

EBRD GREEN ECONOMY TRANSITION

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European Bank
for Reconstruction and Development



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What is the EBRD

2

The Green Economy Transition strategy

3

Examples of EBRD green financing instruments

4

Future EU funding programmes

What is the EBRD



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for Reconstruction and Development

Organisation

68 shareholding countries and the EU and the EIB

37 countries of operations from Central Europe to Central Asia

Basic principles

Sound banking

Transition Impact

Environmental Sustainability

Key stats

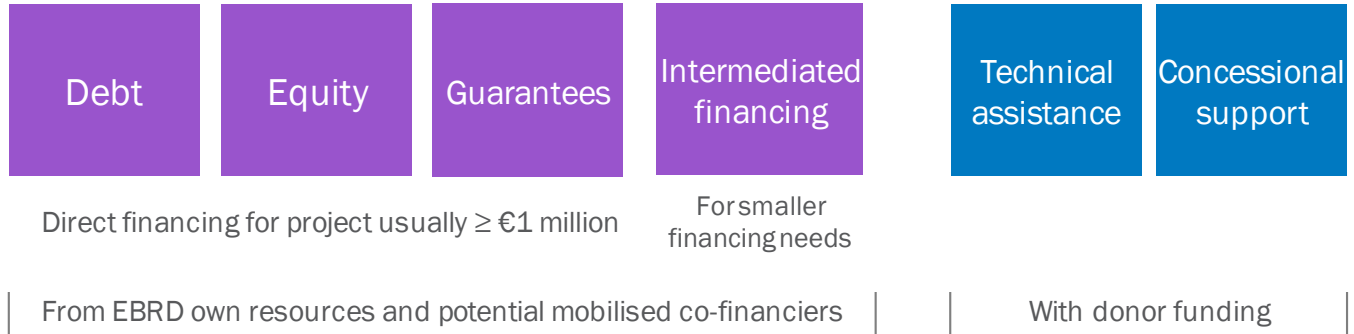
€30 billion capital base

€43 billion portfolio

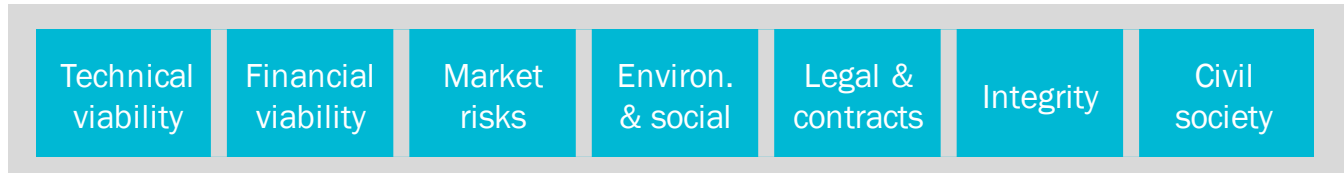
€9.5 billion financing signed in 2018

EBRD financing and support

Support instruments



EBRD due diligence



Plus...





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What is the EBRD

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The Green Economy Transition strategy

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Examples of EBRD green financing instruments

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Future EU funding programmes

The Green Economy Transition



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The GET is the EBRD strategy to increase the share of Bank's business represented by projects which have beneficial impacts on the environment or in terms of climate change. These can be found across all sectors financed by the Bank.

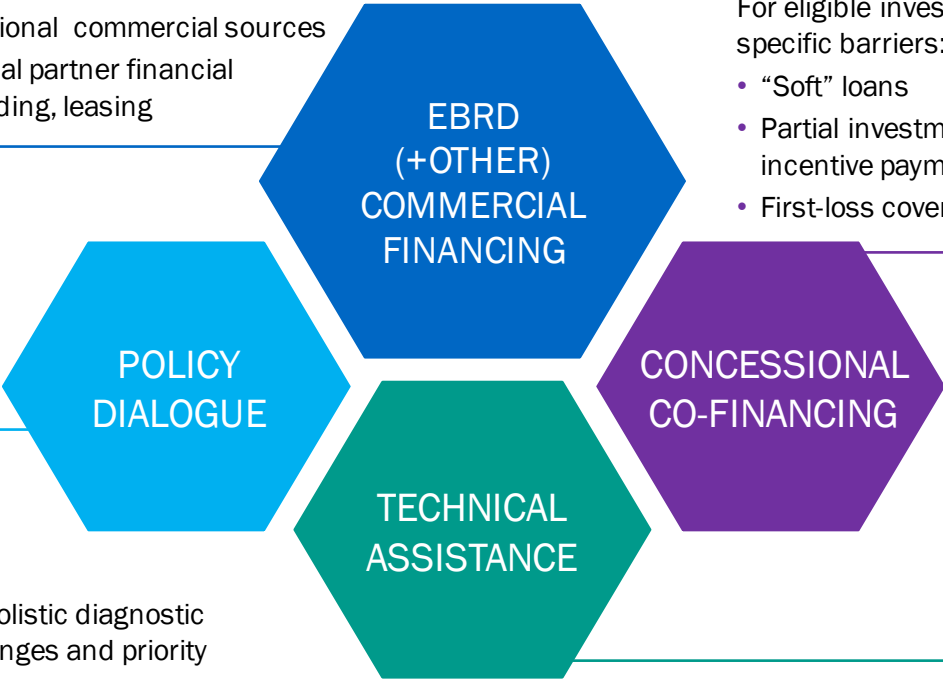
- Energy efficiency
- Renewable energy
- Water efficiency
- Resilience to climate change
- Waste minimisation and material efficiency
- Pollution control and environmental compliance



The GET business model



- EBRD direct finance: loans, equity investments or guarantees
- Mobilising additional commercial sources
- Indirectly via local partner financial institutions: lending, leasing



For eligible investments which face specific barriers:

- “Soft” loans
- Partial investment grants or incentive payments
- First-loss cover, guarantees

- Working with central authorities on optimum legislation for green economy development
- Supporting cities with holistic diagnostic of environmental challenges and priority investment planning

- Energy /resource efficiency audits
- Climate risk assessment
- Capacity building for local financial institutions
- Support with design, tendering, monitoring
- Support to adopt operational or CSR-type standards.

GET financing results in 2010 - Q1 2019



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FINANCED

1,350+

green projects

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

300+ credit lines to local financial institutions for on-lending to smaller projects.

SIGNED

€26 billion

of green financing

For projects with a total value of €160 billion

Since 2016 green financing has represented 37% of EBRD's total business.

AVOIDED

70 million

tonnes of CO₂/year

More than the annual energy use related emissions of Romania

+ since 2013, helped reduce 330 million m³ in water consumed /year = almost half of London's annual water use.





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The Green Economy Transition strategy

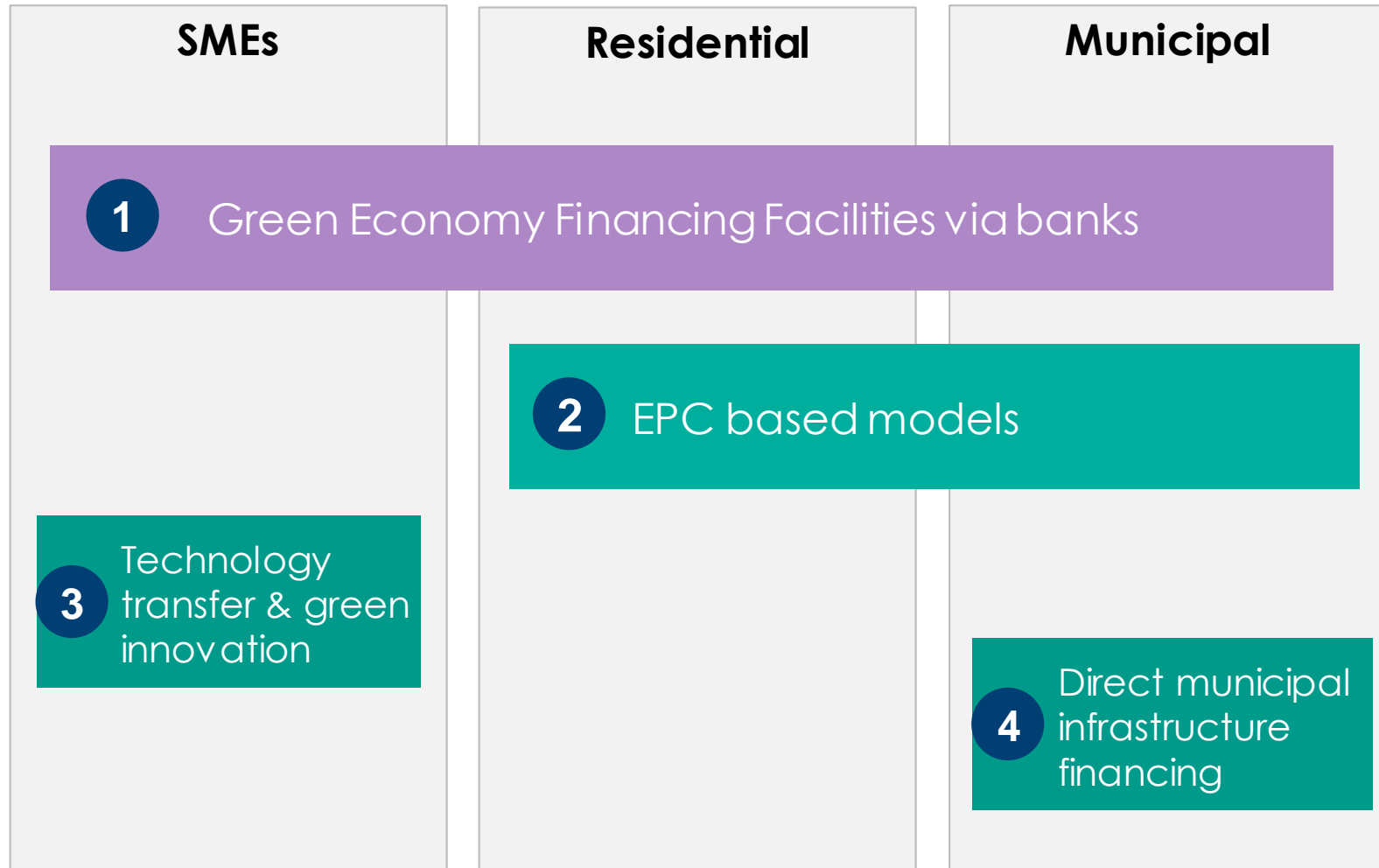
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Examples of EBRD green financing instruments

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Future EU funding programmes

Examples of GET instruments relevant for EU Countries of Operations



1 The Green Economy Financing Facilities

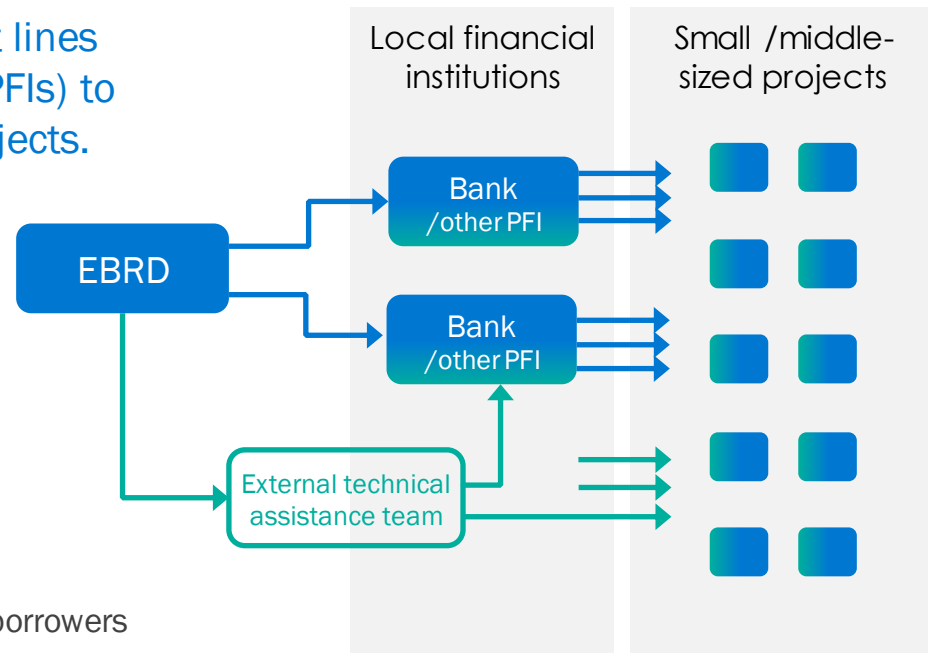
Through GEFFs, the EBRD offers credit lines to local partner financial institutions (PFIs) to finance small and mid-sized green projects.

Working via Partner Financial Institutions:

- Enables outreach to many small and medium-sized green opportunities
- Develops durable local financing markets by raising the capacity of PFIs to recognise green opportunities in the long-term.

GEFFs bring together:

- Credit lines to PFIs to be channelled to end-borrowers
- PFI capacity raising: training staff to recognise green opportunities, enhanced marketing outreach, targeted green financing products
- Project development support: direct assessment of larger-scale opportunities; online databases of pre-approved technologies for small-scale projects
- Incentive payments to end-borrowers /blended soft loans, aimed at addressing first-mover and affordability barriers (grant intensity is relatively low).



- Financing (e.g.: commercial loans, soft loans, grants)
- Technical Assistance

1 GEFF results in 2006-2018



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- ✓ GEFs in **26** countries
- ✓ more than **143** financial institutions
- ✓ more than **EUR 6** billion of financing mobilised
- ✓ over **175,000** projects (with businesses and households)
- ✓ equivalent of over **8.5** million tonnes CO₂ emissions avoided per year equivalent to half of Croatia's annual energy related CO₂ emissions
- ✓ target a variety of sectors:
 - Renewable generation
 - Industry
 - Logistics
 - Commercial buildings
 - Residential buildings
 - Public services
 - Climate resilience in agribusiness

1 GEFs success factors

- Catalyses banks, encouraging them to develop green financing as a durable business line
- Alignment of technical assessment of projects with banks' financing approval cycle
- Standardised approach to project eligibility checking especially for small scale investments
- Technology Catalogue enables market visibility for vendors and manufacturers of green products
- Can be aligned to complement national /regional support programmes and priorities acting as “one-stop-shops”
- High leverage of engaged donor support for technical assistance and/or incentives



1 GEF Technology Selector



PRODUCT CATALOGUE EBRD GEFF VENDORS



- CATEGORY
- Windows & Doors
 - Insulation
 - Boilers
 - Heat pumps
 - Power & Cogeneration
 - Cooling
 - Motors & Pumps
 - Process Technologies
 - Transport
 - Domestic Appliances
 - Lighting

TECHNOLOGY CATALOGUE

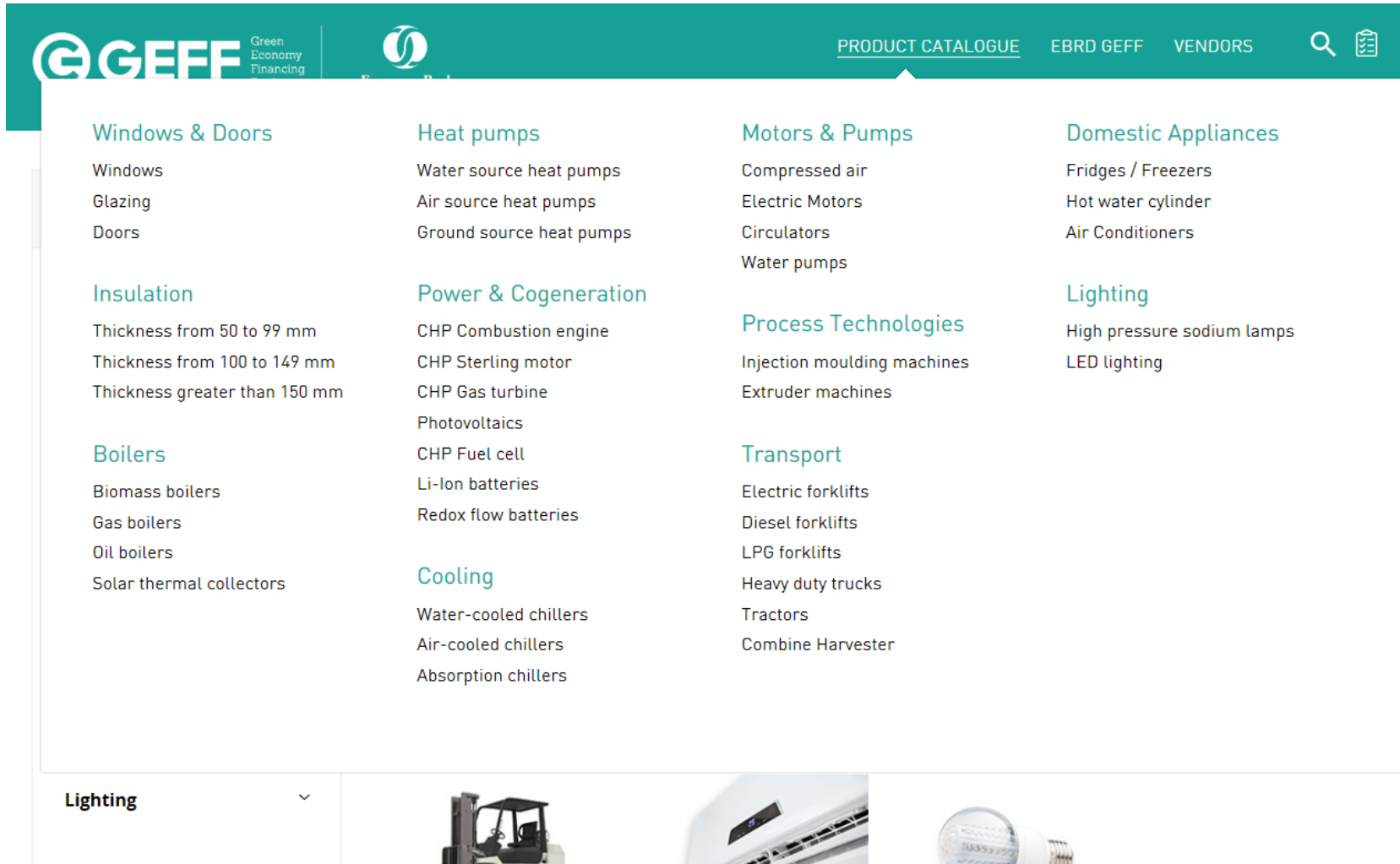
Browse products that are assessed as eligible by EBRD, per country. [Read more...](#)

Quick search: Country Technology Manufacturer

Search



1 GEF Technology Selector



The screenshot shows the GEF Technology Selector web application. The header is teal with the GEF logo (Green Economy Financing) on the left, the European Bank logo in the center, and navigation links for 'PRODUCT CATALOGUE', 'EBRD GEF', and 'VENDORS' on the right. A search icon and a list icon are also present. The main content area is white and displays a grid of technology categories. The 'Lighting' category is selected and expanded, showing a dropdown menu with the word 'Lighting' and a downward arrow. Below the menu, three images are displayed: a forklift, an air conditioning unit, and an LED light bulb.

GEFF Green Economy Financing

PRODUCT CATALOGUE EBRD GEF VENDORS

Windows & Doors
Windows
Glazing
Doors

Insulation
Thickness from 50 to 99 mm
Thickness from 100 to 149 mm
Thickness greater than 150 mm

Boilers
Biomass boilers
Gas boilers
Oil boilers
Solar thermal collectors

Heat pumps
Water source heat pumps
Air source heat pumps
Ground source heat pumps

Power & Cogeneration
CHP Combustion engine
CHP Sterling motor
CHP Gas turbine
Photovoltaics
CHP Fuel cell
Li-Ion batteries
Redox flow batteries

Cooling
Water-cooled chillers
Air-cooled chillers
Absorption chillers

Motors & Pumps
Compressed air
Electric Motors
Circulators
Water pumps




Process Technologies
Injection moulding machines
Extruder machines

Transport
Electric forklifts
Diesel forklifts
LPG forklifts
Heavy duty trucks
Tractors
Combine Harvester

Domestic Appliances
Fridges / Freezers
Hot water cylinder
Air Conditioners

Lighting
High pressure sodium lamps
LED lighting

Lighting ▼



1 GEF experience in Poland



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23,980+ sub-projects supported in 2011-18 via lending or leasing

€612 million of EBRD and partner financial institutions financing mobilised

230,000 tonnes of CO₂ estimated annual emission reductions



PoISEFF & PoISEFF 2

- SME EE facility active in 2011-8
- EUR 210 million in credit lines
- Partner financial institutions (PFIs): BNP, Millennium, BGŻ, BZ WBK, SG
- 2,000+ SME sub-projects financed worth EUR 214 million loans and EUR 19 million incentives
- 120,000 tonnes CO₂ reduced /year



- Facility for residential green projects
- Retail loans based on Technology Selector, mortgage loans, SME loans to vendors
- Compatibility with Clean Air Priority Programme (CAPP) and thermo-modernization tax relief Act
- EUR 85 million credit lines since 2016
- 14,000+ sub-projects; 35,000 tonnes of CO₂/year

GEFF Leasing Facilities

- EUR 250 million facility active in 2014-18
- 5 PFIs: BNP&CLAAS, Santander, SocGen, Millennium, PKO
- 5,500+ sub-projects financed for EUR 249 million; 49,000 tonnes of CO₂ reduced /year
- New EUR 350 million framework facility since 2017
- 1,196 sub-projects financed worth EUR 50 million by end of 2018

1 Municipal Sustainable Energy Financing Facility



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PROGRAMME

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

The facility brought 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

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

RESULTS (by end of 2016)

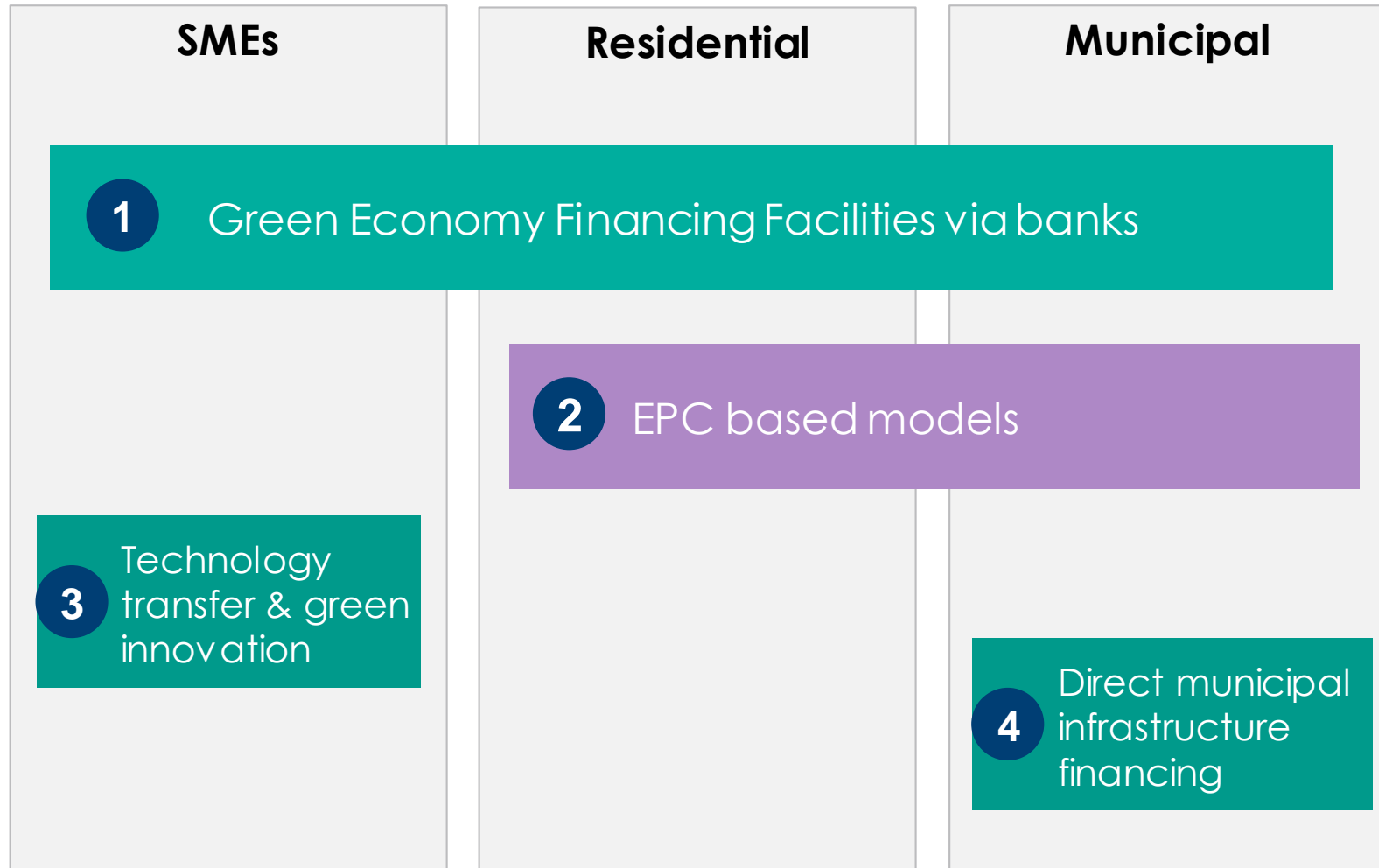
- 2 partner banks in Hungary, 1 in Romania and 2 in Slovakia
- 420 projects supported up to date with 94% of the MunSEFF funds. 80% are energy efficiency projects in buildings, the rest municipal infrastructure projects, mainly public lighting.
- 66 of the projects are implemented under concession or long-term maintenance or supply contracts.
- 18,000 tonnes of CO₂ 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 a 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.

Examples of GET instruments relevant for EU Countries of Operations



2 Energy Performance Contracting



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Stages of EPC market development
(for residential and public buildings
sectors)

- Improving legal framework and introducing EPC templates
- Structuring a critical mass of pilot projects
- Enabling early-stage financing for ESCOs
- Supporting more advanced stage financing of ESCOs (forfeiting schemes)

Lessons learnt to date

- Different countries are at different stages of market development
- EPC approach most useful for simpler projects, like street lighting
- Not an easy solution for substantial scaling up in buildings sector
- Where “pure” ESCO projects may not be the best solution, a more effective alternative is to integrate performance elements in other financing arrangements (via utilities, via municipal borrowing).

2 EPC project structuring support in Croatia



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EBRD has supported national authorities in Croatia and the Western Balkans with:

- EPC contract templates and for energy supply contracting,
- Standardising public procurement and contracting documents,
- Support to municipalities to prepare and tender projects.

in Croatia, since 2014:

- 7 directly supported street lighting ESCO projects implemented
- Another 15 municipalities used the contract templates and tender documents to procure street lighting ESCO projects
- 35,00 lamps replaced or about to be replaced for an estimated contract value of over €15 million; savings of 15,000 MWh.

Project example:

- Replacing 900 lights with highly efficient LED lights in a town in Istria with a population of 4,300
- Total capex of €411,000, with an 8 years payback based on energy and maintenance cost savings
- Financing sources: 36% grant-funded by Croatia's Environmental Protection and Energy Efficiency Fund and 64% financed by the bidding ESCO
- Estimated energy consumption savings of 57% and 56% of energy and maintenance costs, annually.



The ESCO market development work is part of the policy window of the broader Regional Energy Programme (REEP)

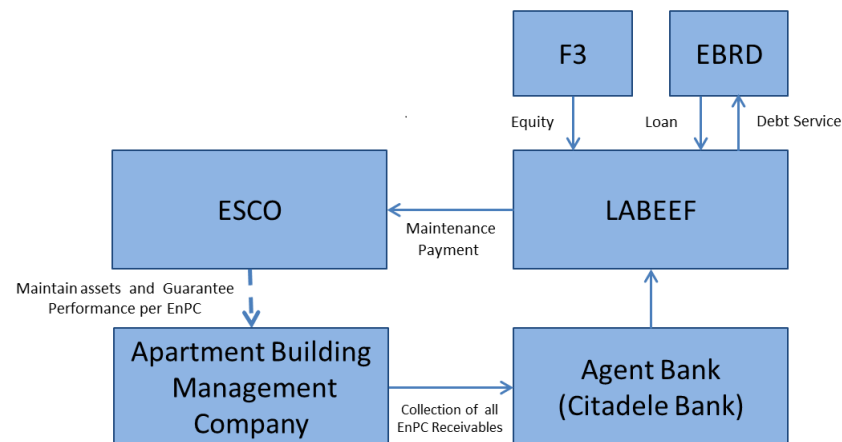
The REEP aims to foster low carbon transition in the Western Balkans region via policy dialogue, intermediated financing and direct EBRD engagement.

The EU is one of the main REEP donors.

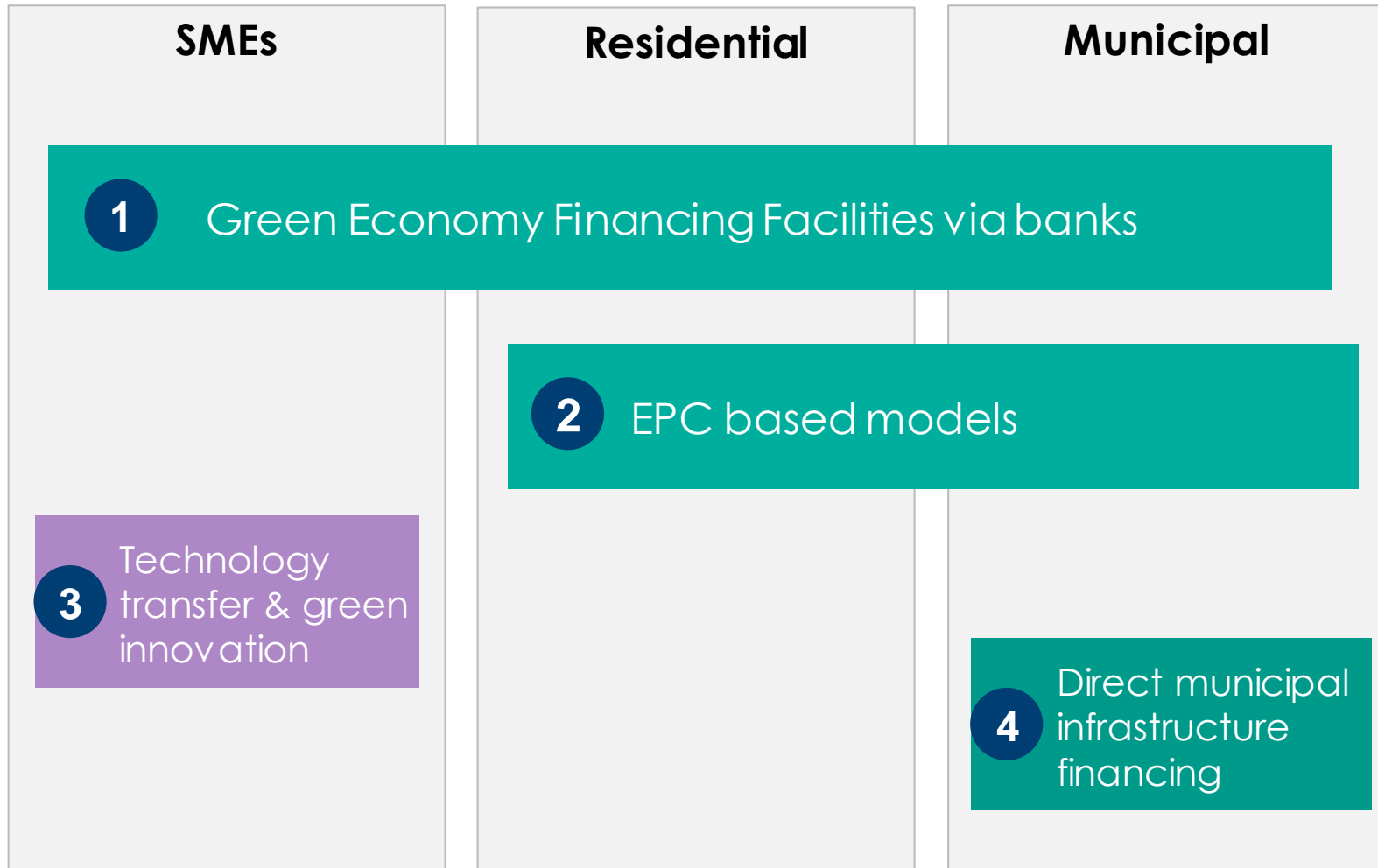
2 Supporting ESCO refinancing in Latvia

The Latvian Baltic Energy Efficiency Facility (LABEEF) repurchases the long-term investments necessary for multifamily building renovation.

- €2 million initial EBRD financing to LABEEF in parallel to private sector fund
- LABEEF purchases the receivables from Energy Performance Contracts (EPC) based on residential and public buildings.
- ESCO must have begun to receive its payments from the end-client
- Standardised qualification of underlying contracts based on guidelines developed including with EBRD support (e.g. building type, measures, etc.)
- Benefits for homeowners: energy savings levels of up to 50%; 20 year contracts with ESCOs with no initial out-of-pocket outlay; comfort main selling point!



Examples of GET instruments relevant for EU Countries of Operations



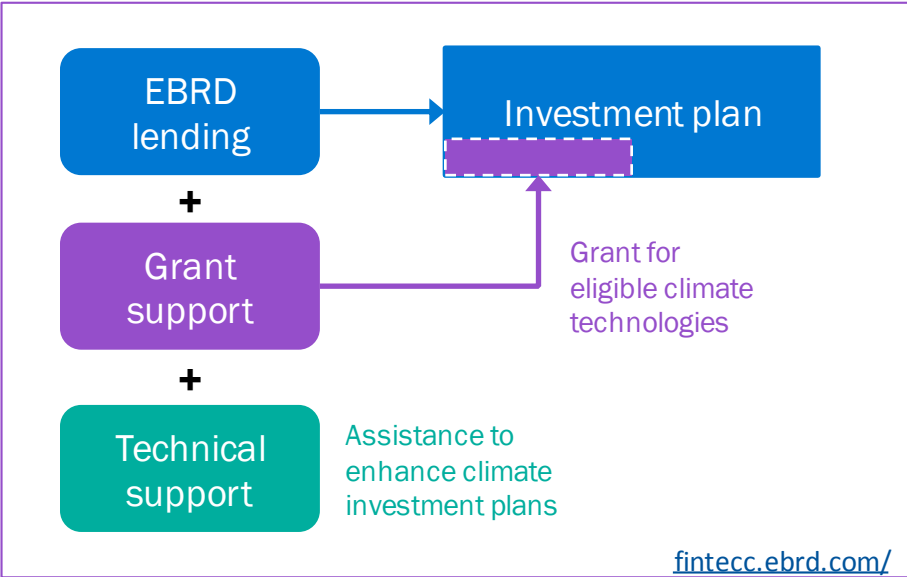
The Finance and Technology Transfer Centre for Climate Change (FINTECC) facilitates technology transfer to private companies in countries where advanced solutions have low market penetration rates.

FINTECC grants cover up to 25% of the costs of eligible technologies. Examples include:

- Tri-generation, high-grade thermal insulation, heat pumps, energy efficient cooling systems,
- Water recycling systems and advanced irrigation
- Carbon dioxide recovery systems, by-pass dust recycling, other material saving technologies in manufacturing.

FINTECC is supported with technical assistance assignments such as:

- Energy and resource audits to enhance companies' green investment plans
- Ascertaining that financed technologies are eligible for FINTECC grants
- Assessments of local technology markets and building of knowledge sharing networks.



Currently active in the Caucasus, Central Asia, Egypt, Jordan, Lebanon, Morocco, Tunisia and Ukraine.

46 projects supported since 2013

€140 million EBRD green lending supported with €12 million in FINTECC grants

230,000 tonnes CO₂ in estimated annual emission reductions

1.6 million m³ of estimated annual water savings.

3 FINTECC project example: Morocco



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CLIENT AND PROJECT

A family-owned Moroccan SME producing confectionary products for local and export markets.

EBRD is providing support for the construction and operation of a new production site on the outskirts of Casablanca. The total investment value is of €15 million.

SUSTAINABLE ENERGY MEASURES

Assessment funded by the EBRD Special Shareholders Fund evaluated feasibility of on-site PV generation and recommended additional energy efficiency measures (average payback of 6 years):

- Roof-mounted PV system
- Ice-based energy storage system to balance daily energy use and supply between cooling and cold storage needs
- Energy management system and ISO 50001
- Energy recovery from furnace chimney
- High-grade thermal insulation of building.

IMPACT OF PROJECT

- 50% of electricity needs covered from solar power. At the time of signing, the planned roof-mounted solar installation of 1.4 MW was the largest of its kind in Morocco.
- Fuel savings of some 600 tonnes of oil and annual emission reductions of 2,200 tonnes of CO₂ (equivalent to the annual footprint from driving 500 average household cars in the UK).



INVESTMENT PLAN

EBRD loan (in Moroccan Dinars)	€ 4.6 million
of which finance for sustainable energy measures	€ 2.2 million
Grant support for adopting advanced technologies	€ 0.3 million
Other commercial and own financing	€ 10.4 million

3 Green innovation support

Support for research, development, deployment or production related to environmentally friendly new technologies, new products, or innovative organisational or business models of interaction with suppliers/customers.

Launched in 2018 the programme is supported by:



■ Technical Assistance

Delivery

- Beneficiaries can be companies of any size in any of the EU-12 countries.
- Support in the range of €30,000 – €200,000

Examples

- Developing green innovation action plans /strategies
- R&D support: testing, prototyping, software development, patenting, intellectual property related TA.
- Installation of new technology: technical due diligence, O&M training
- Launching a new product: certification, marketing
- Adopting a new business model: software adaptation, training
- Investment facilitation: technical /financial due diligence, modelling.

■ Grant support

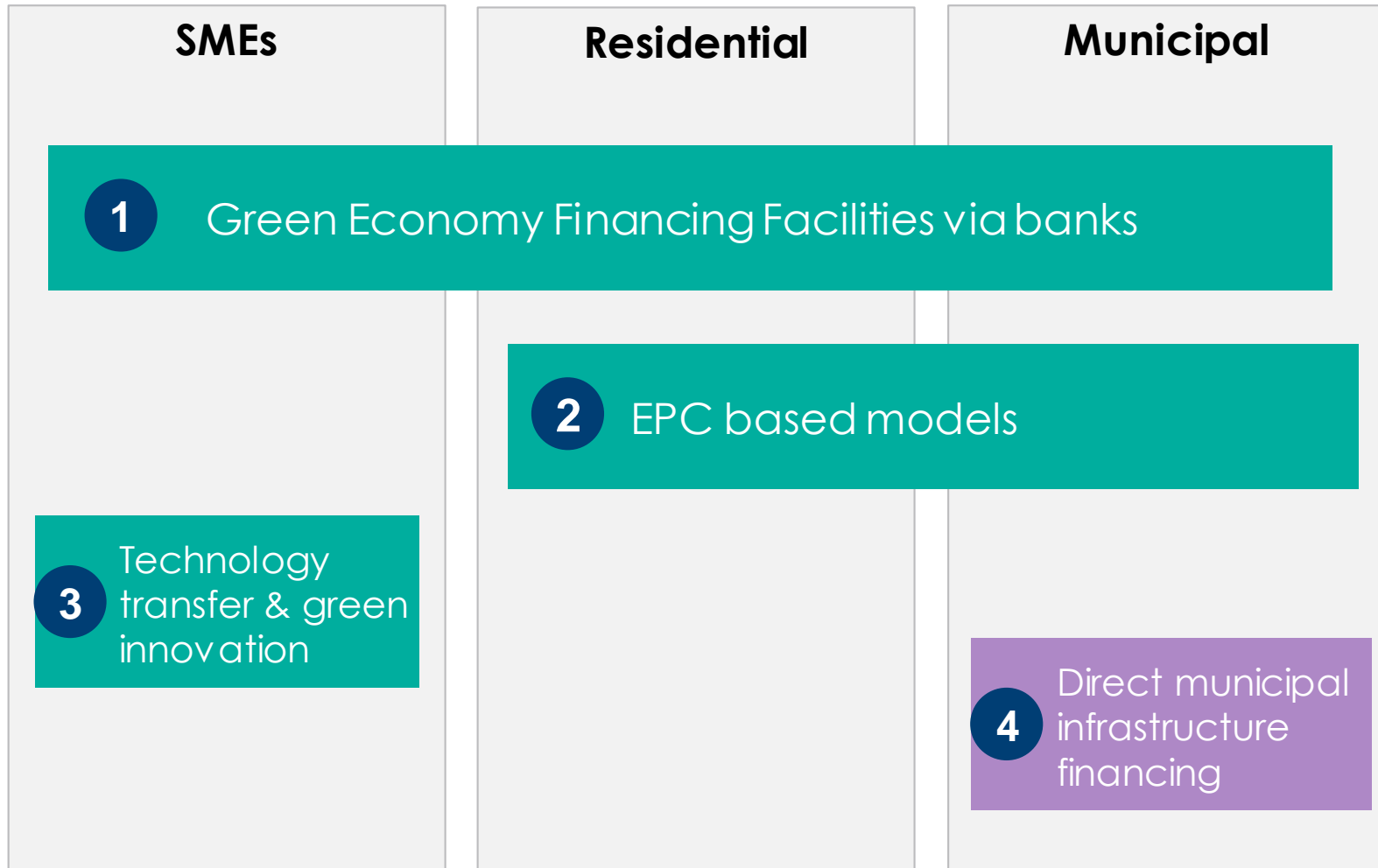
Delivery

- Beneficiaries will be SMEs or mid-caps in Bulgaria, Latvia or Romania.
- Grants of up to €500,000 per company, deployed as complementing EBRD financing. Paid upon verification of project implementation.

Examples

- R&D support: specialised equipment for R&D facilities
- Installation of new technology: support with incremental costs relative to standard technology or associated with first-mover risks
- Launching a new product: support with new production line, distribution /connectivity network
- Adopting a new business model: logistics network, digital hardware network, special preparation and conversion of land /site use.

Examples of GET instruments relevant for EU Countries of Operations



Direct engagement of municipalities Green Cities Programme



The Green City Programme provides a systematic approach to promoting low-carbon cities via a holistic assessment of gaps, opportunities and priorities for upgrading a city’s infrastructure and services.

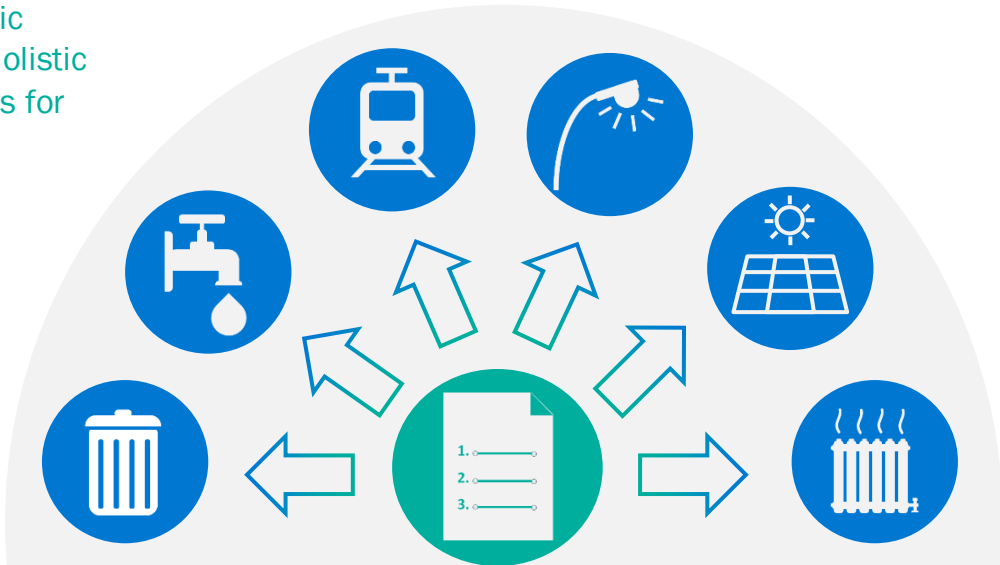
The central instrument is a Green City Action Plan (GCAP) whereby the EBRD partners with cities to identify, benchmark and prioritise the most pressing environmental and energy related improvements and indicative investments.

Programme components:

- ▶ Strategy support as Green City Action Plans
- ▶ Financing of identified priority investments
- ▶ Potential use of soft loans or grants
- ▶ Project development and implementation assistance.

Type of improvement areas mapped via GCAPs:

- Sustainable waste management
- Water and wastewater improvements
- Sustainable urban transport
- Street lighting energy efficiency
- Public buildings energy efficiency
- District heating rehabilitation.



Green City Action Plan

Steps to engage the programme:

1. A “trigger” project opens cooperation with EBRD
2. A Green City Action Plan is developed with donor support
3. Follow-up priority projects are supported over the medium-term

GCAPs finalised to date **Tbilisi, Tirana, Yerevan**. 22 other under development.

CLIENT AND PROJECT

EBRD is supporting the water and wastewater company of the Canton of Sarajevo to modernise its water supply.

Before the rehabilitation, “non-revenue water” (losses, unbilled consumption) has been estimated at 76%. There are often night time supply restrictions of up to 6 hours.

The phased modernisation will improve service reliability, quality and operational costs. The first phase will include:

- Rehabilitation of pumping stations (efficient electrical equipment, chlorination processes)
- Reconstruction of 25km of pipe network
- Metering and control equipment.

TECHNICAL ASSISTANCE

Aside from design, procurement and implementation support, a number of specific EBRD TA tools are being offered:

- The introduction of a Public Service Contract between the company and the Canton, and of a Financial and Operational Performance Improvement Plan, aim at putting the company on a track to become commercially sustainable;
- A Green City Action Plan for Sarajevo is being developed to identify environmental performance gaps and further priority investments in municipal infrastructure.



FINANCING PROGRAMME

EBRD sovereign loan for phase 1	€ 10 million
Planned technical assistance	€ 1.7million
Possible EBRD loans for later phases	€ 15 million

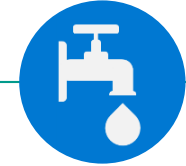
GREEN ECONOMY IMPACTS

- Reduction of water losses from the current 70%+ to roughly 50% via upgrades in pipes and metering
- Electricity consumption will be lowered by 35% for the rehabilitated assets.

4 Direct infrastructure support Co-financing EU Structural Funds



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Romania water sector since 2010

- Contribution to large-scale water infrastructure rehabilitation investments
- Provided the needed co-financing to complement EU Cohesion grants
- First commercial terms lending to newly formed regionalised water utilities
- Enabled Romania to meet key water related EU Directives
- As of 2016: signed loans with
 - 24 regional water companies
 - EUR 312 million of EBRD loans
 - EUR 2.08 billion co-financed Cohesion Fund grants.

Bulgaria water sector since 2018

- Support for newly formed commercialised municipal water supply and wastewater companies
- Bulgaria's Fund of Funds who manages Structural Funds allocations, signed an ESIF amount for the EBRD to deploy as either long-term parallel loans for directly financed water companies, or as guarantees for co-lending banks
- EUR 115 million of ESIF funding prospectively allocated to EBRD
- EUR 115 million in EBRD lending
- To complement EUR 600+ million in future Structural Funds grants.



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Future EU funding programmes

Major green financing programme proposals under the next EU MFF

- **InvestEU** is the Union's €38 billion new instrument. It provides an EU guarantee with a view to mobilising public and private financing, for strategic investments in the support of EU policies. At least 30% share of the overall InvestEU envelope will be dedicated to achieving EU climate goals. Implemented primarily by EIB (continuation of Juncker Plan) but a percentage will be open to other IFIs and National Promotional Banks.
- The bulk of **European Regional Development Fund and Cohesion Fund** (overall budget of €273 billion) investments will go towards innovation, support to small businesses, digital technologies and industrial modernisation. It will also go to the shift towards a low-carbon, circular economy delivering on the Paris Agreement.
- **Horizon Europe** continuation of Horizon2020, with a budget of €97.6 billion, is a research and innovation programme and a driver of economic growth and jobs.
- **The External Action Plan** will be a major guarantee programme targeting geographies outside the EU, building up on the current pilot EIP.
- **LIFE +** (with a dedicated of €5.4 billion in the next EU budget) is the Programme for the Environment and Climate Action. It focuses on developing and implementing innovative ways to respond to environment and climate challenges, such as the transition to clean energy.
- A proposed new €4.8 billion fund for a **Just Energy Transition** to support local communities in coal-heavy regions across Europe away from fossil fuels has been proposed.
- The **Modernisation Fund** and the **Innovation Fund**, based on ETS revenues.

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Links

- [Green Economy Transition](#)
- [Green Economy Financing Facilities](#)
- [REEP](#)
- [FINTECC](#)
- [Green Innovation Programme](#)
- [Green Cities Programme](#)
- [Bulgaria water framework](#)