

Financing Power and Energy

EBRD perspective

February 2017



European Bank
for Reconstruction and Development

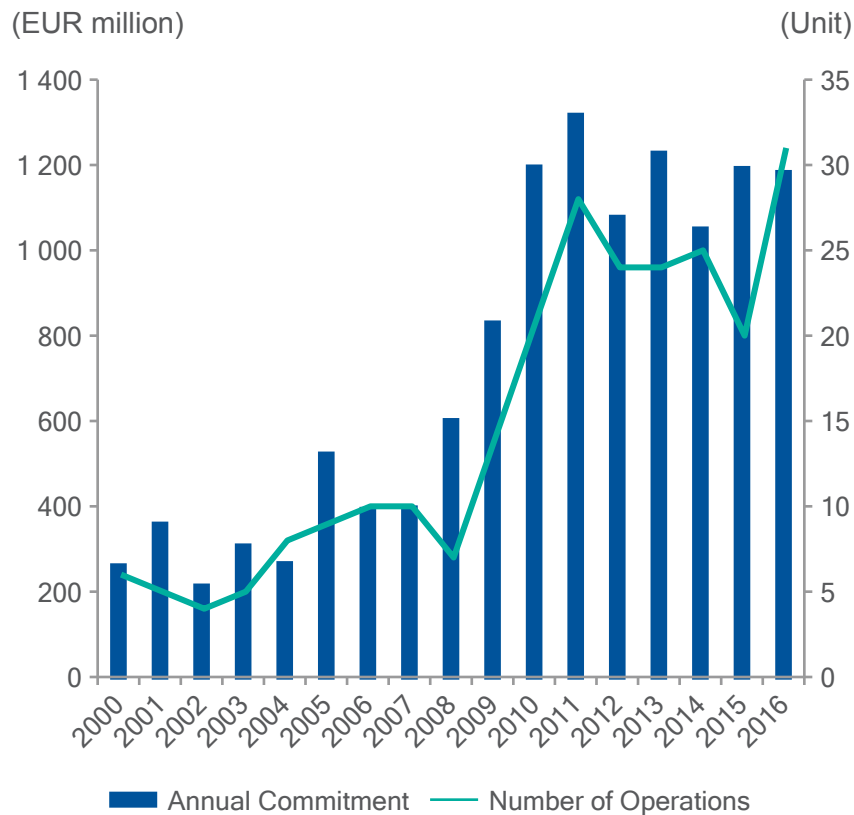
Team of ca. 35 bankers, based in London, Amman, Bucharest, Cairo, Istanbul, Kiev, Skopje, Sofia, Tbilisi and Warsaw

EBRD's Power team works closely as a trusted partner to clients and governments towards its strategic aim to deliver energy that is secure, affordable and sustainable using the following operational approach:

- Promoting renewable, energy efficiency and sustainable energy through direct financing and policy dialogue.
- Supporting sector reforms and allowing market principles to develop (e.g. increased competition, market liberalisation, increased private ownership).
- Strengthening frameworks and infrastructure that lead to regionalisation (eg. trans-border transmission lines, regional trading hubs) but also integration of renewable energy.
- Supporting the deployment of new technology e.g. smart metering.



EBRD matches increasing financing needs from Power and Energy sector in its countries of operations



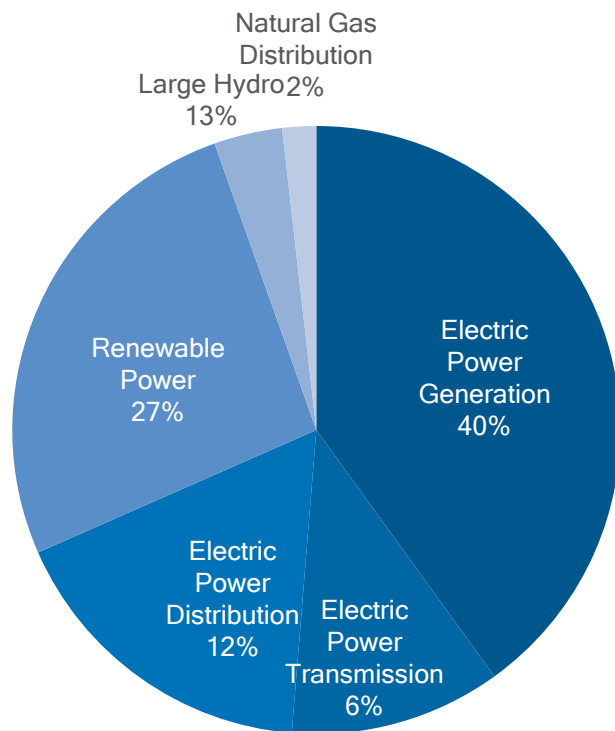
Updated as of 31 December, 2016.
Source: EBRD data

- Cumulative EBRD financing in the sector since 1992 has exceeded EUR 11.3 bn, spread across 251 projects.
- In 2016 EBRD invested EUR 1.2 bn in 31 projects in the power & energy sector.
- From 2010, power & energy investments doubled to exceed EUR 1 bn with more than 20 operations executed annually.
- At least 20% of those funds went towards renewable energy generation projects.

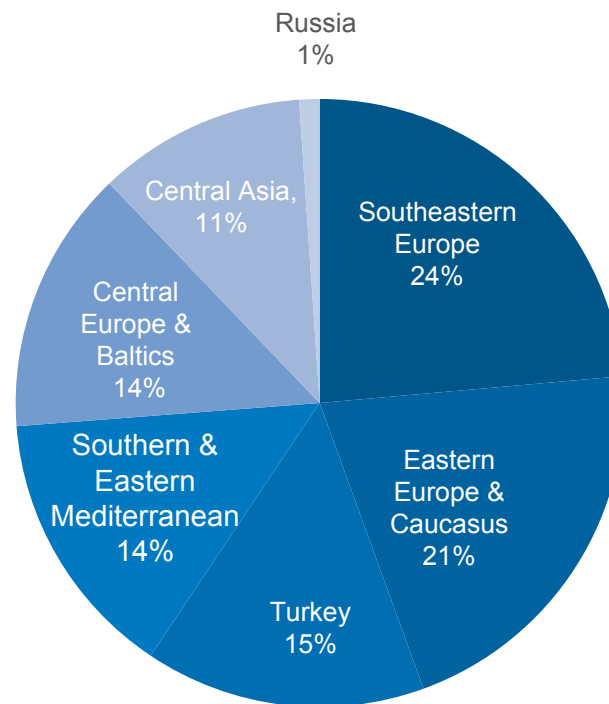
Power and Energy – Overall Portfolio

PEU's current portfolio is over EUR 6.5 bln and exposure to renewables is 27%

Portfolio by sub-sector

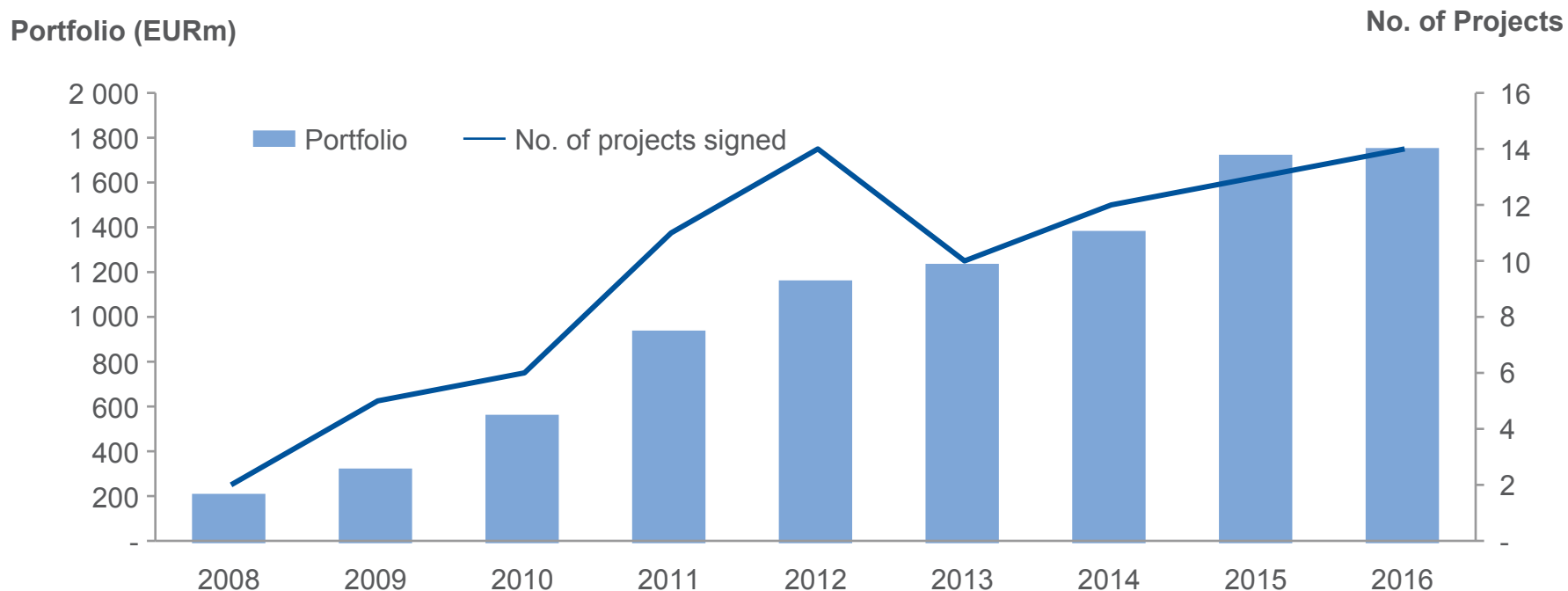


Portfolio by region



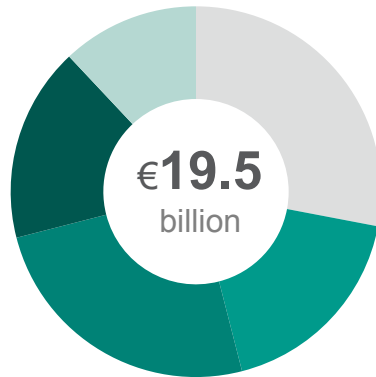
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EBRD's Renewable Energy Portfolio grew to above EUR 1.75 bn



- Technologies financed include onshore wind, geothermal, small hydro, solar and biomass.
- Complex and award winning renewable transactions include: Krnovo Wind Farm (Montenegro), Salkhit Wind Farm (Mongolia), Ma'an Solar Programme (Jordan), Efeler Geothermal Plant (Turkey) and Khalladi Wind Farm (Morocco).

Power and Energy: Core of the EBRD's GET initiative



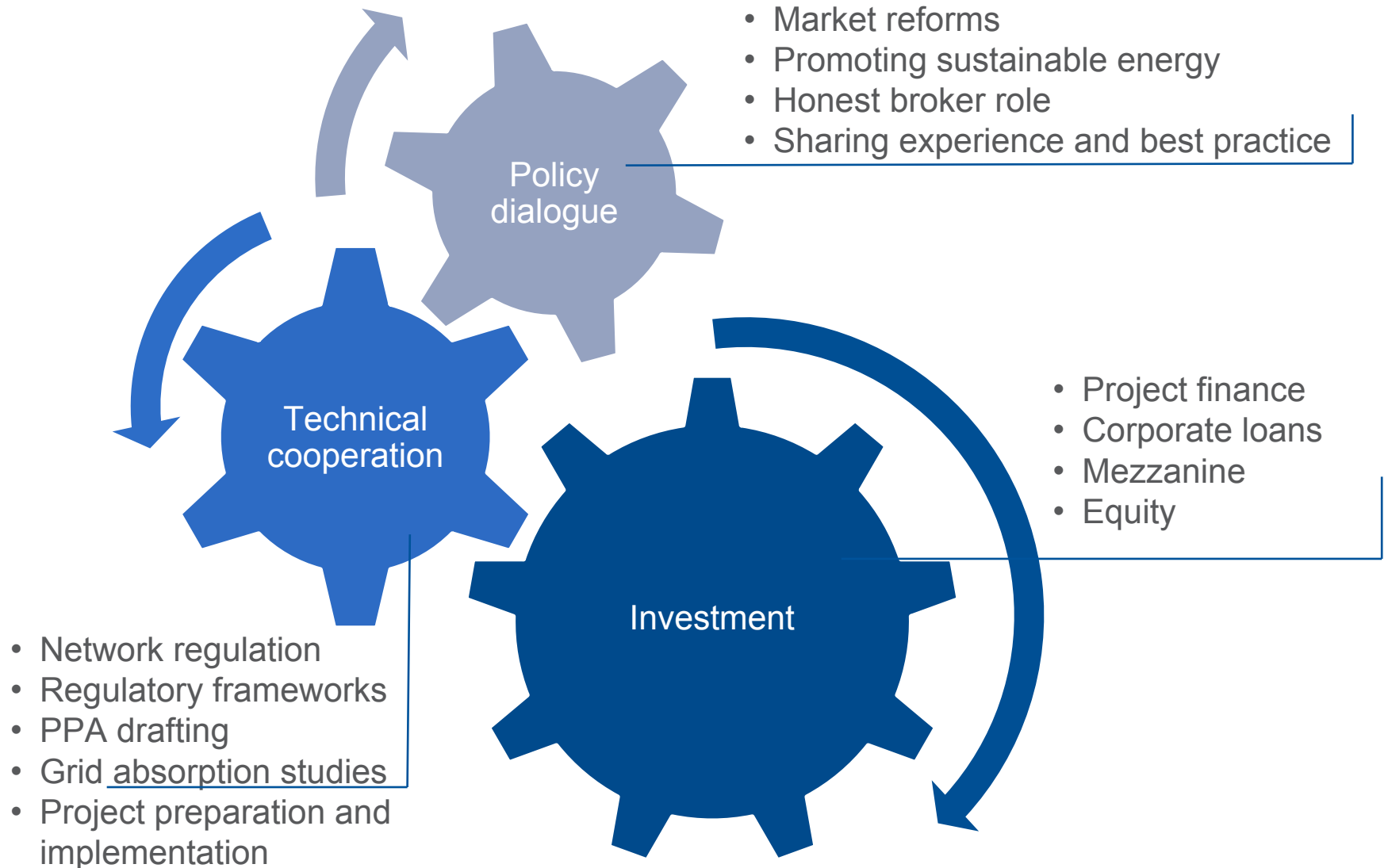
- Corporate energy efficiency : 28%
- Green Economy Finance Facilities : 18%
- **Cleaner energy production** : **25%**
- **Renewable energy** : **17%**
- Municipal infrastructure energy efficiency : 12%

- Green economy is the core of the EBRD mandate. Recognising this, the Bank launched the **Green Economy Transition (GET)** approach in 2015 to put investments that bring environmental benefits at the heart of the EBRD mandate.
- The GET approach seeks to increase the volume of green financing from an average of 24 per cent of EBRD annual business investment over the previous 10 years to 40 per cent by 2020.
- This recognition is in line with the aspirations of the international community, as it has been shown with the agreement and ratification of **the Paris Agreement on Climate Change** or **the United Nations' Sustainable Development Goals**, linked to the protection of the environment and the promotion of low-carbon and environmentally-friendly sectors of an economy.

Power and Energy – Operational Approach

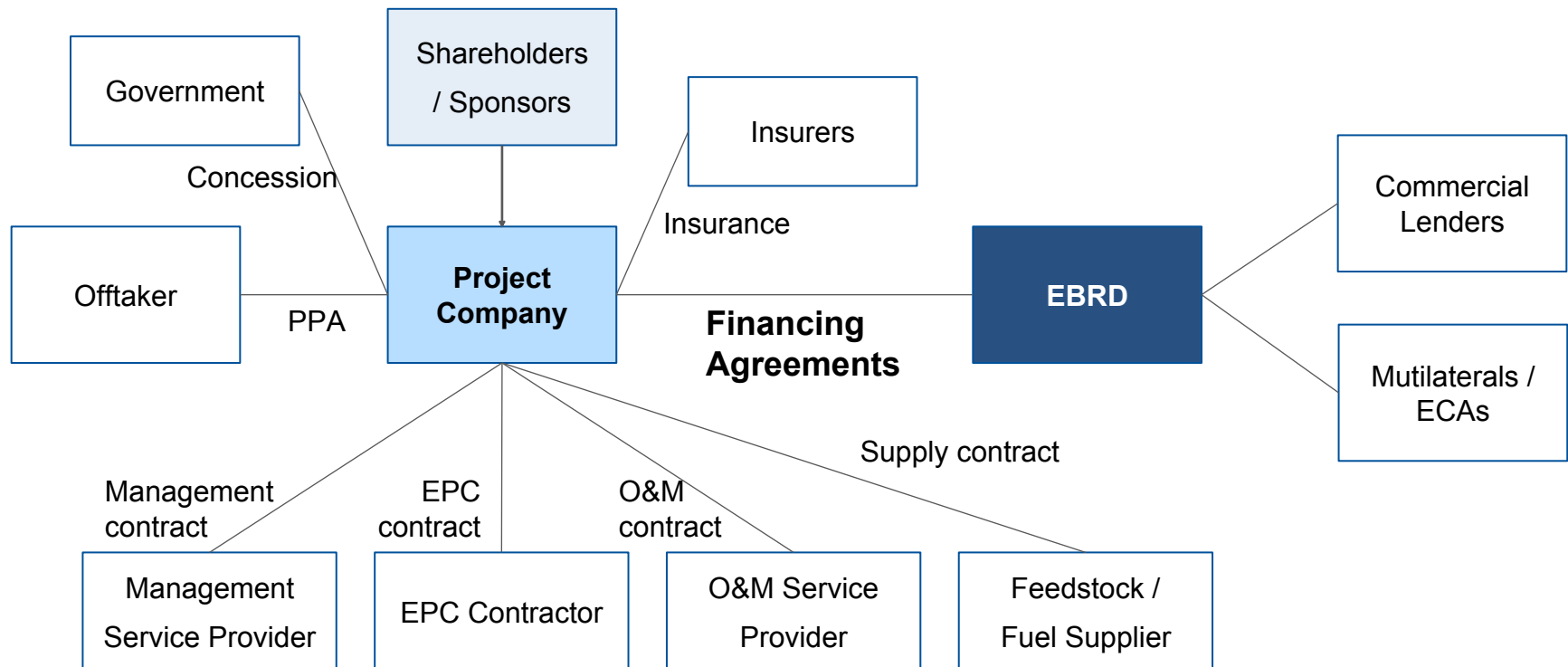


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Power and Energy – Project Financing

EBRD utilizes Project Financing structure for investment in power and energy sector



EPC : Engineering, Purchasing and Construction
O&M : Operation and Maintenance

Power and Energy - Financing Guidelines

- Maturities between 10 to 15 years.
- Flexibility on commitment amounts (but up to 35% for Project Financing).
- IFI public procurement rules for works goods and service and competitive procurement for private partners of PPP arrangements.
- Market pricing and security structures.
- Local currency, where possible.
- Syndication to commercial banks, where possible or other IFIs.
- Equity investments, where appropriate, e.g during privatizations alongside a strategic investor.

Key risks for investors and financiers

Risk

Mitigation

1 Reliance on regulatory support
=> Retroactive changes

Strong commitment from host governments/ regulators. Conservative Financing Structure. Technological advance. Carbon cost.

2 Construction risk
=> Delays, Costs

Reputable and experienced contractors. Turnkey EPC contracts. Short construction period. Proven technology.

3 Grid capacity
=> Curtailment

Grid studies. Operators are becoming more experienced in operating RE and manage/
control capacity additions in a fair and trans-parent manner. Balancing cost. Shift towards smart grids.

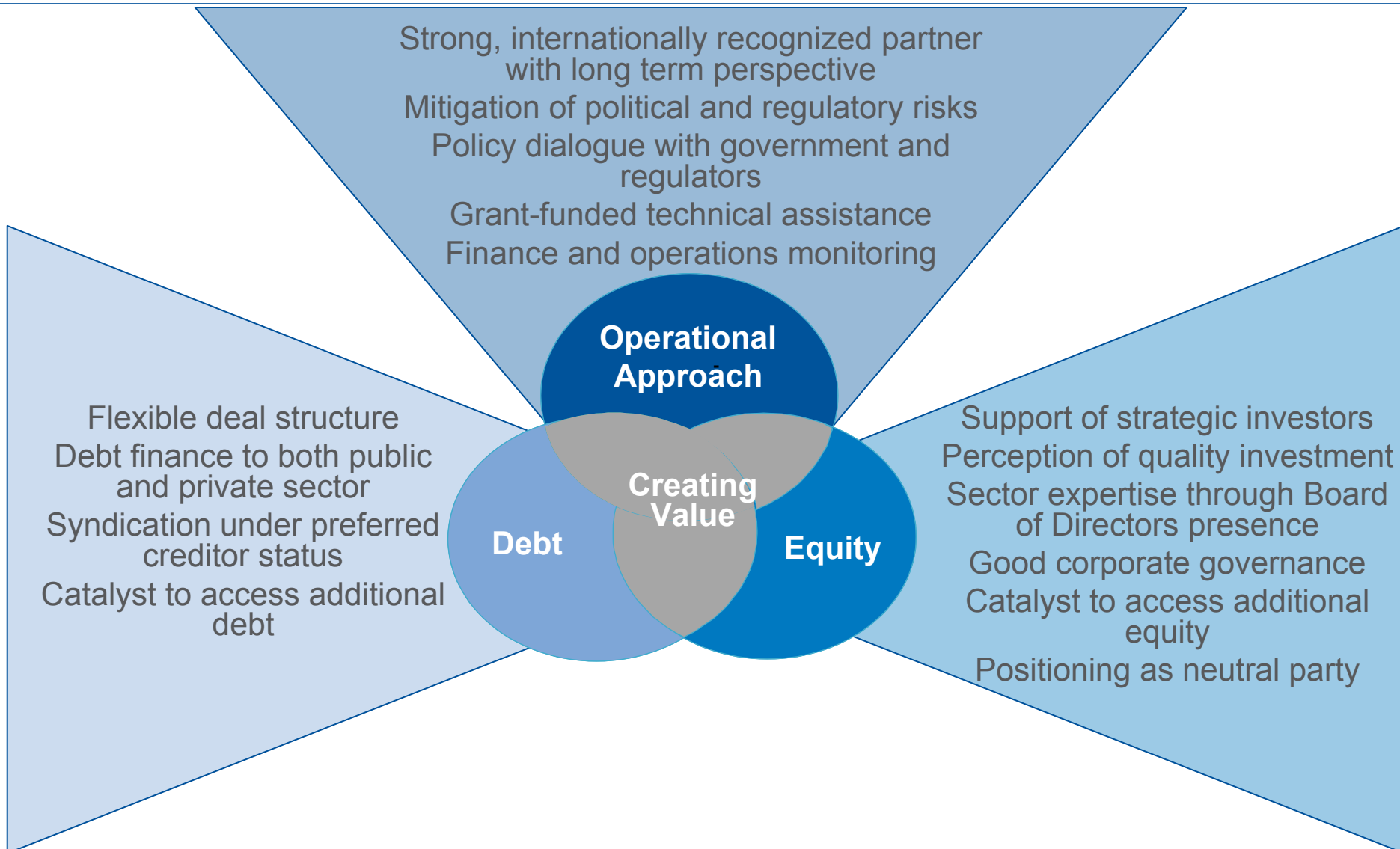
4 Off-taker & Market risk
=> Non payment

Comprehensive financial and market analysis.
Affordability analysis.

Benefits of Working with the EBRD



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Power and Energy – Selected Business Partners

Sponsors



Co-Financiers





Case Studies

2015 - Polenergia Wind Portfolio Poland



EBRD financing enabled the construction and operation of a 100MW portfolio of three wind farms in Poland. This project represents the first large scale wind farms in Poland to be fully merchant based and also uses the best available technology for wind turbines.

Key Facts

- Borrowers:**
 - Mycielín Wind Farm (48MW)
 - Piekło Wind Farm (12MW)
 - Grabowo Wind Farm (40MW)
- Sponsor:** Polenergia
- Project Size:** EUR 183m
- EBRD Finance:** EUR 64m
- Co-Lenders:** Bank of China, Alior Bank, & BOS Bank to contribute: EUR 64m
- Structure:** Senior loan to private operators on a limited recourse basis with conditional completion guarantee by the Sponsor.



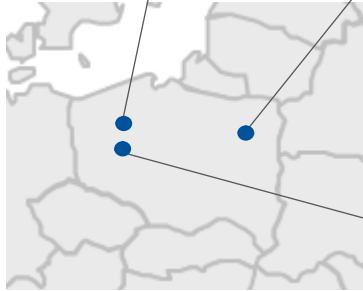
Location



Piekło



Grabowo



2016 - SEDAS Electricity Distribution Loan - Turkey



EBRD is financing Phase II of a USD 325m package aimed at privatising the distribution sector. The Bank's involvement includes the restructuring and optimization of the existing Phase I distribution loan and the financing of the 2016-2020 investment programme for Turkey's electricity distribution and retail companies.

Key Facts

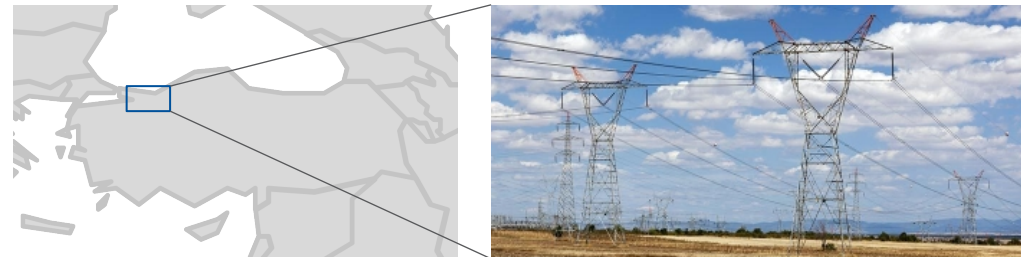
- **Borrowers:** Akcez, SEDAS, SEPAS
- **Sponsors:** CEZ, Akkok
- **Project Size:** USD 325m
- **EBRD Finance:** USD 162.5m
- **Co-Lenders:**
 - IFC
 - Unicredit Bank Austria
- **Structure:** Senior secured A/B loan with corporate guarantee from Sponsors. The transaction will eventually be converted to full non-recourse.



The Project

- Akcez has the ambition, through this investment, to set the bar higher than other market players by raising quality standard, efficiency and customer satisfaction.
- The Project is the first time the EBRD mobilised local currency financing through it's A/B syndicated loan structure.
- Beyond the company's capex programme, and through Technical Assistance, the EBRD will help Akcez promote equal opportunities and a greater role for female employees.

Location



2015 - Krnovo Wind Farm Montenegro



EBRD financing will enable construction and operation of a 72MW wind power plant, representing Montenegro's first ever utility-scale private renewable energy project. Krnovo Wind Farm is one of the first wind energy projects and non-recourse financings in the region. The project will represent ca. 6% of the country's electricity production.

Key Facts

- **Borrower:** Krnovo Green Energy
- **Sponsor:** Akuo Energy
- **Project Size:** EUR145 million
- **EBRD Finance:** EUR 48.5m
- **Co-Lender:** KfW IpeX EUR 48.5m
- **Mezz lender:** Proparco EUR 20m
- **Structure:** Senior secured loan, sculpted semi-annual repayments to maintain a minimum ADSCR



...what they said

“Montenegro is a country that lies at the crossroads of Europe, has considerable renewable resources and has decided to make even greater use of these resources to have production of green electricity- a strategic priority for its development. We welcome this proactive policy and are delighted to have financed the country's very first wind farm with the help of EBRD, KfW IPEX-Bank, and Proparco.”

- Eric Scotto, Akuo Energy's cofounder and CEO

Location



Thank you for you attention



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