

Integrated Carbon Programmes WB Technical Workshop 1 June 2016

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European Bank
for Reconstruction and Development

EBRD at a glance

- Promotes transition to market economies in 36 countries from central Europe to central Asia
- Since 2011, the Bank has expanded its operations to include Egypt, Morocco, Tunisia, Jordan, Cyprus and Greece
- Owned by 65 countries and two inter-governmental institutions, with a capital base of €30 billion



The map shows the EBRD's operational region, which includes 36 countries from central Europe to central Asia, plus Egypt, Morocco, Tunisia, Jordan, Cyprus, and Greece. The countries are color-coded: blue for the 36 transition economies, red for the six additional countries, and light blue for the rest of the world.

**SOUND
BANKING**
& SUPPORT TO
THE PRIVATE
SECTOR

**TRANSITION
IMPACT**
&
ADDITIONALITY

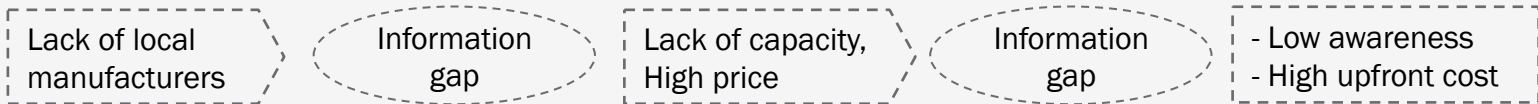
**ENVIRONMENTAL
SUSTAINABILIT
Y**

Barriers to sustainable energy and resource investments

Gaps in the climate technology supply chain

- Limited market availability of energy efficient technologies
- information gap among players along the supply chain

Technology supply chain



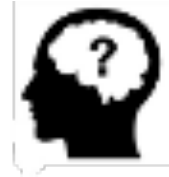
Credit-related risks

- High perceived credit risks due to the lack of sector track record
- Long pay-back period for investments in energy supply and utilities
- Commercial loans not readily available



Behavioural barrier

- Low awareness
- High upfront costs -> EE investments are highly discounted and lifecycle savings are overlooked



Inadequate pricing and regulatory environment

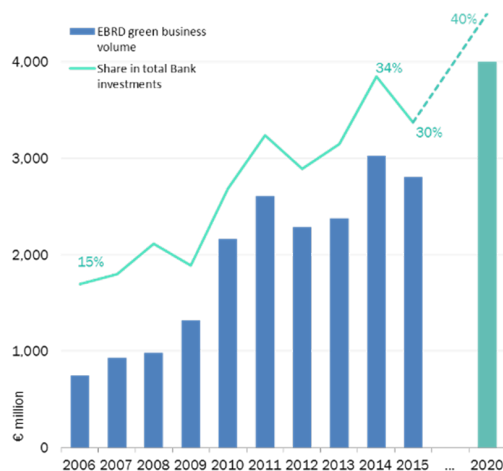
- Limited policy support, capacity and expertise: e.g. reforms to support renewable developers inadequate, inadequate pace of industrial restructuring, low collection rates (ETCs)
- Tariffs not reflective of the costs of energy generation, water and waste management services and externalities
- **Unclear carbon pricing signals**

EBRD's green economy transition approach

Scaling-up

The **Green Economy Transition (GET)** approach aims to increase the EBRD's green financing to around **40% of total EBRD financing from 2016 to 2020** up from a 25% target from 2011 to 2015.

- GET financing of up to **€18 billion** with annual GET financing reaching **over €4 billion by 2020**
- Mobilisation of **another €60 billion** for a total project value up to €78 billion
- Between 50% ~ 66% of GET financing from the private sector, driven by the EBRD business model

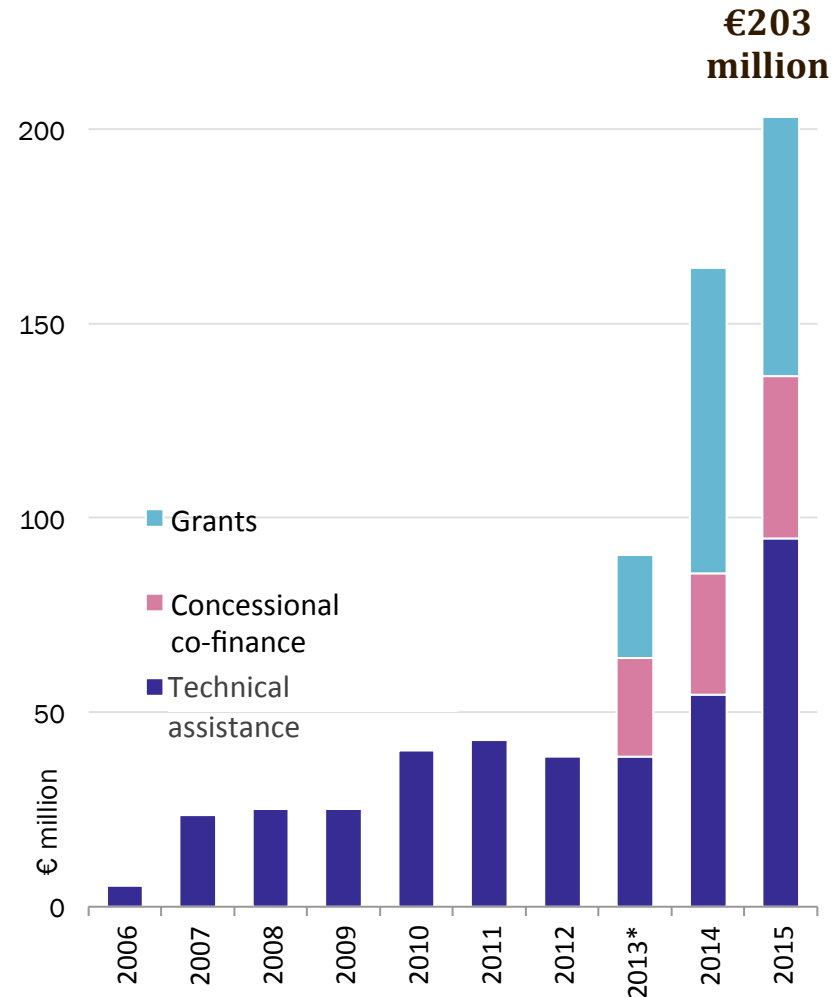


The GET approach builds on a track record of green financing (Sustainable Energy and Resource Initiative) over the past 10 years, which has led to:

- **Emission reductions:** 73 million tonnes/year (equivalent to more than annual emissions in Austria)
- **Annual energy savings:** 1.1 million TJ/year (equiv. to 26 million toe/year; equivalent to more than Greece's annual energy consumption)
- **Water savings:** 25 million cubic metres/year (equivalent to 68,000 people's yearly water consumptions)
- **Waste avoided:** 1 million tonnes/year

Mainstreaming Green Financing: Climate Finance and Donor Support

- The EBRD facilitates access to specialised donor resources for:
 - Targeted technical assistance to complement project scoping or implementation
 - Concessional finance to blend with EBRD financing
 - Grant incentives for borrowersto help overcome barriers such as MRV, affordability constraints, first-mover risks, behavioural and perceived risks, low technology penetration rates
- The EBRD partners with major providers of multilateral concessional climate finance resources like EU, CIF and GEF, and bilateral donors.
- The EBRD is accredited to the Green Climate Fund



* Full SRI concessional co-finance and grant data available from 2013 on

Examples of EBRD Support to Baseline and Credit Instruments

The EBRD invested and supported over 35 JI, CDM and Voluntary carbon projects in its Region, including Armenia, Bulgaria, Estonia, Jordan, Georgia, Lithuania, Mongolia, Ukraine and Russia.

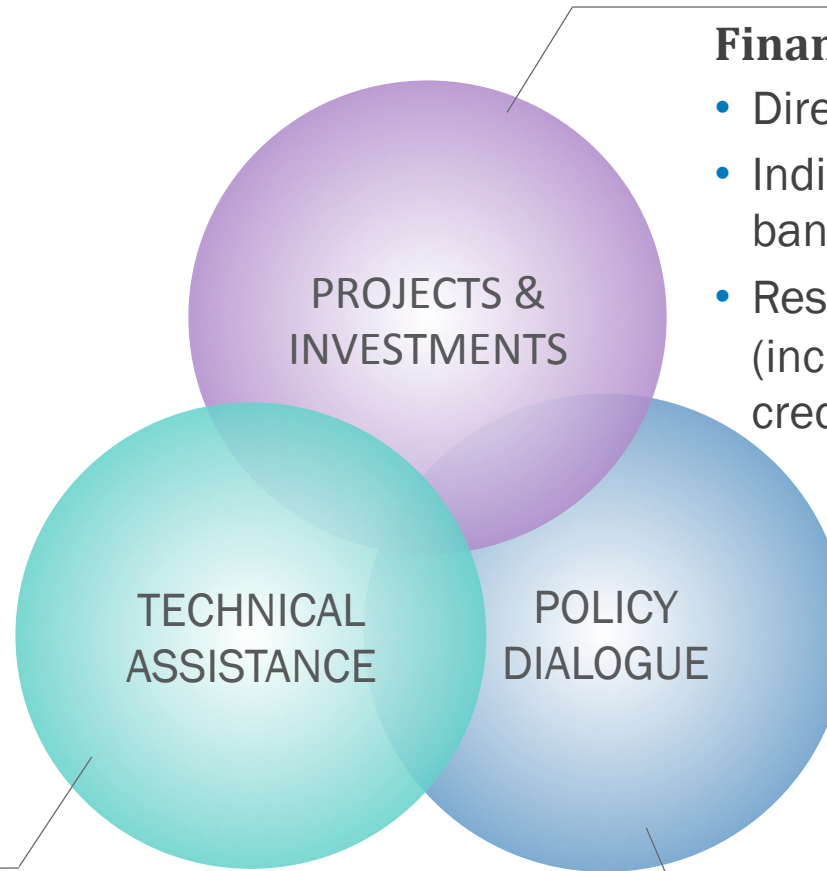
Examples

Country	Project / Programme	EBRD Financing	Carbon Credit Type	Support
Turkey	MIDSEFF – sub-projects (5)	EUR 1.5 billion	Gold Standard, VCS	Carbon Asset and Methodology
Turkey	Bursa Light Rail	EUR 70 million	VCS	Carbon Asset and Methodology
Kazakhstan	Yerementau Wind	EUR 59 million	Domestic Carbon Credit	Carbon Asset Development
Georgia	Enguri	EUR 58 million	CDM	Support to Asset Development and Monetise

Integrated Carbon Programmes (example of activities)

Technical assistance:

- Baseline studies / benchmarking
- Carbon market intelligence / studies
- Support for implementing robust Monitoring Reporting and Verification
- Support for contracting
- Training Banks on Carbon Market Services



Financing instruments

- Direct financing
- Indirect-financing via local banks (SEFFs)
- Result based donor finance (incl. purchase of carbon credits)

Capacity Building

- Strengthen institutions and regulations
- Carbon market options Definitions e.g. net global emission reductions.
- Sector based pathways to carbon neutral

ICPs funded by Spain

Spain: Technical assistance: EUR 3.25 million

Carbon purchases: EUR 7.75 million

EBRD: Emission reduction projects in/directly financed by EBRD

ICPs:

1. Upscaled carbon approach in SEMED for renewable energy
2. Fintecc MRV in Egypt (fintecc.ebrd.com)
3. Green Investment Scheme in Slovakia (www.slovseff.eu)

Key features:

1. Policy: Support for carbon instrument development, including emphasis on MRV and methodologies
2. Projects: Leverage investments in sustainable energy, with co-finance for result based emission reductions / carbon credits.

Example Carbon Price Underwriting MCCF – GIS SLOVAKIA

Carbon reduction
compensation = CO₂e
emissions avoided per year (in
tonnes) * €20 * 3 years *
0.943*

(minimum 5% of disbursed
loan, maximum 20% of
disbursed loan)

(*) rounded figure
corresponding to a discount
rate of 3% over 3 years

Projects covered by the EU ETS may also be eligible to receive a CRC provided that an equivalent amount of EU allowances (EUAs) is cancelled at the benchmark market price in respect of which the CRC is paid, to avoid double-counting of emission reductions.

The CRC calculation for ETS covered may be different.

Thank you!

For all further enquiries, please contact:

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Climate technology transfer: Sustainable energy for Moroccan food producer

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.

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

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

- 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).
- At the time of signing, the planned roof-mounted solar installation of 1.4 MW was the largest of its kind in Morocco.

TECHNOLOGY TRANSFER SUPPORT

The project benefits from partial grant support from EBRD's FINTECC (Finance and Technology Transfer Centre for Climate Change) programme which aims to accelerate the uptake of advanced resources efficiency technologies in countries with low market penetration levels and underdeveloped supply chains.

The programme offers up to 25% grant cover for the cost of eligible climate technologies with high replication potential. Targets early market development and affordability and "first-mover" barriers.

*The programme is supported by the
Global Environment Facility*



ONEE Rehabilitation – Morocco

Borrower

L'Office National de l'Electricite et de l'Eau Potable (ONEE)

Signing date

November 2015

Loan

A sovereign guaranteed senior loan of EUR 35 million

Project

The operation will enable the Company to rehabilitate 12 hydropower plants (ranging from 1 to 31 MW capacities) and 3 dams and build resilience to risks associated with climate change in Morocco. The Project will significantly extend the lifespan of the hydro assets as well as improve their climate resilience, energy efficiency and safety.

Khalladi Wind Farm - Morocco

Borrower

UPC Renewables SA , a special purpose vehicle 70% owned by ACWA Power (ACWA), 25% owned by ARIF, a North-Africa and Sub-Saharan Africa-focus infrastructure fund managed by Infra Invest, a North-Africa-focus fund manager and 5% owned by UPC Renewables

Signing date

November 2015

Total project costs

EUR 163 million

Co-financing entities

BMCE
Clean Technology Fund

Project

The Khalladi wind farm, with a capacity of 120 MW, will be developed under Morocco's renewable energy legal framework (13-09 law) which allows private companies to sell renewable energy directly to private offtakers through the use of the national grid.