

EBRD Green Finance in Central Asia

February 2018



European Bank
for Reconstruction and Development

- Introduction to EBRD
- EBRD Green Instruments and Programmes in Central Asia: Results and Case studies
- Planned Green Financing and Indicative Donor Needs

Introduction to the EBRD

The EBRD is a **triple-A** rated* bank with a capital base of **€30 billion**.

The EBRD is owned by **65 countries** and two inter-governmental institutions.

EBRD has extensive experience in **green financing**, and plans to scale up even more.

Green Economy Transition Strategy:

- 40% of business volume by 2020
- further scale-up
- broaden the environmental dimension
- innovation and new areas
- Use more financing channels

* From all three main rating agencies (S&P, Moody's and Fitch)

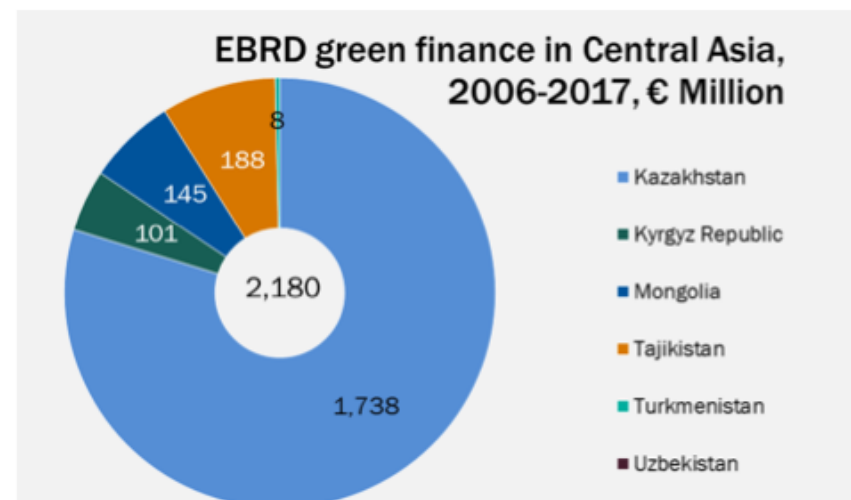
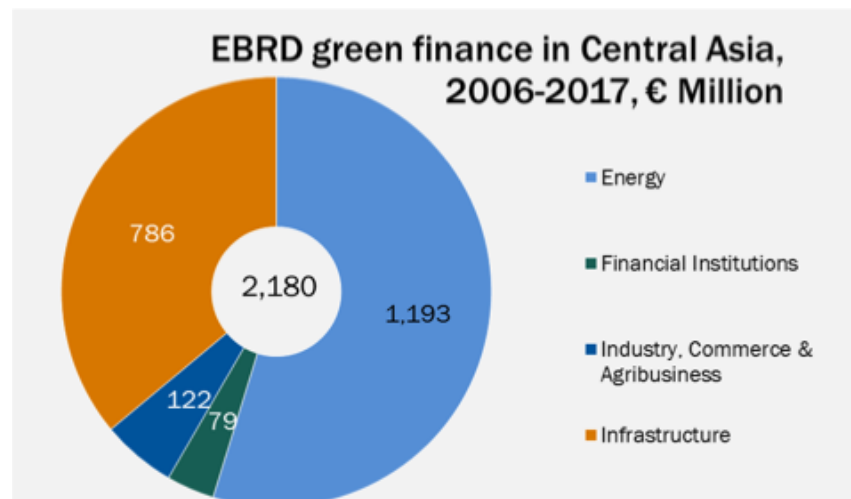
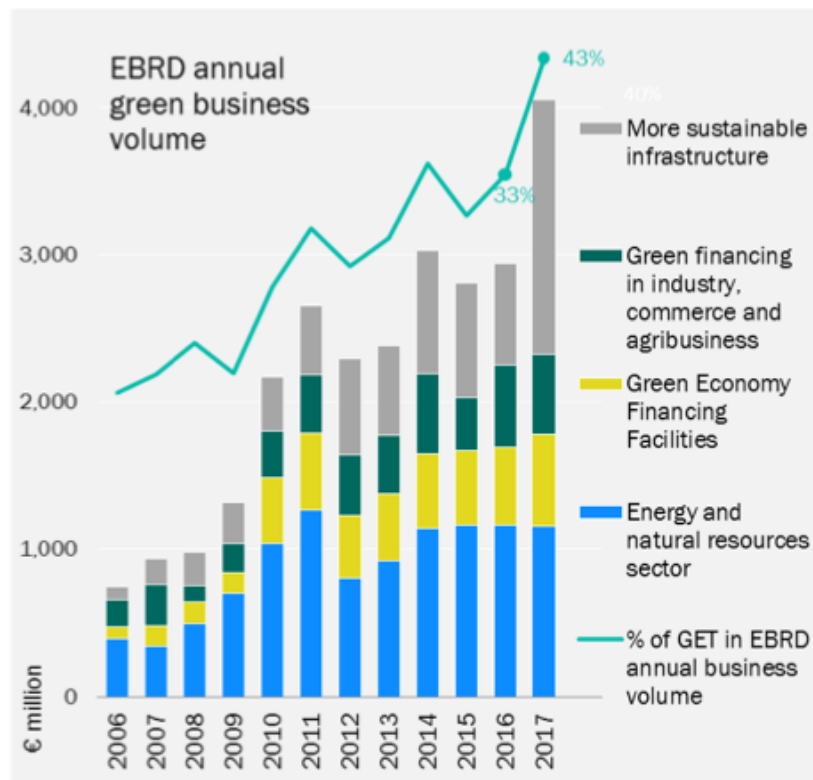
We invest in **36 countries**, including **Central Asia**



EBRD green financing in Central Asia overview

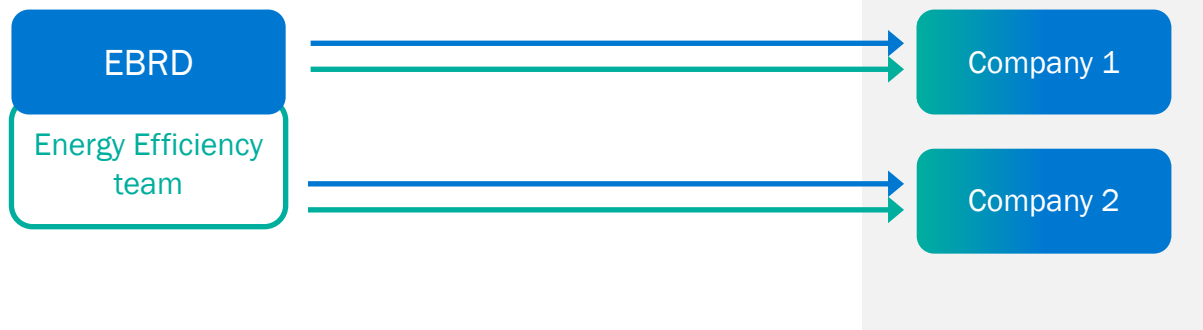


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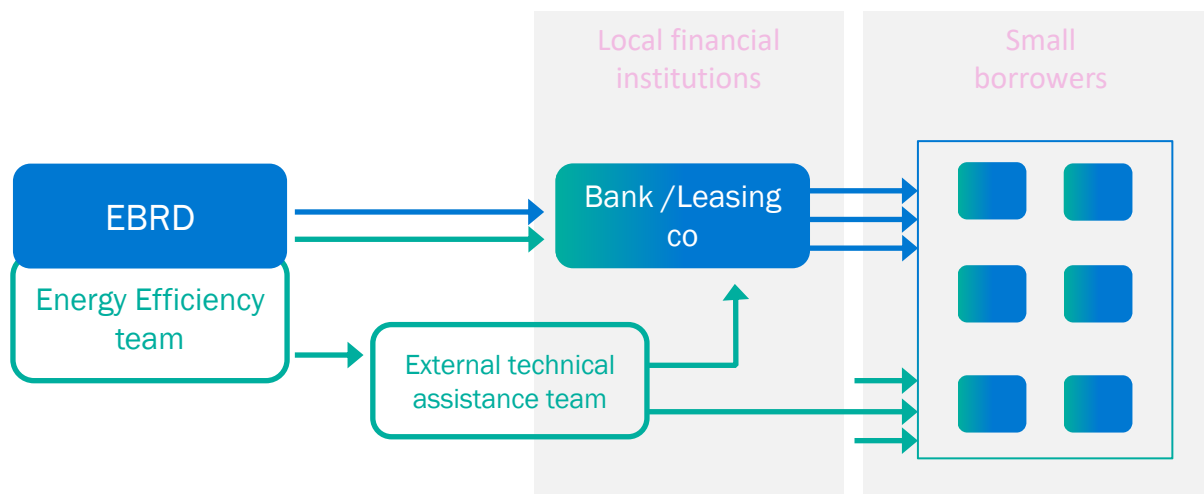
EBRD financing channels

DIRECT FINANCING AND SUPPORT



EBRD
FINTECC

FINANCING VIA PARTNER FINANCIAL INSTITUTIONS



→ Financing → Technical Assistance



GEFF in Kyrgyz Republic: thermal insulation for greenhouses



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PROGRAMME

EBRD Sustainable Energy Financing Facility in Kyrgyz Republic (KyrSEFF) was launched in April 2013. KyrSEFF focuses on lending through local financial institutions for energy efficiency and renewable energy investments in the residential and SME sectors. In 2016, resource efficiency investments included as a pilot.

STRUCTURE OF FACILITIES

EBRD financing	US\$ 55 million
EU IFCA grant for incentives and technical assistance	€16 million

RESULTS AND IMPACT

- Loans signed in the amount of US\$ 35 million with seven local financial institutions
- US\$ 26 million disbursed for 80 investments in the Commercial sector and over 1,000 in the Residential Sector
- Energy savings: 121,000 MWh per year
- Emission reduction: 36,900 tonnes of CO₂ per year
- Over 630 loan officers trained



This project is funded by
the European Union



PROJECT EXAMPLE

- Asel Babakanova, a homeowner in Bishkek, has been planning to improve her home for a while.
- To reduce her energy bills and increase comfort, she wanted to install new energy efficient windows, insulate the walls and roof of the building and install an efficient solid fuel boiler.
- The \$7,160 loan allowed Asel to reduce the house's energy consumption by 31,892 kWh per year, leading to decent cost savings. The investment will repay from energy savings rather fast, continuing to generate savings for many more years to follow.
- In addition, the investment led to a carbon emission reduction of 1,902 tonnes of CO₂ per year.

Environmental Remediation Account for Central Asia (ERA)

- Initiated by European Commission and operational since 2016, using EBRD's experience with multi-donor funds, such as the Chernobyl Shelter Fund and the Nuclear Window of NDEP
- **Objective: remediation of seven uranium legacy sites in the Kyrgyz Republic, Tajikistan and Uzbekistan to good international standards**
- Overall cost estimated at €85 million
- Efforts underway by Central Asian countries to raise awareness and additional funds
- Donor conference planned for end 2018 to close funding gap of €70 million



New Programmes and Initiatives

Indicative donor funding needs



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- **GEFF Uzbekistan**
Credit lines up to US\$ 60 million,
Incentive grants: US\$ 10.5 million
Technical support: US\$ 3.5 million
Indicative timing: Q1 2018
- **GEFF Tajikistan**
Credit lines up to €20 million
Incentive grants: US\$ 5 million
Technical support: US\$ 1.8 million
Indicative timing: Q3 2018
- **GEFF Kyrgyz Republic**
Credit lines up to €35 million
Incentive grants: US\$ 6 million
Technical support: US\$ 3.5 million
Indicative timing: Q1 2019

New Programmes and Initiatives

Indicative donor funding needs

- **Kyrgyz Water Network Infrastructure** (Mirzaki-Kurshab, Kerben, Isfana & Naryn II)



Loan up to €8 million,
Capex grant: €12 million,
Technical assistance: €1.3m
Indicative timing: Q1 2018

- **Climate Resilient Transport in Central Asia**



Tajik Roads

Loan up to €50 million
Indicative donor funding needs: €10 million
Indicative timing: Q2/3 2018



Kyrgyz Railways

Loan up to €12 million
Indicative donor funding needs: €5 million
Indicative timing: Q2/3 2018

Thank you



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For more information on EBRD's Green Economy Transition projects and initiatives:

<http://www.ebrd.com/what-we-do/get/knowledge-hub.html>



FINTECC

Supports companies to implement **advanced climate technologies** that reduce greenhouse gas emissions and/or increase climate resilience by providing **grants** and **technical assistance** in the context of an EBRD investment.

EXAMPLES OF ELIGIBLE TECHNOLOGIES

- High-grade thermal insulation of buildings
- By-pass dust recycling
- Energy efficient ventilation and air conditioning systems
- Heat recovery systems
- LED lighting
- Energy management systems

SECTORS & CLIENTS

All **private sector, non multinational clients** are eligible.

The programme targets primarily the **corporate sector**.

COUNTRIES

- Kazakhstan, Ukraine, Armenia, Azerbaijan, Belarus, Georgia, Kyrgyz Republic, Moldova, Mongolia, Tajikistan, Turkmenistan and Uzbekistan
- Egypt, Jordan, Morocco and Tunisia



FINTECC is funded by the GEF, the EBRD and the EU

GEFF in Tajikistan: Increasing resilience to climate change via the financial sector



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PROGRAMME

Launched in 2016, ClimADAPT provides financing to enterprises and households in Tajikistan via local banks and microfinance institutions for improved water and energy use and sustainable land management measures.

EBRD financing is blended with concessional longer-term finance from the Pilot Programme for Climate Resilience, to overcome affordability barriers to action on climate resilience.

ClimADAPT has two windows: one targeting businesses, especially in the agricultural sector, and another for households.

FINANCING STRUCTURE

EBRD credit lines	US\$ 5 million
Concessional credit lines from the Pilot Programme for Climate Resilience	US\$ 5 million
Technical assistance support from UK DFID and the EBRD ETC Fund	€2.25 million

CLIMATE VULNERABILITY

Tajikistan is highly vulnerable to future changes in river runoff and glacier melt, via impacts on its agricultural sector, its hydro-based electricity system and soil erosion.

The facility impact metrics will therefore account for reduced water consumption, energy efficiency gains and reduction in soil erosion loss.



CLIMADAPT
Finance Technology Innovation



CLIMATE
INVESTMENT
FUNDS



PROJECT EXAMPLE

- ClimADAPT loan of €500,000-equivalent in local currency for the construction of a new greenhouse complex with advanced insulation and hydroponic and drip-irrigation to grow tomatoes.
- IRR of 37%, water consumption per kg yield of tomatoes is 46% below the level of the company's existing greenhouses.

Building climate friendly fitness centres in Tajikistan



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CLIENT AND PROJECT

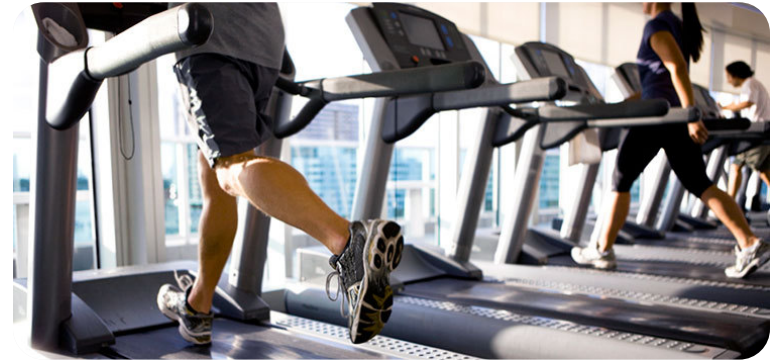
Inter Fitness is a locally based company engaged in the construction of a new stand-alone fitness and recreational centre in Dushanbe, Tajikistan. The EBRD financing will be used as a contribution to the construction of the new centre and acquisition of equipment. After implementing the improvements supported by the FINTECC grant, this will be the first sports facility in Tajikistan to use such advanced sustainable energy technologies.

EBRD will assist in implementing:

- Efficient low-emissivity windows
- LED lighting
- Solar heating panels
- European system of climate control with Class-A level of energy efficiency

FINANCIAL STRUCTURE

EBRD finance:	US\$ 2 million
FINTECC grant:	US\$ 0.3 million
<u>Other finance:</u>	<u>US\$ 5.5 million</u>
Total Project Value :	US\$ 7.8 million



PROJECT IMPACT

- Expected reduction in energy consumption of more than 20 per cent in comparison to standard construction practices,
- Primary energy savings of 3,000 MWh per year,
- Emission reductions of about 1,000 tonnes of CO₂ per year.

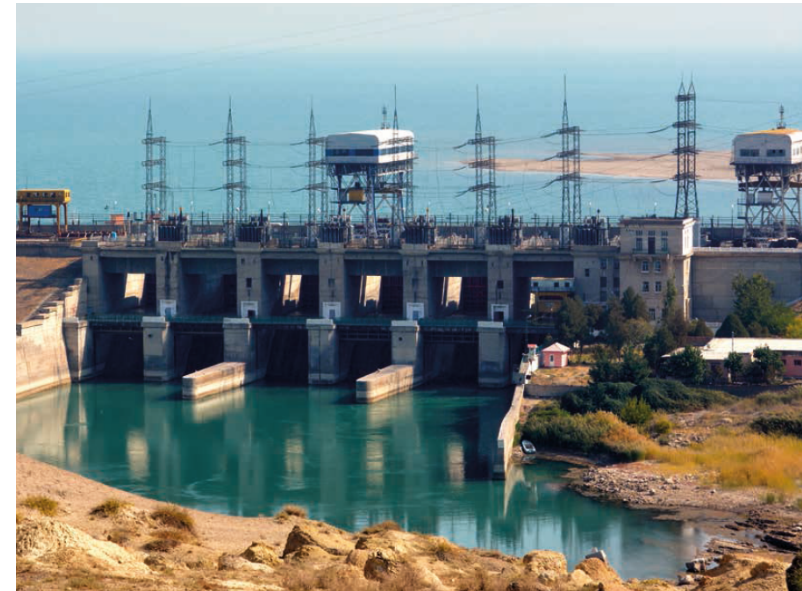
Improving resilience to climate change in Tajikistan's hydropower sector

CLIENT AND PROJECT

Support to the Tajik state-owned power utility by financing the rehabilitation and upgrade of dam structure and turbine and hydro-electric equipment. This will increase capacity of the plant from 126MW to 170MW and strengthen the plant's resilience against the projected impacts of climate change.

CLIMATE RESILIENCE MEASURES

- Design of the upgrade to include climate resilience considerations by modelling future hydrology under a range of climate change scenarios and hydrological models
 - Turbine upgrade and spillway capacities adjusted to optimise power generation and safety across the range of projected hydrological conditions.
 - Capacity building on climate and hydrological data collection and usage, reservoir management and dam safety, including twinning programme with staff of world-leading HP operator Hydro Quebec
- ⇒ Innovative replicable model for integrating climate resilience in HPP
- ⇒ Potential transformative sector-wide impact by introducing best international practice for climate resilience



FINANCIAL STRUCTURE

Total finance	US\$197 million
EBRD loan	US\$88 million
EIB loan	US\$38 million
GCF Funds	US\$50 million
<i>of which grant</i>	<i>US\$23 million</i>
<i>concessional loan</i>	<i>US\$27 million</i>
CIF (PPCR*) funds	US\$21 million
<i>of which grant</i>	<i>US\$11 million</i>
<i>concessional loan</i>	<i>US\$10 million</i>



Supporting water infrastructure in Kazakhstan



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CLIENT AND PROJECT

The EBRD loan and government funds will finance new water connections and water meters, and facilitate the use of modern drip-irrigation technologies in the agriculture sector. Increasing access to sustainable and climate-resilient irrigation to rural areas will create tens of thousands of rural jobs across Kazakhstan.

Kazakhstan's arid climate mean that any rural development is impossible without irrigation and water services. At present, the water and irrigation systems are not only highly inefficient but they have been in decline since the country's independence at the end of 1991. Climate change is forecast to worsen this situation by altering precipitation patterns and reducing water availability in many parts of the country, especially the south.

FINANCIAL STRUCTURE

EBRD finance: US\$ 173 million

Kazakhstan grant: US\$ 21.4 million

Total Project Value : US\$ 195 million



CLIMATE RESILIENCE MEASURES

- Water pricing and regulation reforms (e.g. permitting metering, etc.)
- Major water efficiency savings of at least 112 million m³ of water saved per year – which will increase the resilience of water supplies and irrigation systems to changing climate conditions and increasing water stress.

Increasing climate resilience of water supplies in Tajikistan

CLIENT AND PROJECT

A loan to State Unitary Enterprise KMK on-lent to seven North Tajik water companies to fund priority capital investments and improve municipal water supply in the cities of Chkalovsk, Gafurov, Isfara, Kanibaidam, Karaikkum, Khorog and Taboshar. The project supports improvements in financial and operational management of water utilities through activities such as installation of individual water meters, tariff reforms and development of public service agreements.

FINANCIAL STRUCTURE

EBRD loan:	€7.3 million
<i>of which GET adaptation</i>	€4.0 million
SECO grant:	€7.3 million
<u>GEF grant:</u>	<u>€2.0 million</u>
Total Project Value:	€16.5 million



CLIMATE RESILIENCE MEASURES

- Provision of critical infrastructure, including supply network, metering and operations equipment
- Technical capacity development for water companies and municipalities on adapting to climate change combine with improvements in corporate planning and fulfilment of national and international environmental and social standards
- Stakeholder participation and awareness raising activities focused on climate change risks to end-users.

** This project has helped to develop replicable approaches for other municipal water projects in climate sensitive countries.*

Increasing climate resilience of district heating infrastructure in the Kyrgyz Republic

CLIENT AND PROJECT

EBRD is providing a loan to the Kyrgyz Republic to on-lent to OJSC Bishkekteploset for the Bishkek District Heating Network project. The project aims to address the implications of climate change and increasing water stress on district heating system through improved heat generation, reduced losses in the network, and customer controlled heat supply, taking projected future climate conditions and water availability into account.

FINANCIAL STRUCTURE

EBRD loan:	€7.2 million
<i>of which GET adaptation</i>	€0.9 million
<u>EBRD SSF grant:</u>	<u>€2.5 million</u>
Total Project Value :	€9.7 million



CLIMATE RESILIENCE MEASURES

- Construction and refurbishment of pumping stations
- Introduction of supervisory control and data acquisition (SCADA) system to reduce water losses

Policy and financing support for buildings energy efficiency in the Kyrgyz Republic



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POLICY DIALOGUE ACTIVITIES

Comprehensive assistance to prepare:

- **Primary Law on Energy Performance of Buildings**, introducing responsibilities of building owners and instruments to promote EE in buildings
- Secondary legislation on **energy performance certifications** and regular inspections of boilers and heating systems
- Tertiary legislation on harmonising **technical standards** on thermal protection of buildings, heating networks, water supply, etc.



REGULATORY RESULTS

- The new legislation transposes all key provisions of the EU Directive on Energy Performance of Buildings (EPBD) up to the best practice level in EU countries.
- **Primary law was approved** by Parliament and signed by the President of the Kyrgyz Republic in 2012. It defines legal obligations related to energy efficiency of building owners, public bodies and state authorities.
- Secondary legislation introduces minimum mandatory energy efficiency requirements, a methodology for energy performance assessment (in compliance with ISO EN 13790/2008) and for certification of buildings.

WIDER MARKET DEVELOPMENT

- Legislative upgrades incentivize developers, owners and residents to invest in thermal rehabilitation and equipment upgrades.
- Policy dialogue part of wider, integrated, market development approach – in parallel, the Kyrgyz Sustainable Energy Financing Facility (KyrSEFF) was launched to enhance the availability of financing for energy efficiency.
- KyrSEFF offers credit lines to 6 partner banks to on-lend to energy efficiency projects in the business and residential sectors. Commercial funding is complemented by incentive grants and technical assistance from the EU.

CLIENT AND PROJECT

Bear Beer, a leading Kyrgyz beer and bottled water producer benefitted from EBRD financing for the purchase of necessary soft drinks and beer brewing equipment to modernise water and beverage production. The EBRD will assist in implementing:

- Energy management system
- CO₂ recovery system
- High efficiency steam boiler
- Energy efficient equipment

FINANCIAL STRUCTURE

EBRD finance :	€7 million
FINTECC grant:	€0.1 million
<u>Other finance:</u>	<u>€12.1 million</u>
Total Project Value :	€19.2 million



PROJECT IMPACT

- Climate technology has driven down energy costs and greenhouse gas emissions by 700 tonnes of CO₂ per year.
- The savings from investment in energy efficient equipment has made the business more competitive.
- Environmental, health and safety standards to a level beyond current industry practice, such as implementation of environmental/health and safety management system, international certification ISO14001, installation of BAT equipment, etc.)