Development of Renewables in Central Asia – Lender’s perspective

November 2021
EBRD investments in energy in Central Asia

Operational approach

- Promoting sustainable energy
- Honest broker role
- Sharing experience and best practice

Policy dialogue

- Development equity
- Mezzanine
- Project finance
- Corporate loan
- Equity
- RE frameworks
- Small Financing Facilities

Technical cooperation

- PPA drafting
- Grid absorption studies
- Regulatory frameworks
- Low carbon pathways development

Investment
**Challenges and Opportunities**

**Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Mongolia**

- The EBRD is the pioneer in supporting sustainable energy projects in the region.
- Through investments, the Bank aims to support sector reforms that increase competition and liberalization of the market, strengthen frameworks for regionalization and energy security, prioritize energy efficiency and use of renewable energy.

**What is required to unlock the potential?**

- The region needs stronger macroeconomic policies and clear, independent and predictable sector regulation.
- Long term regulatory certainty/predictability is the key.
- Bankable transactions attracting other lenders and third party finance.
- Reliable, financially stable shareholders (sponsors).

**What is the region’s potential?**

**Starting point**

- Exceptional resource potential (especially wind, solar, hydro) for developing renewables
- Strong but pragmatic political will
- Strong population growth
- Existing/developing legal framework, support mechanisms

**Opportunities**

- Attracting reputable foreign and local investors
- Attracting “know-how” and the best available technology on the market
- Steep cost reduction of RES technologies
- Carbon footprint and emission reduction
- Supply of carbon credits to the carbon credit market

**Challenges**

- Intermittent and unpredictable nature of wind and solar power, seasonality of hydro
- Impact of large power volumes interfering with system stability because of priority of dispatch (no balancing market)
- Poor diversification of power sector balance with huge reliance on aged power stations
EBRD investments in renewables in Central Asia, Caucasus and Turkey

- **CAUCASUS (Georgia, Armenia, Azerbaijan)**
  - 16 projects (9 RES)
  - EBRD finance: EUR 1.6bn
  - 1765 MW total RES capacity
  - 390 MW Hydro
  - 20 MW Wind
  - 55 MW Solar
  - 1,300 MW Hydro rehab

- **KAZAKHSTAN**
  - 22 projects (14 RES)
  - EBRD finance: EUR 1.3bn
  - 788 MW total RES capacity
  - 588 MW Solar
  - 100 MW Hydro rehab
  - 100 MW Wind

- **MONGOLIA**
  - 5 projects (5 RES)
  - EBRD finance: EUR 103m
  - 180 MW total RES capacity
  - 30 MW Solar
  - 150 MW Wind

- **TURKEY**
  - 19 projects (11 RES)
  - EBRD finance: EUR 1.5bn
  - 1,224 MW total RES capacity
  - 85 MW Solar
  - 592 MW Wind
  - 256 MW Hydro
  - 291 MW Geothermal

- **UZBEKISTAN**
  - 7 projects (2 RES)
  - EBRD finance: EUR 665m
  - 200 MW total RES capacity
  - 200 MW Solar

- **KYRGYZ REPUBLIC**
  - 2 projects
  - EBRD finance: EUR 59m

- **TAJKISTAN**
  - 6 projects (2 RES)
  - EBRD finance: EUR 220m
  - 126 MW total RES capacity
  - 126 MW Hydro rehab

- **EUR 5.4 billion** of net cumulative EBRD investment
- **77 active projects**
- **43 RES projects**
- **4,283 MW** of renewable capacity
### LEGISLATION

<table>
<thead>
<tr>
<th>Year</th>
<th>Activities</th>
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<tbody>
<tr>
<td>2009</td>
<td>• Introduction of feed-in tariff system with uniform structure</td>
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| 2011-2013 | • Launch of operational legal framework with a set of rules and norms on renewable energy  
• Introduction of (i) fixed feed-in tariffs, (ii) development of the Financial Settlement Centre off-taking energy via (iii) development of Power Purchase Agreements agreement |
| 2013 | • Introduction of Law on supporting the use of Renewable Energy |
| 2014 | • Introduction of full indexation of feed-in tariffs against inflation |
| 2015-2016 | • Introduction of the Green Economy Law which provides further supports to the development and operation of renewable energy projects |
• 858MW of solar, wind, hydro and biomass capacity was auctioned. |

### POLICY DIALOGUE ACTIVITIES

<table>
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<td>• Assisting for drafting of secondary legislation implementing the renewable energy law (2009)</td>
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</table>
| • Advice to the Government of Kazakhstan on Developing FiTs for Renewable Energy Sources (2010)  
• Advising on improvement renewable energy primary legislation (2011)  
• Advising on a renewable energy sources allocation (2013) |
| • Modelling the social impact of renewable energy feed-in tariffs (2013) |
| • Assisting in the final stage of developing renewable energy legislation (2014) |
| • Assisting Ministry of Energy on establishing a bankable regulatory and legal framework (2015-2016)  
• Strategic Environmental Review (SER) of RES development in Kazakhstan (2015-2016) |
| • Assisting in the review of the PPA bankability (2018)  
• Support for the implementation of wind auctions in Kazakhstan, including regulatory support on the tender process and documentation for the wind power projects (2019)  
• Promoting gender equality in RE sector (2019)  
• Strategies for carbon market development (2019)  
• Memorandum of Understanding (2019) |
EBRD investments in renewables in Central Asia
Promoting Renewables Development in Uzbekistan

2018-2021:
- **Sector reform**
  - October 2018:
    - USD 240m loan for Talimarjan Power Project (extensive climate and decarbonisation initiatives)
  - January 2019:
    - USD 240m loan for Navoi Transmission Upgrade Project (emissions savings shared with Navoi Transmission Project)
  - November 2019:
    - USD 96.1m loan for Navoi Transmission Upgrade Project (emissions savings shared with UzbekEnergo Muruntau Substation Project)
  - December 2020:
    - EUR 81.6m Vital Infrastructure Support Project loan for working capital needs of the Uzbek TPPs in the context of EBRD COVID-19 crisis response (500,000 tCO2/yr emissions savings)
    - USD 60m Nur Navoi project: equity bridge loan for the construction and operation of a pilot solar auction project of 100MW installed capacity located in Navoi region (154,000 tCO2/yr emission savings)
  - April 2021:
    - EUR 21.85m loan package for the construction and operation of a 100MW solar project in Samarkand region (155,000 tCO2/yr emission savings)

- **Policy dialogue / TC support**
  - 2018-2021:
    - Launch of renewable energy auctions
    - Compliance functions established
    - Uzbekenergo unbundling
    - Power sector tariff reform
    - Roadmap for attracting investment via corporate and structural reform
    - MoU on cooperation regarding wind power auctions
    - Climate resilience in the power sector: risk assessment and investment needs action plan
    - Low-carbon pathway for the power sector
    - Background study to inform engagement on water management issues
    - Support for implementation of wind auctions
    - Development of the new Electricity Market Law
    - Support in the definition and implementation of policies to attenuate the economic impact of COVID-19 in the power sector
    - Review of the Renewables Law

- **EBRD investments in renewables in Central Asia**
- **Promoting Renewables Development in Uzbekistan**

- **GHG emissions savings**
  - **2018:2021**
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Auctions for Renewable Capacity

Why auctions?

➢ Good for consumers
  • energy at the lowest price

➢ Good for the authorities
  • transparent and objective selection process and price determination
  • control over budget, timing and location

➢ Good for industry
  • lower regulatory risk (is the price “right”?)
  • stable and long-term high volume business

Case Study: Karakalpakstan WPP – 100 MW

| Project scope | • Develop, finance, construct, own and operate 100 MW wind power plant. |
| Location      | • Located in the Qorao’zak district of Karakalpakstan region |
| PPA term and tariff | • 25 years  
  • Tariff will be 100% indexed to USD but payable in Uzbek Som. |
| Public Partners | • JSC National Electric Grid of Uzbekistan - PPA.  
  • The Ministry of Investment and Foreign Trade (“MIFT”), as signatory of the GSA on behalf of GOU. |
| Support Structure | • GOU will provide support under GSA, including bankable termination provisions and support in land allocation. There will be liquidity support in the form of a Letter of Credit from an acceptable bank. |
| Tender Stage | • 70 submissions received for the EOI  
  • 12 prequalified bidders  
  • Bids submitted: ACWA Power (SA); Masdar (UAE), Voltalia (FR)  
  • Winner: ACWA Power with tariff USc 2.5695 |
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