Innovation in financing CCUS

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EBRD - Energy efficiency and Climate Change
What is the EBRD

- Multilateral financing institution established in 1991 to support transition to market economies
- Owned by 66 countries, the EU and the EIB

- €30 billion capital base
- €41 billion portfolio
- €9.2 billion average annual business in the past 3 years
- 3 key operational principles
  - Sound banking
  - Transition impact
  - Environmental sustainability
How projects are assessed at the EBRD

- Credit and financial risks
- Environmental and social risks
- Integrity analysis
- Civil society engagement

- Market Transition Impact
- Green Economy Transition impact
The EBRD Region and Climate Change

Carbon emission intensity of economies in the EBRD region in 2014

2014 energy-use related CO₂ emissions per unit of GDP (expressed as 2010 US$, at market exchange rates). Source: IEA
Mainstreaming Green Financing: the EBRD Business Model

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

**EBRD (+OTHER) COMMERCIAL FINANCING**

- Working with governments on legislation that creates optimum conditions for green investments
- Supporting the development of legal instruments and best practice guidelines (e.g. contract templates, tenders).

**POLICY DIALOGUE**

- Resource efficiency audits
- Capacity building for local financial institutions (staff training, marketing, green retail lending products)
- Climate vulnerability assessment

**TECHNICAL ASSISTANCE**

- Project structuring support (e.g. tendering, investment guidelines)
- Support to adopt operational or CSR-type standards (energy management, buildings certification, reporting).

**CONCESSIONAL CO-FINANCING**

Concessional finance and grants address barriers regarding pricing and credit risk:

- Reward energy, resource and CO₂ savings in the absence of right pricing of CO₂, water and waste
- Make technologies with high (upfront) costs affordable
- Address Equity/capital gaps
- Cover the first loss to address first-mover risk in the absence of track record in the sector
The EBRD’s Track Record in Green Economy Transition

- The EBRD has been engaged in green economy finance since its establishment
- In 2006, the EBRD launched the Sustainable Energy Initiative to address the twin challenges of energy efficiency and climate change
- The EBRD was the first multilateral development bank (MDB) with a dedicated pool of technical experts in-house
- In 2009, the EBRD became the first MDB to set itself a carbon emissions target
- In mid-2014, the EBRD has already exceeded the three year (2012-14) target under the UN’s Sustainable Energy for All initiative

The EBRD’s engagement in the context of its countries of operations:
- high share of heavy industry
- ageing infrastructure
- high energy intensity
- a lack of market-based pricing for energy
Mainstreaming Green Financing
Results in 2006 – 2017

FINANCED
1,500
Green Projects and Credit Lines

1,100 directly financed projects

400 credit lines to local FIs

SIGNED
>€26 billion
of green financing

36% of total business

REDUCED
>90 million
tonnes of CO$_2$/year

>200 million m$^3$/y water savings
GET IMPLEMENTATION REVIEW
2017 RESULTS

GET & PROJECTS

- €4 billion GET ABI
- 43% GET share in EBRD ABI
- 186 GET projects

PHYSICAL IMPACT

- 6.3 million tonnes CO₂ per year expected emission reductions
- 144 million m³ per year estimated water savings
- 610,800 tonnes per year waste material minimisation

PORTFOLIO COMPOSITION*

- €3 billion in energy efficiency, resource efficiency and environmental projects across sectors
- €958 million in renewable energy projects
- €392 million in 31 projects with climate resilience components

GREEN ECONOMY FINANCING FACILITIES

- 39 credit lines signed under the Green Economy Financing Facilities
- 10,207 sub-projects signed under the Green Economy Financing Facilities

* Certain projects have multiple benefits which are captured in mitigation, adaptation and other environmental GET categories.

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CCUS: key risks...

- Technology
- Market
- MRV
- Regulatory
- Misaligned Incentives
- Environmental Impact
- Social Acceptance
- Underdeveloped Infrastructure on Transport/Storage
Financing the Transformation: creating the right incentives…

- New value chains & business models: creating the commercial incentives for Capture and Use...+other revenues streams?
- The role of R&DI (initially government induced), TC (to support project preparation), concessional finance, policies (applying good practice from other sectors: e.g., contract for difference).

…and building on industry strengths

- Scale: materials, energy demand, costs, market complexity
- New industrial landscape (new industry clusters)
- Industry collaboration & integration (largely absent to this day)
- Circularity: the relevance of global frameworks
Pre-requisites…

• The role of concessional finance and innovation finance: e.g., demonstration of first of kind, ‘value of death’.
• Different energy vectors: electricity, hydrogen, gas (increasingly ‘green’ gas)
• Markets for low-carbon products (carbon pricing and carbon price pass through)

..and Challenges

• Risk allocation: reducing the cost of finance.
• Industrial scale up of materials and energy (electricity, gas, hydrogen)
• Consistency of investment with long-term objectives and market trends
• Residual GHG emissions: total decarbonisation??
• Acceptability: location of industrial clusters (social cohesion)
• Industrial collaboration: partnerships around new value chains
Innovative Green Finance: Low-Carbon Pathway for Egypt’s cement industry

• The EBRD engaged with relevant ministries and the national cement industry association to define priority upgrades and targets for a technology upgradation roadmap.

• In 2016 the Government announced targets of 15% usage of alternative fuels and the reduction of clinker content to less than 80% at the level of the industry by 2030.

**Project example**

• Cooperation with the Egypt subsidiary of a large international cement group owning a cement plant which accounts for 10% of the installed production capacity in the country.

• EBRD signed a €50 million loan in 2015 to support the upgradation of the plant. €15 million of the loan is targeting “green” measures:
  - Introduction of alternative fuels (AF) derived from municipal waste into the new fuel mix used to fire the plant’s kilns
  - Installation of dust filters to reduce dust emissions to the levels required by the EU Industrial Emissions Directive.

• 47,000 tonnes of CO₂ estimated annual emission reductions. The project will drive the development of the local AF supply market, including through suppliers’ training workshops.
THANK YOU

For more information:
http://www.ebrd.com/what-we-do/get.html