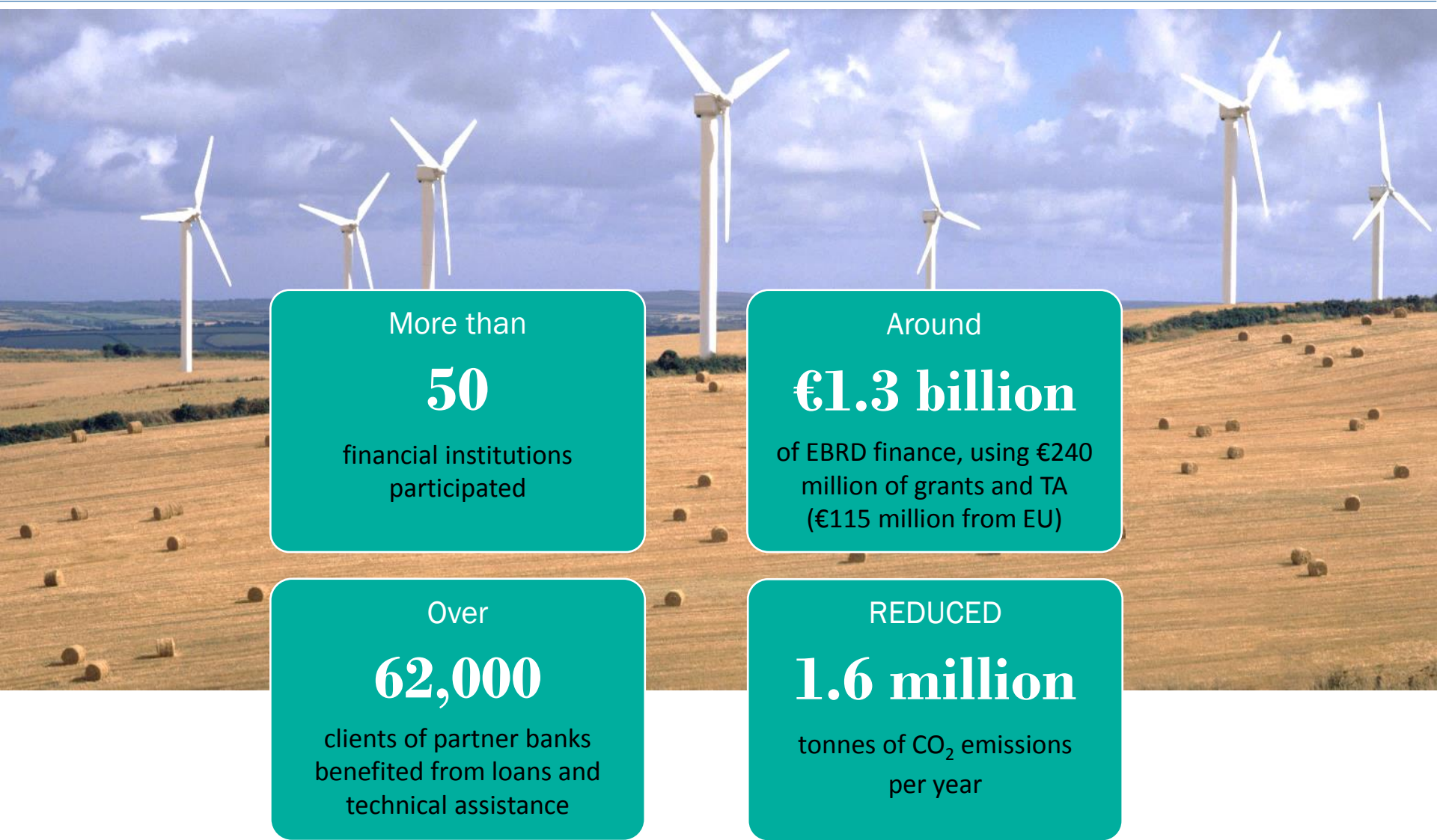
Public buildings



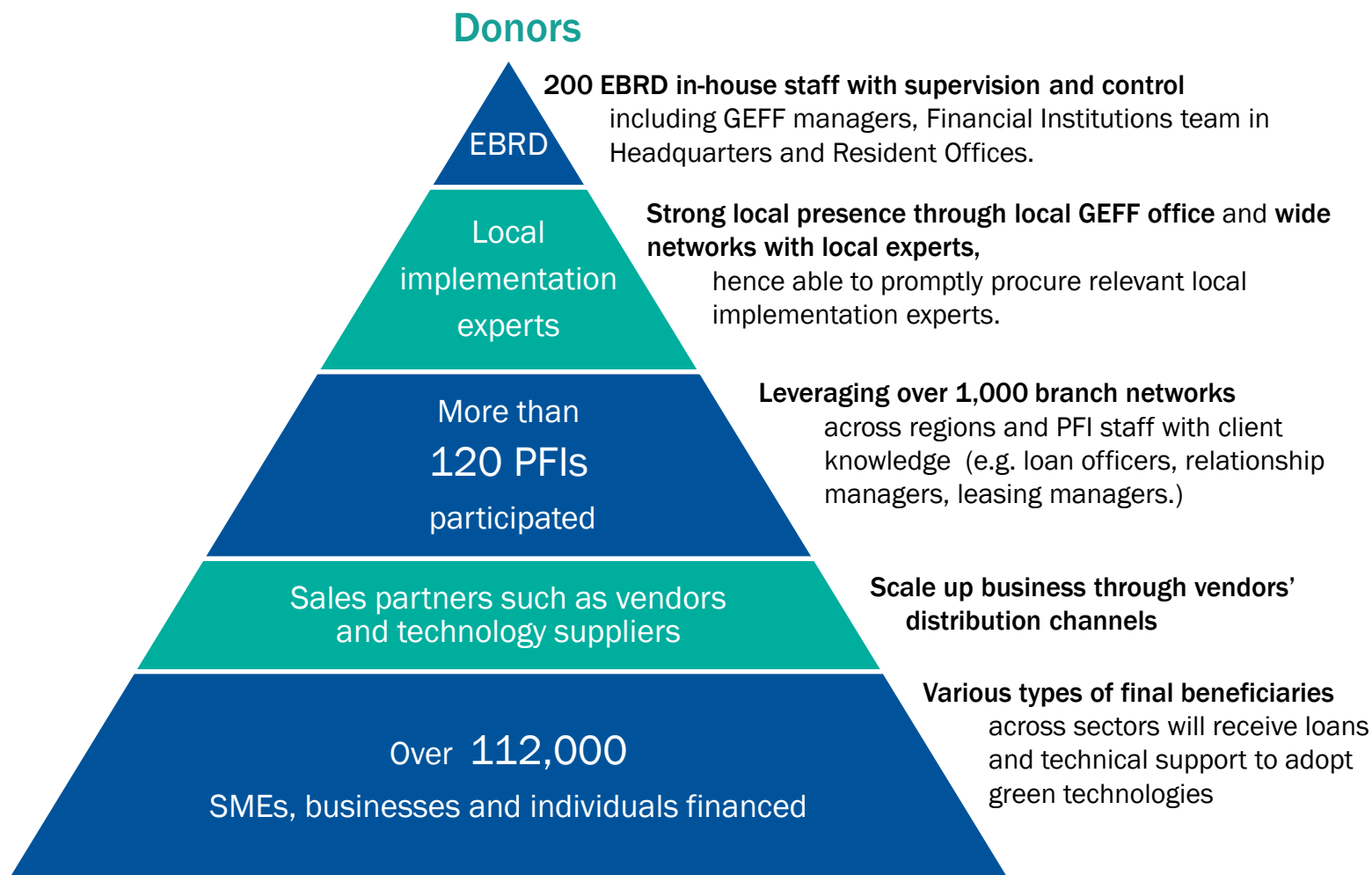
# GEFF results to date in the EU-12



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# Donors leverage the EBRD's networks for green economy financing



# Example: GEFs in Romania: Sustainable energy in the commercial and industrial sectors



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## PROGRAMME

Two EBRD Sustainable Energy Financing Facilities were active in Romania in 2008-2015 aiming to develop the local financing market for sustainable energy projects in the industrial and commercial sectors.

EEFF and RoSEFF combined credit lines to local partner banks, technical assistance for sub-project appraisal and banks' capacity building, and partial grant incentives.

## STRUCTURE OF FACILITIES

EBRD credit lines	€ 130 million
Incentive payments	€ 19 million
and technical assistance from the EU	€ 7 million

## RESULTS AND IMPACT

- 7 local participating banks
- 470 sub-projects, total investment value of €164 million
- 290,000 tonnes of CO<sub>2</sub> estimated annual emission reductions – comparable to 15% of the annual emissions from the energy use of buildings in Bucharest
- 900 GWh estimated energy savings – comparable to 6% of the hydroelectricity produced in Romania.



## PROJECT EXAMPLE

- SE-GES, a Romanian ESCO, received a SEFF loan of € 1.1 million from BRD Groupe Société Générale to build a heat and power cogeneration unit.
- The unit supplies baseload electricity and hot air to the factory of one of Europe's largest maize-based food producers, Sam Mills.
- The "Build-Own-Operate-Transfer" model means the ESCO builds the unit, gradually recovers the costs from energy sales and eventually transfers it to the site owner.
- The investment received an EU grant of €165,000.
- Primary energy savings were of 32% and emission reductions of 3,300 tCO<sub>2</sub>/year.

# SEFF: Enhancing banks' support for industrial energy efficiency in Bulgaria

## PROGRAMME

The Bulgarian Energy Efficiency and Renewable Energy Credit Line was the first EBRD Sustainable Energy Financing Facility. SEFFs are designed as effective “one-stop-shop” solutions to developing local financing markets for sustainable investments, combining:

- Credit lines for local financial institutions to on-lend to medium and smaller-sized projects
- Donor-funded expert teams who assist banks in developing green line of business, by assessing clients with sustainable resource investment plans and through marketing and training
- Potential incentive payments to sub-borrowers to help overcome affordability constraints and raise awareness of technologies with low market penetration rates.

## STRUCTURE OF THE FACILITY

EBRD credit lines (2004-2014) € 155 million

Technical assistance and incentive grants € 35 million

(from the Kozloduy International Decommissioning Support Fund setup after the closure of the Kozloduy nuclear power plant)

## RESULTS

- 9 local partner banks
- 300 sub-projects in the corporate and power sector
- €250 million in total investment value
- Annual emission reductions of 710,000 tonnes of CO<sub>2</sub> (comparable to the emissions of 390,000 cars)



## PROJECT EXAMPLES

- 195 energy efficiency and 98 clean energy projects
- EE example: a Bulgarian manufacturer of large electrical machines for hydropower plants and pumping stations upgraded their equipment.
- BEERECL loan of €49,000 and a KIDSF grant of €7,200. Energy savings-based payback time of 1.5 years.
- RE example: a BEERECL loan of €1.2 million and a KIDSF grant of €181,000 supported the construction of a biomass installation for heat and electricity production using wood waste, with a pay-back time of 3.8 years.



# SEFF: Boosting residential energy efficiency financing 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 small-scale 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 CO<sub>2</sub> estimated emission reductions equivalent to the annual footprint of 55,000 Sofia residents.



# SEFF: Residential energy efficiency in Slovakia



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## PROGRAMME

Aims to decrease Slovakia's energy intensity, especially after the closure of the outdated Bohunice nuclear power plant. SlovSEFF targets energy efficiency and renewable energy sub-projects in the corporate and residential sectors.

## STRUCTURE OF THE FACILITY

EBRD credit lines (2008-2014)	€ 150 million
Technical assistance and incentive grants (from the Bohunice International Decommissioning Support Fund, setup after the closure of the Bohunice plant)	€ 30 million
EBRD credit lines, extension 2015	€ 40 million
Technical assistance and incentive grants (from the proceeds of a sovereign sale of carbon credits by the Slovak Republic to Spain, a transaction facilitated by EBRD's carbon market development efforts).	€ 7.7 million

## RESULTS TO DATE (by end of 2016)

- 6 local partner banks
- €158 million of SlovSEFF funds on-lent to 700 projects, worth in total €257 million
- 600 loans for residential projects, accounting for 60% of SlovSEFF funds on-lent to date
- 86,000 inhabitants benefited
- Average IRR of residential projects of 9-10%
- 114,000 tonnes of CO<sub>2</sub> annual estimated emission reductions, 582 GWh primary energy savings.

Ministerstvo  
**HOSPODÁRSTVA**  
SLOVENSKEJ REPUBLIKY



## PROJECT EXAMPLE

- An 8 stories block of 32 apartments built in 1975. Investment amount of €120,000, benefited from a SlovSEFF loan for 90% of the costs.
- Measures included: insulation of shield walls and basement ceiling, stairways and entrances windows replacement, stairway lighting regulation, solar panels.
- Energy savings of 52%, payback of 10 years.

# SEFF: Boosting banks' financing for energy efficiency projects in the public sector in Slovakia

## PROGRAMME

The EU-EBRD Municipal Sustainable Energy Financing Facility is an initiative of the EBRD and the European Union to develop and stimulate commercial bank financing to municipalities and their utility companies in Central Europe.



## STRUCTURE OF THE FACILITY

EBRD credit lines for  
Slovak banks € 90 million

EU grant support for  
partial incentive payments € 13 million

Technical assistance  
funded by the EU € 5 million

## RESULTS IN SLOVAKIA

- 2 Slovak partner banks
- 402 projects financed
- €84 million of MunSEFF finance disbursed for total investment of €92 million
- Estimated emission reductions of 300,000 tonnes of CO<sub>2</sub> over the lifetime of investments

## PROJECT EXAMPLES

### District heating in Krásno nad Kysucou

- Borrower: local utility which supplies heat to 400 apartments and non-residentials.
- Technical measures focused on heat production decentralisation: new localised heating stations with natural gas boilers and hot water pumps.
- MunSEFF loan €680,000, EU grant €100,000.



### Renewed trolleybus fleet in Žilina

- Borrower: local trolleybus company with a fleet of 40 trolleybuses.
- Project consisted of new low-floor trolleybuses which consume 33% less energy.
- MunSEFF loan €2.1million, EU grant €300,000.



### Kindergarten renovation in Vycapy-Opatovice

- Renovation measures included thermal insulation, new windows and rehabilitated heating system with energy consumption savings of 38%.
- MunSEFF loan €150,000, EU grant 30,000.
- Watch [Making kindergarten a warmer place](#)



# SEFF: Promoting energy efficiency in public buildings in Central Europe

## PROGRAMME

MunSEFF has been setup to develop the capacity of banks in Hungary, Romania and Slovakia to provide financing for municipal sector energy efficiency opportunities.

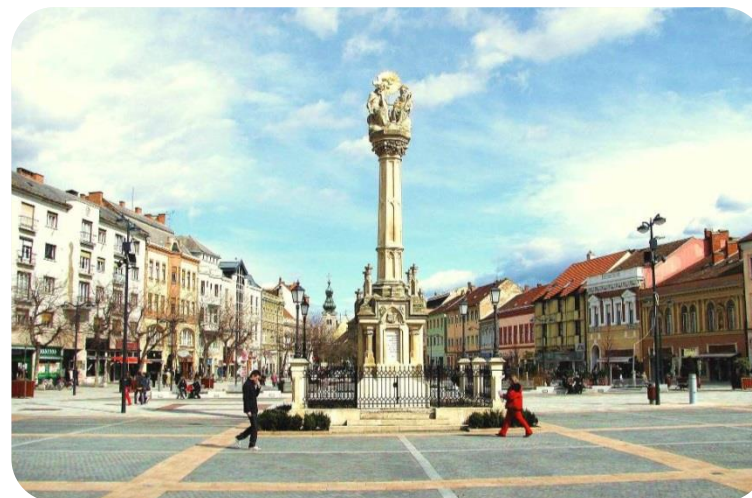
The facility brings together dedicated credit lines, technical assistance to supplement local capacity in running tenders, as well as grant support for the less commercial rehabilitation measures often required by these projects.

## STRUCTURE OF THE FACILITY

EBRD credit lines (2009-2014)	€ 105 million
Technical Assistance from the EU	€ 5 million
Grant support for partial incentive payment	€ 21 million

## RESULTS TO DATE (by end of 2016)

- 2 partner banks in Hungary, 1 in Romania and 2 in Slovakia
- 420 projects supported up to date with 94% of the MunSEFF funds. 80% are energy efficiency projects in buildings, the rest municipal infrastructure projects, mainly public lighting.
- 66 of the projects are implemented under concession or long-term maintenance or supply contracts.
- 18,000 tonnes of CO<sub>2</sub> estimated annual emission reductions and 88GWh of primary energy savings.



## PROJECT EXAMPLE

- Refurbishment of the heating system of a primary school in the municipality of Szombathely (of 80,000 inhabitants)
- The executing company, entered into an 12 years energy supply contract with the public authority, and delivered measures leading to 30% energy savings.
- The company benefited from a MunSEFF loan of €30,000 and an incentive payment of €4,500.

## FINTECC

Supports companies to implement **advanced climate technologies** that reduce greenhouse gas emissions and/or increase climate resilience by providing **grants** and **technical assistance** in the context of an EBRD investment.

## EXAMPLES OF ELIGIBLE TECHNOLOGIES

- High-grade thermal insulation of buildings
- By-pass dust recycling
- Energy efficient ventilation and air conditioning systems
- Heat recovery systems
- LED lighting
- Energy management systems

## SECTORS & CLIENTS

All **private sector**, **non multinational clients** are eligible.

The programme targets primarily the **Corporate sector**.

## RESULTS TO DATE

The EBRD has signed 29 transactions which include a FINTECC grant component. The incentives are worth US\$ 7.3 million, supporting US\$ 100 million of green investments.

## COUNTRIES

- Kazakhstan, Ukraine, Armenia, Azerbaijan, Belarus, Georgia, Kyrgyz Republic, Moldova, Mongolia, Tajikistan, Turkmenistan, Uzbekistan
- Egypt, Jordan, Morocco, Tunisia



FINTECC is funded by the GEF, EBRD and the EU



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# Addressing key barriers to climate technology deployment

Low market penetration



FINTECC provides information on climate technologies through its technical assistance

Knowledge gaps & capacity



FINTECC offers project preparation support to develop bankable projects

Inadequate regulatory framework



FINTECC is working with governments to support frameworks that incentivise technology transfer

Availability of financial instruments



FINTECC offers grants in support of EBRD lending or investment in eligible climate technologies

Underdeveloped supply chains



FINTECC connects clients with suppliers of climate technologies



# Example FINTECC project: Moldova – lightweight glass containers

## CLIENT AND PROJECT

The Glass Container Company is the largest glass bottle producer in the Republic of Moldova. The EBRD is supporting the modernisation of GCC's existing factory, comprising an investment into a new melting furnace and two new production lines.

## PROCESS AND INVOLVEMENT

- Client approached the RO with a financing request for plant refurbishment
- EBRD: initial screening of EE and Recycling options. Consulting services were provided to identify the best investment programme for the client

## BENEFITS

- Introduce new technologies to the client
- Put the client in touch with a range of suppliers of technologies

## INVESTMENT PLAN

EBRD finance	€ 5.3 million
FINTECC grant	€ 0.3 million
Other finance	€ 8.3 million
<b>TPV</b>	<b>€ 13.9 million</b>



## PROJECT DETAILS

**Client:** Glass Container Company

**Sector:** Glass Manufacturing

**Country:** Moldova

### Technology:

Installation of Narrow Neck Press and Blow (NNBP) process in production line to produce lightweight glass containers, resulting in reduced energy and material consumption per unit produced.

### Physical Savings:

Installation results in electricity savings of 1,350 MWh per year. This accounts for 2,950 tonnes of CO<sub>2</sub> emissions savings

NØW Programme has four components to mainstream waste minimisation and material valorisation within a circular economy:

## Component 1:

Commercial +  
Concessional  
Financing

## Component 2:

Technical support for  
project developers

## Component 3:

Policy dialogue to  
improve waste  
management practices

## Component 4:

Awareness &  
knowledge sharing of  
relevant technologies

- In Turkey, the waste sector contributes 9 per cent of the country's GHG emissions
- Support the development of the necessary **infrastructure** to recover valuable materials
- Financing SMEs by developing a **leasing mechanism** for upgrading recycling equipment
- Establishing a **Turkey Materials Market Place**
- Promote **waste-to-energy** as alternative to landfilling



# Supporting biogas generation capacity in Turkey



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## PROJECT AND CLIENT

One of the largest dairy groups in Turkey has received EBRD support for increasing its biogas generation plant capacity from 10.6 MW to 19.2 MW. The Bank also supported the Company in converting by-product of the biogas plant, digestate, into organic fertilisers.

The project has dual benefits as biogas is an extremely useful source of renewable energy, while digestate is a highly valuable organic fertiliser and has indirect greenhouse gas emission reduction potential.

## FINANCIAL STRUCTURE

EBRD finance (in USD):	\$ 22 million
Climate Technology Fund grant	\$ 3 million
Total Project Value	\$ 25 million



## EXPECTED IMPACT

- Emissions reductions of 160,000 tonnes of CO<sub>2</sub> per year
- Estimated electricity produced from renewable energy amount to 64,000 MWh, estimated heat produced from renewable energy amount to 33,700 GJ
- Reducing significant amount of waste, estimated at 1.5 per cent of total waste in Turkey, sent to landfill
- 26,000 tonnes per year of organic fertilisers will replace chemical fertilisers of the same specifications



**€250m Framework** to support cities to identify, benchmark, prioritise and invest in Green City measures to improve urban environmental performance through:



## Delivery of strategy and policy support

Green City Action Plans (GCAP)  
Policy dialogue

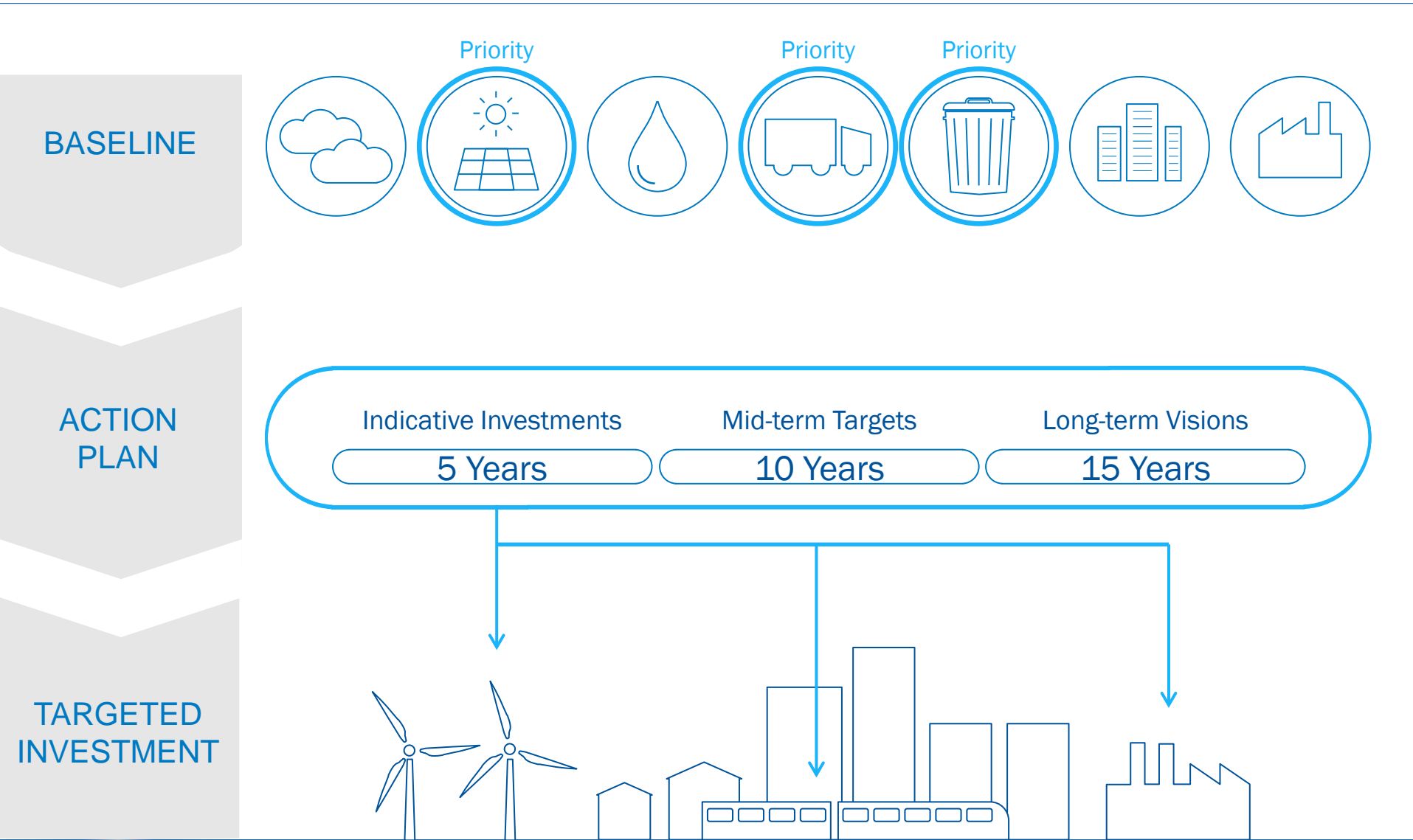


## Facilitating and stimulating Green City infrastructure investments

Urban transport	Water & Wastewater
District heating	Building energy efficiency
Solid Waste	Street Lighting & Roads



## Building capacity of city administrators and key stakeholders





# Case study of ESCO street lighting project in Novigrad, Croatia: EBRD supported tender preparation



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- **Project:** Replacing more than half of the approx. 1,700 lights in the town of Novigrad, Croatia (population 2,600) in Istria with LED lights
- **Model:** Energy performance contract, with payments linked to savings
- **Costs:** total capex of €411,000 with a 8 years payback based on energy and maintenance savings
- **Financing sources:** 35% grant-funded by Croatia's Environmental Protection and Energy Efficiency Fund and 65% financed by the ESCO company selected following competitive tender
- **Savings:** 54% of energy consumption and 45% of maintenance costs, annually



This project is funded by  
the European Union

- **Environmental impact:** 112 tonnes of CO<sub>2</sub> estimated annual greenhouse gas emission reductions from electricity savings
- **Tender preparation supported** by EBRD under EU funded [Regional Energy Efficiency Programme \(REEP\)](#).

Healthcare

Hotels &  
Lodging

Residential  
buildings

Office &  
Commercial  
buildings

Public  
buildings

Retail &  
Logistics

- **€15 billion** of GET enabled green buildings investments, with EBRD's contribution of € 2 billion;
  - More than **25 million m<sup>2</sup> of floor area** of green buildings was financed by EBRD;
  - **71,000 GWh of energy savings** are expected from EBRD's Green Buildings Investments over life-time (15-25 years) with emission savings of **335 million tonnes of CO<sub>2</sub> per year**.
- 
- Dedicated credit lines (Financing Facilities) through local financial 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)

# Sustainable Retail: Schwarz Green Stores Program in Poland and Serbia

## PROJECT AND CLIENT

EBRD is supporting Lidl (Serbia) and Kaufland (Poland), which are part of Schwarz Group. The project focuses on green retrofits of stores in Poland and new green stores as part of business expansion in Serbia.

## FINANCIAL STRUCTURE

EBRD loan (in EUR):	€ 200 million
<i>of which green financing</i>	€ 130 million

## 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 tonnes of CO<sub>2</sub>/year

## GREEN ECONOMY TRANSITION ELEMENTS

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

## PROJECT AND CLIENT

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

EBRD helped develop, and invested in this Fund – it is the 1st 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.

## FINANCIAL STRUCTURE

EBRD equity investment (in EUR):	€ 50 million
Fund Value at final closing	€ 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 management, with qualitative and quantitative targets
- LEED/ BREEAM certification
- Sustainability performance will be linked to the Management Company's remuneration.

# Supporting ESCOs in Latvia using innovative forfeiting mechanism



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## THE PROBLEM

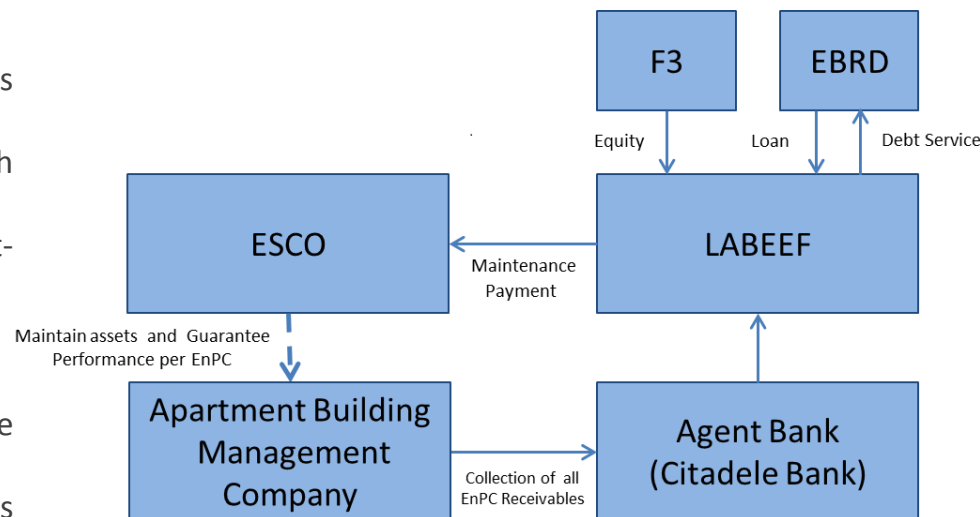
- ESCOs are typically paid back through energy bills over a number of years
- This can however leave them short of cash with which to do more projects
- Typical bank debt helps only partially as it is short-term, borrowing capacity is reached quickly

## THE INNOVATION

- A fund specifically set up to purchase the receivables
- Receivables are from projects where the ESCO has begun to receive its payments from end-client
- Through the sale the ESCO has the cash needed to invest in further projects
- The ESCO is provided a fee to cover its maintenance and guarantee obligations under its contract with the end-client

## THE EBRD'S ROLE

- Helped develop the financing structure
- Intend to provide debt financing to the fund purchasing the receivables





# EUR 50m structured loan to Lithuanian state agency for residential efficiency investments



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## THE PROBLEM

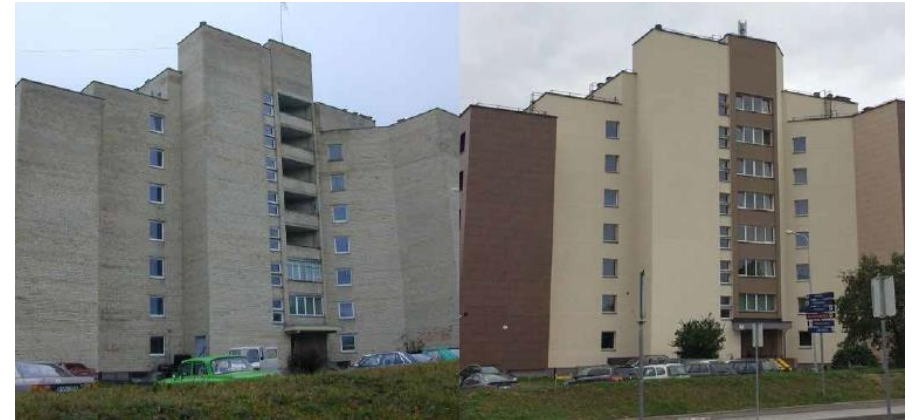
- Residential energy efficiency investments have often long payback periods. Shorter loan tenors make it often unaffordable for residents to borrow.
- If a state agency provides clear procedures for appraising efficiency investments and what contract templates to use, as well as some oversight, risks for residents are reduced.

## THE INNOVATIVE SOLUTION

- Lithuanian Public Investment Development Agency (VIPA) provides long term credits and related investment grants upon completion.
- EBRD provided additional debt-finance to finance additional buildings. VIPA credit subsidy is confirmed on completion and grant is dependent on achievement of 40% savings.

## THE EBRD'S ROLE

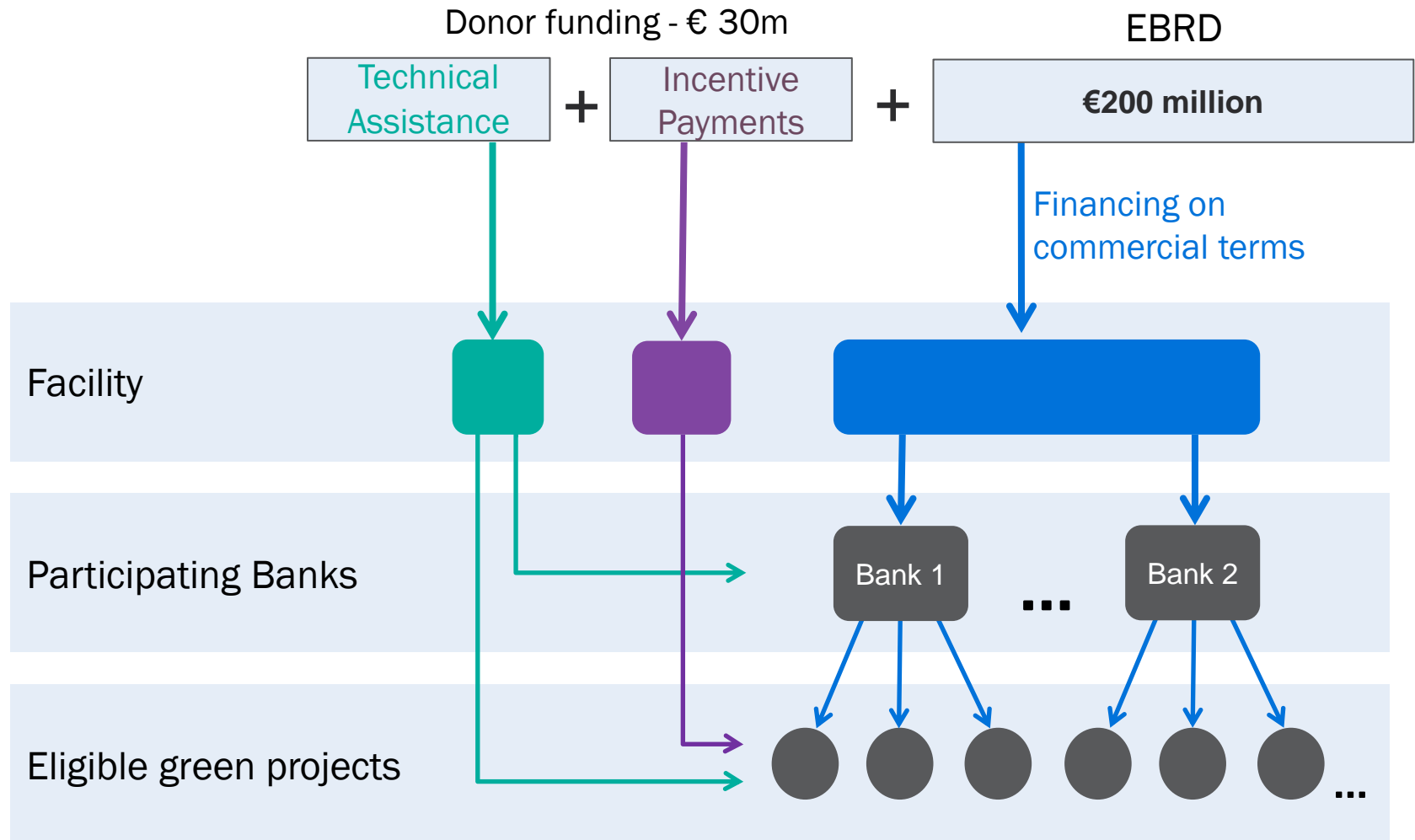
- Helped structure the project and provided debt.



## BENEFITS OF THIS STRUCTURED LOAN

- It helps reduce Lithuania's energy intensity, which is still 2.5 times higher than EU average.
- It addresses some of the investment demand of >€5 billion for retrofitting residential buildings.
- About 61% of the population live in multi family buildings built during the Soviet era, which require refurbishing in the near future.

- Programmes under development in EU-12



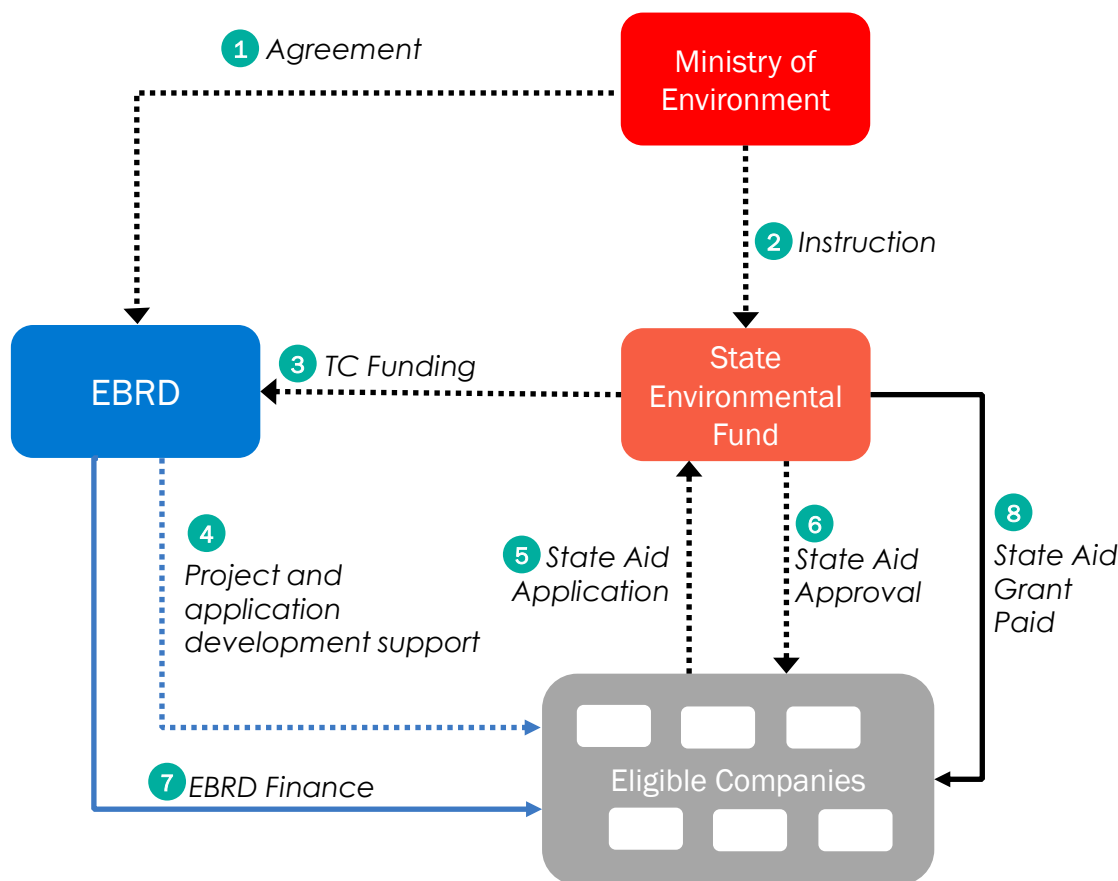
# Green Industrial Innovation Programme Slovakia

Supported by Slovak Ministry of Environment



European Bank  
for Reconstruction and Development

Supporting Slovakian industry to **go beyond EU air emission requirements**, using specific State Aid scheme.



1. EBRD and Ministry of Environment enter into Agreement
2. Ministry instructs the Environmental Fund (EF)
3. EF transfers TC funding to EBRD (EUR 1m to begin with)
4. With consultants, EBRD provides project development and state aid application support to clients
5. Companies submit applications
6. EF approves applications and allocates state aid grant money
7. Investment goes ahead with EBRD financing as appropriate
8. EF pays out grant after installation and verification (in the year after the year of expenditure)

# Climate Technology Innovation Program

In development with Horizon 2020



European Bank  
for Reconstruction and Development

For companies  
in Romania,  
Bulgaria and  
Latvia



Aggregator

EBRD indirect credit  
lines and direct  
lending products

## INNOVATION PLANS

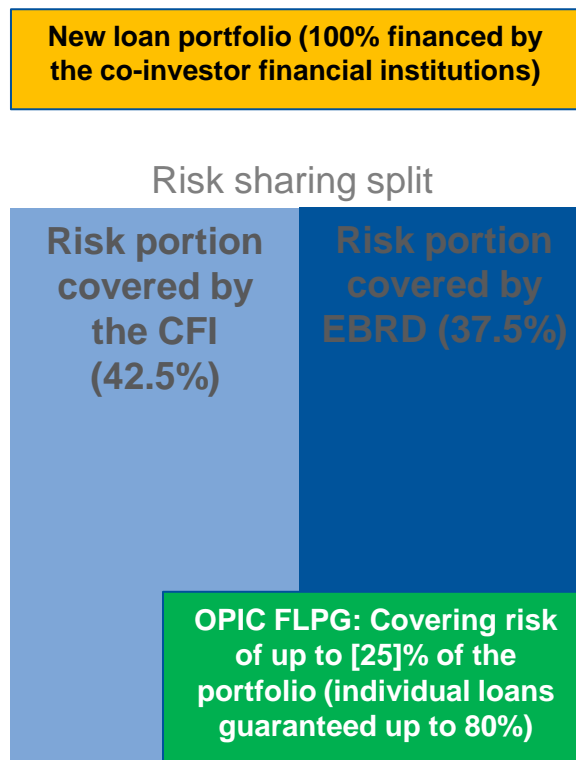
- Technical assistance for innovations in operations, productivity, environmental sustainability, and quality standards
- Capital investment grants where needed, e.g. for innovative technologies, monitoring, IT etc.
- Related costs e.g. contractual, IP etc.

Value chain mid-caps and SMEs

Lower value-added chain SMEs



- EBRD has been involved in the setting up of the Fund Manager for Financial Instruments in Bulgaria (“FMFIB”) with technical support.
- Currently, EBRD and FMFIB are in discussions regarding the management of the financial instrument under the Water and Wastewater investment window with funds from the Operational Programme (“OP”) Environment.
- Also discussing a First Loss Portfolio Guarantee with funds from the Operational Programme Innovation and Competitiveness combined with an additional Risk Sharing element from EBRD – e.g. as below:



## Energy efficiency product

- Total portfolio of new loans to final beneficiaries = €200 million
- FPLG = €40 million (provided by the OPIC budget)
- Leverage (OPIC/commercial funding) = 1:5
- EBRD’s risk-sharing (assuming 25% cap of the portfolio covered by FPLG) = €75 million (or 37.5% of the overall portfolio of new loans)
- Risk assumed by the co-investor financial institution = €85 million (or 42.5% of the overall portfolio of new loans)
- TC support to also be provided



- TC funding to support climate-related innovation
- Supported activities will include:
  - Proof-of concept with regard to new products, new materials and/or new business, organisational or production processes);
  - Technical development of products, new materials and/or processes;
  - Prototyping (product, material or process);
  - Testing (product, material and/or processes);
  - Environmental exploration/studies;
  - Design services;
  - Marketing services;
  - Project management;
  - IPR consulting

## INNOVATION FOCUS SECTORS

- Bio-energy
- Low carbon buildings
- Green transport and logistics
- Climate technology manufacturing and related supply chain improvements
- IT solutions for carbon reduction
- Advanced process technologies
- Development of circular business models
- MRV, Energy and Carbon Management Technologies
- Energy storage solutions
- CO<sub>2</sub> and other GHG removal and utilisation technologies
- Advanced agricultural processes
- Renewable energy technologies
- Innovative environmental technologies

According to the EU's High-Level Expert Group on Sustainable Finance:

- *Currently, the EU is not on track to deliver the €11.2 trillion required to meet its 2030 energy policy targets.*
- *The latest estimates put the annual investment gap at around €177 billion between 2021 and 2030, totaling €1.77 trillion.*
- *The biggest gaps relate to investment in energy efficiency in buildings (74%) and transport (17%)*
- *Geographically, the biggest gaps are in central and eastern Europe.*
- *Closing the investment gap will bring significant benefits, including clean energy and reduced greenhouse gas emissions; it will also create new jobs in Europe, reduce energy poverty and improve air quality*

The EBRD stands ready to support EU Member States to scale up investments in this area

# Indicative EBRD additional financing and donor funding needs in EU-12 over the next 4 years



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## INTERMEDIATED

Approximately EUR 1 billion of additional green financing is possible, with 20% grants and 5% technical assistance funding from donors

Bulgaria	125
Croatia	125
Cyprus	50
Hungary	130
Poland	200
Romania	200
Slovakia	125
Slovenia	50

*Investment in Estonia, Latvia, Lithuania and Greece may also be considered using intermediaries that are not financial institutions.*

## DIRECT

Approximately EUR 0.5 billion of additional green financing is possible, with 20% donor funding combined for technical assistance, and context-specific grants/ concessional finance.

	A	B	C	D	E
	Biofuels and Bioenergy	Energy efficiency in Midstream Oil & Gas	Value Chain financing in Agribusiness	Industrial EE (including raw materials and waste mgmt)	Green Technology Innovation
EU MS					
Bulgaria					
Croatia					
Cyprus					
Estonia					
Greece					
Hungary					
Latvia					
Lithuania					
Poland					
Romania					
Slovakia					
Slovenia					

- **Solid**
  - High and speedy impact - verified
  - Low risk: close monitoring and management
- **Sustainable**
  - Mostly commercial financing - just enough subsidy leads to sustainability in medium term
  - Intensive capacity building as part of core delivery
- **Visible**
  - Demonstration effect
  - Specific visibility plans (events, press briefings, articles, videos) to maximise impact
- **Proven**
  - Donors want to work with EBRD – largest current recipient of Green Climate Funding globally
  - Repeat clients percentage very high



# Thank you



**European Bank**  
for Reconstruction and Development

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Energy Efficiency & Climate Change

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For more information on EBRD's Green  
Economy Transition projects and initiatives:

<http://www.ebrd.com/what-we-do/get/knowledge-hub.html>

