# DELIVERING PROFITABLE ENERGY EFFICIENCY INVESTMENTS IN INDUSTRY

**Nigel Jollands, Senior Policy Manager** Energy Efficiency and Climate Change

IEA Side Event - Energy Efficient Prosperity 1 December 2015 Paris



# EBRD investments - making businesses more profitable, sustainable and competitive



# Ivan Stojakovic Manager, Woodmaster

1 December 2015

Video

### Energy efficiency in the transport sector Rail transport in Kazakhstan



#### CLIENT

National Company Kazakhstan Temir Zholy (KTZ) manages railway infrastructure and operates freight and passenger train services.

#### PROJECT

Finance for KTZ's energy efficiency programme, including installation of energy efficient lighting; introduction of heating solutions such as solar collectors, heat pumps; and upgrade of hot water generators.

#### FINANCIAL STRUCTURE

EBRD loan	EUR 28.6 million
of which SEI	EUR 28.6 million
CTF concessional loan	EUR 0.5 million

#### **TECHNICAL ASSISTANCE**

EUR 99,000 from the Shareholder Special Fund and the Netherlands for:

- Project design, management and monitoring;
- Capacity building in energy management and facilitation of ISO 50001 adoption;
- Review of ESCO mechanisms for financing energy efficiency investments



#### EXPECTED IMPACT

- Electricity savings: over 60,000 MWh/year
- Thermal energy savings: around 3,800 MW/year
- Emission reductions: 83,000 tCO<sub>2</sub>/year
- Cost savings: over EUR 3.5 million/year
- Project IRR: > 15%

### Energy efficiency in agribusiness Energy efficiency for a sugar producer in Ukraine



#### CLIENT

Astarta, the largest sugar producer in Ukraine.

#### PROJECT

Funds from four EBRD loans between 2008 and 2012 were used for energy efficiency improvements, company expansion, financial support during the economic downturn and a biogas plant.

#### FINANCIAL STRUCTURE

EBRD loansEUR 47.2 millionof which SEIEUR 27.8 million

#### **TECHNICAL ASSISTANCE**

€80,000 for 3 energy audits to assist project preparation by identifying best available technology for:

- upgrading process heat exchangers
- upgrading filter press system
- introducing process heat recovery system



#### **EXPECTED IMPACT**

- Energy savings: 34,000 toe/year
- Emission reductions: 60,000 tCO<sub>2</sub>/year
- The majority of energy efficiency investments had IRRs of more than 20%

#### Carbon Market

- EBRD facilitated a transaction in carbon credits under the Kyoto Protocol's Joint-Implementation mechanism.
- The MRV under this JI mechanism allowed for a robust assessment of the emission reduction impact.

### Industrial energy efficiency Energy and material efficiency in glass production

#### CLIENT

Şişecam, one of the largest glass producers globally and a long-standing client of the Bank.

#### PROJECT

- Turkish plant: finance for various EE measures, including waste heat recovery and energy management systems.
- Bulgaria plant: capacity expansion and EE measures such as oxy-fuelling and waste heat recovery systems.
- Russian plant: construction of a greenfield plant for flat glass products in Tatarstan.

#### FINANCIAL STRUCTURE

EBRD loans	EUR 90 million
of which SEI	EUR 90 million
Total project value	EUR 290 million

#### **TECHNICAL ASSISTANCE**

In 2012 five plants were audited with more than EUR 112,000 of donor support from Italy and Spain.



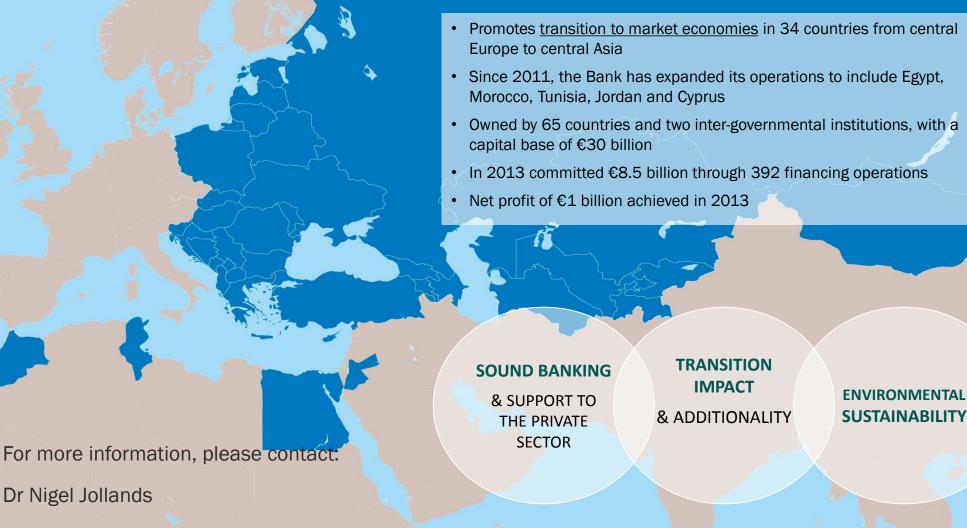
- Emission reductions: >400,000 tCO<sub>2</sub>e/year
- Working towards ISO 50001 certification for Energy Management Systems
- Enhanced reporting under the Carbon Disclosure Project and the Global Reporting Initiative





## Where the EBRD invests





jollandn@ebrd.com