



# EBRD Green Financing for Green Building Concept Presentation for IKI Project Accelerating 0-emission building ambitions in the MENA region

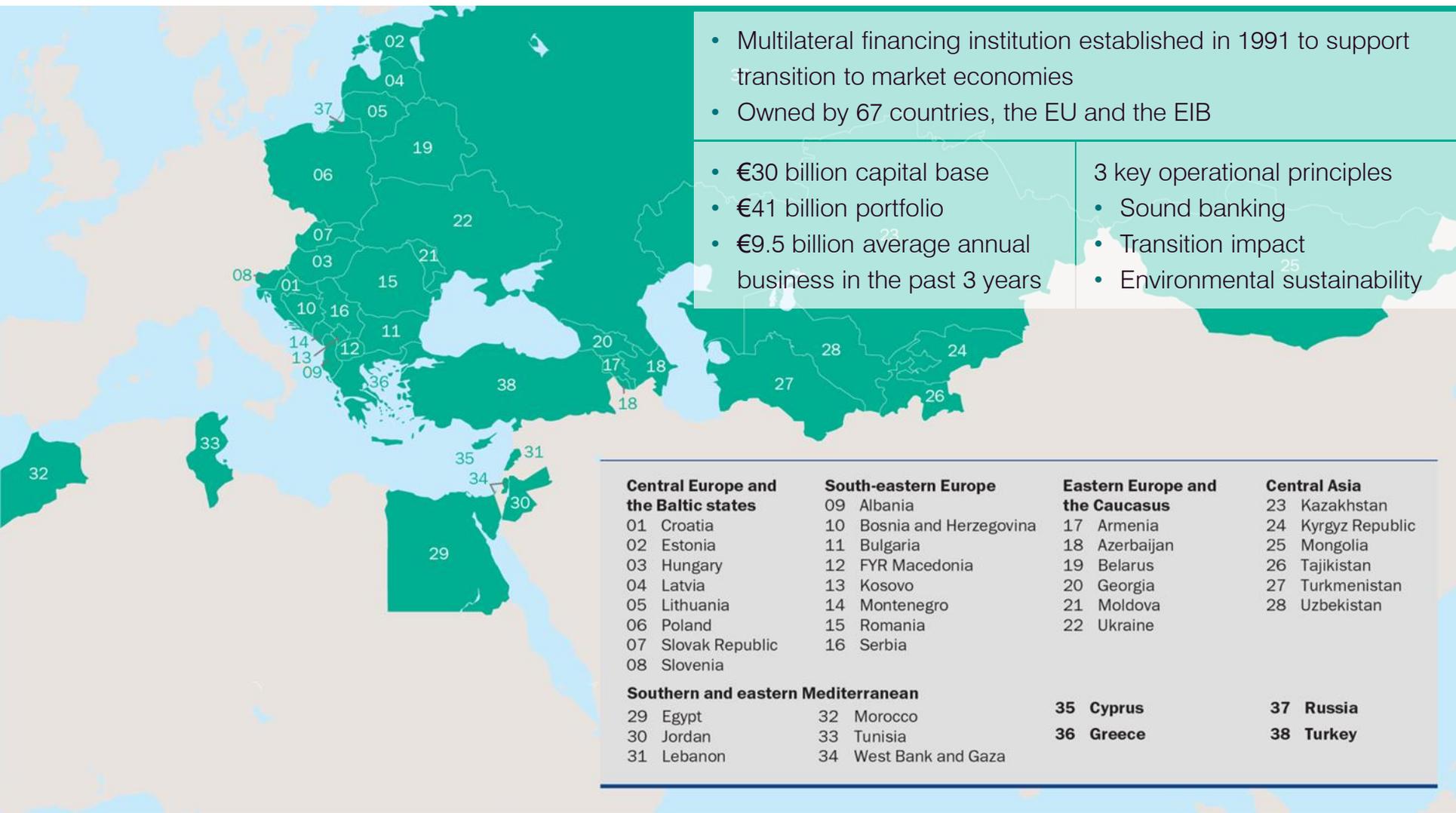
Reginal Workshop, 04 –05 July 2018, Mövenpick Hotel, Beirut

- Introduction to the EBRD and Green Economy Transition
- EBRD Green Financing for Green Building Concept - Market opportunities – Example of TuREEFF Programme
  - Small Investments & Vendor Financing
  - Rehabilitation of Existing Housing Stock
  - Reconstruction and New Residential Building Construction
  - Green Mortgages
- Lessons Learnt and Recommendations
- Case Study from Morocco



# Introduction to the EBRD and Green Economy Transition

# What is EBRD - European Bank for Reconstruction and Development



# Mainstreaming green financing Results in 2006 – 2017



FINANCED

**1,460**

projects and credit lines

1,000+ directly financed projects with green components, and

250 credit lines to local financial institutions for on-lending to smaller projects

SIGNED

**€26 billion**

of green financing

For projects with a total value of €148 billion signed in 2006-2017

In 2017 green financing represented 43% of EBRD's total business, up from only 15% in 2006

REDUCED

**90 million**

tonnes of CO<sub>2</sub>/year

Emission reductions more than annual energy emissions of Romania

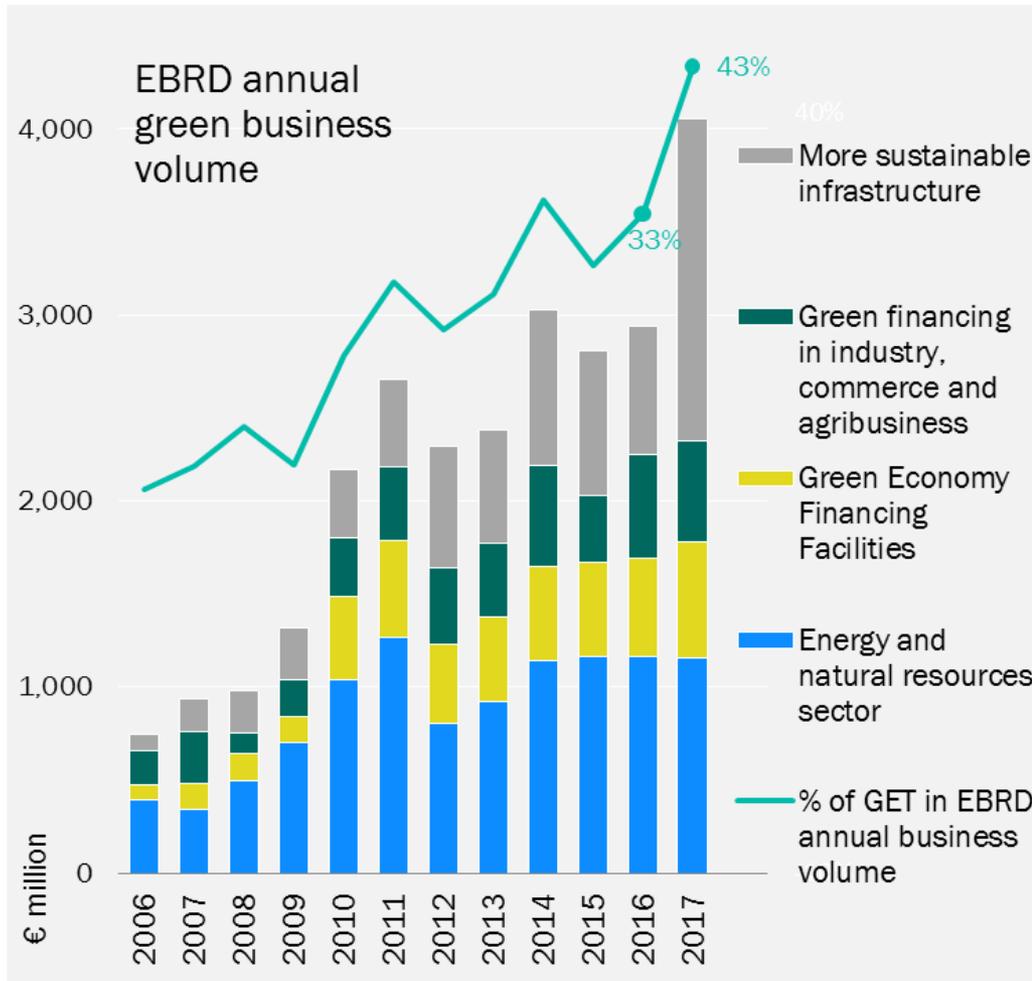
+ annual water savings of 200 million m<sup>3</sup> since 2013 equal to more than a third of annual water use in London

# Mainstreaming green financing

## Dedicated Business Teams Providing a Wide Range of Green Financing Products



European Bank  
for Reconstruction and Development



Tailored made financing to reflect the needs of individual clients.

### A wide range of services provided

- Financing (debt, equity, leasing, factoring)
- Risk sharing
- Technical assistance

### No one project is too small or too big

- **Credit line facilities** through local financial institutions (project size from units of € to units of € millions)
- **Direct Financing Facilities** – project size in units € million, speedy approval process
- **Direct financing** – from €5 million to € hundreds of millions – full assessment process
- **Syndication** – for very large or risky projects

### Support in development of regulatory system

### Local presence

EBRD operates fully equipped and staffed offices in each country of operation working directly with clients

# Mainstreaming green financing

## Green economy investments



European Bank  
for Reconstruction and Development

A green economy is a market economy where investments are made taking account of their environmental impact and with particular concern for the sustainable use of natural resources. Green economy projects, or project components, can be from the following areas:

- Energy efficiency
- Renewable energy
- Water efficiency
- Resilience to climate change
- Waste minimisation and materials efficiency
- Pollution control and environmental compliance



# 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



- For eligible investments which face particular barriers:
- Targeted facilities priced below market terms
  - Selective partial investment grants or incentive payments
  - First-loss cover or guarantees



- Working with governments on legislation that creates optimum conditions for green investments
- Supporting the development of legal instruments and best practice guidelines



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

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

# Southern & Eastern Mediterranean (SEMED) Results to Date

6/8

participating financial  
institutions in the region

€250 million

of GEFF financing available  
in the region

Over

77

investments financed

Over

€90 million

of finance provided

Over

350,000

MWh of energy saved per  
year

Reduced over

50,000

tonnes of CO<sub>2</sub> emissions  
per year



# EBRD Green Financing for Green Building Concept - – Example of TuREEFF Programme



Green Mortgage



Reconstruction & New Building Construction



Rehabilitation



Small Investments



# Small Investments & Vendor Financing



European Bank  
for Reconstruction and Development



- Turkey has largely introduced EU directives on energy efficiency
- The aim of the EBRD Programme is to promote market penetration of energy efficient equipments for buildings
- Financing provided through
  - Customer loans to individuals
  - Commercial loans to vendors
- Combined with awareness raising campaign for general public, vendors and retailers on energy performance standards and certificates
- Financing – up to 100% of purchase price



# Rehabilitation of Existing Housing Stock



European Bank  
for Reconstruction and Development



Renewable electricity, heating and cooling

Minimisation of heat loss through insulation, windows & doors

Efficient lighting and ventilation  
Efficient and safe lifts

Water efficiency

## The aim of the Programme is to:

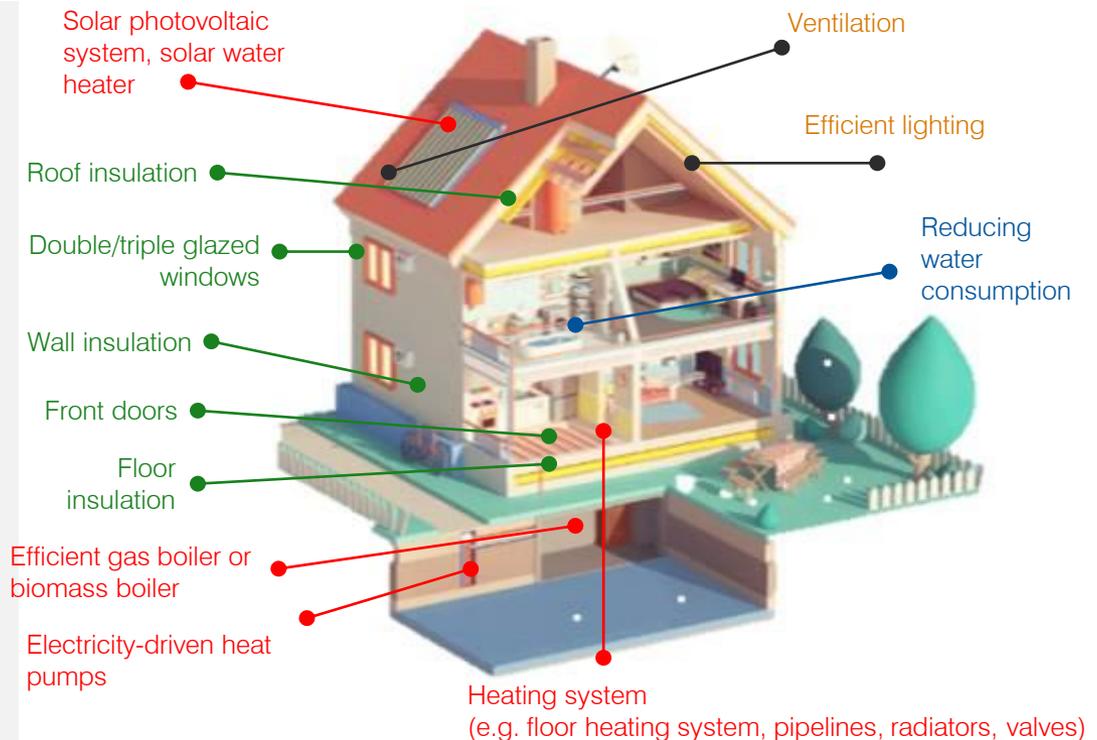
- Improve energy performance and housing quality of existing residential building stock (mostly built since 1980s)
- Projects to meet *EPC C level at least*
- Provide awareness raising and capacity building to general public and SME construction companies

## Financing provided through:

- *Customer loans to individuals – up to 100% of eligible investment costs*
- *Commercial loans to SME construction companies - up to 100% of eligible investment costs*

## Implemented in cooperation with:

- Business associations (like IZODER)
- Local municipalities



# Reconstruction and New Residential Building Constructions



European Bank  
for Reconstruction and Development



Demolition of  
unsafe  
building

High energy  
performance  
building Design  
EPC B and A  
(minimum is  
EPC C)

Monitoring of  
implementation,  
Occupational  
Health and  
safety check on  
site  
On the job  
training

Verification of  
implementation  
  
Providing EPC  
to completed  
projects

## The aim of the Programme is to:

- Support Turkish Government Urban Transformation Programme – safe, efficient and high standard housing
- Increase market penetration of new buildings with high energy performance
- Provide awareness raising and capacity building to general public and SME construction companies
- Increase health & safety practices in construction

## Financing provided through:

- *Individual loans – up to 30% of full investment costs*
- *Commercial loans to SME construction companies - up to 100% of full eligible costs*

## Implemented in cooperation with:

- Business associations
- Local municipalities



ENERJİ VERİMLİLİK  
İNHAZATI



CLIMATE  
INVESTMENT  
FUNDS



# Green Mortgages



European Bank  
for Reconstruction and Development



## The main aim of this programme is to:

- Promote Green Building concept in the market
- Demonstrate a wider coverage of environmental aspects by the Green Building concept than just energy performance

## Financing provided through:

- *Green Mortgages* to individuals, largely off-plan financing, first buyers (no direct financing of developers) – *up to 50% of the value of property*
- Financing in pre-approved Green Buildings by Project Consultant

## Other aspects:

- Awareness raising and capacity building to general public and project developers on Green Building concept
- Increase H&S practices in construction





# Lessons Learnt and Recommendations

# Major Lessons Learnt and Recommendations

## Regulatory Framework enabling Green Building investments

- ❑ Regulatory framework promoting energy efficient/green buildings must be in place and enforced – Turkey is a good example of such functioning regulatory system
- ❑ If not in place/enforced a **Policy Dialogue** is necessary to develop/enforce such framework otherwise it is difficult to generate demand for energy efficient/green investments - the EU is currently working on stocktaking activity in the Neighbourhood South Region which may result in offering support to countries which need a help
- ❑ No subsidies to energy prices (except for lifeline electricity tariffs) - good example is Egypt with ongoing price reform
- ❑ Access of distributed power generation to grid (net-metering scheme) - Good example is Egypt with promotion of RE

## Preparedness of Industries

- ❑ Dialogue with industries during preparation/enforcement of regulations to make them aware and accepting the regulation to be able to enforce it
- ❑ Education, training and capacity building for industries to be able to understand and meet required standards
- ❑ Certification of installers/maintenance of equipment (scaffoldings, wall/roof insulation, windows, SWHs, A/C, lifts, etc.)
- ❑ Occupational Health & Safety training and certification to protect life and health of workers and ensure quality

## Availability of Quality Technologies

- ❑ Certification/labelling of equipment (scaffoldings, wall/roof insulation materials, windows, SWHs, A/C units, lifts, etc.)
- ❑ Support to producers/importers/vendors of high performing equipment/materials (special tax rates, lowered import duties, trade facilitation programmes, support in investments in production of high performing equipment )
- ❑ Promotion of setting professional associations of technology providers ensuring high quality is provided by their members

## Stimulation of Demand

- ❑ Awareness raising among general public on advantages of high performing/green technologies and buildings through demonstration projects and their dissemination
- ❑ Strict enforcement of standards including awareness raising and capacity building of regulators/enforcement services
- ❑ Providing better condition for Green loans (maturity, price)

## Regulatory Framework enabling Green Building investments

- ❑ Technical Assistance in **development of the Regulatory framework** promoting energy efficient/green buildings (primary/secondary legislation) and support in enforcement (awareness raising, capacity building)
- ❑ Technical Assistance in **development of Energy Performance Certification/Labelling** schemes for energy equipment and buildings
- ❑ Technical Assistance in energy price reform
- ❑ Technical Assistance in **development an implementation of regulations for distributed power generation** (grid access, net-metering scheme, power wheeling)

## Preparedness of Industries

- ❑ **Technical Assistance to industries** in preparation for enforcement of regulations (awareness raising, capacity building and training)
- ❑ **Support to industries in the process of certification** (local standards, international standards)
- ❑ **Technical Assistance in Occupational Health & Safety training and certification** to protect life and health of workers and ensure quality

## Availability of Quality Technologies

- ❑ **Support to producers/importers/vendors of high performing equipment/materials** (vendor loans, loans for in investments in production of high performing equipment )
- ❑ **Green Trade Facilitation Programme for import/export** of high performing technologies and materials (import guarantee programme)

## Stimulation of Demand

- ❑ **Awareness raising among general public** on advantages of high performing/green technologies and buildings through demonstration projects and their dissemination
- ❑ **Easier access to loans** for households, vendors producers, construction companies engaged in green projects in buildings
- ❑ **Providing better condition for Green loans** (maturity, price)



# Case Study from Morocco

# Case Study – New International School in Morocco



European Bank  
for Reconstruction and Development

## The Company

- Education
- El Jadida

## Project Goals

- Compliance with building code
- Energy efficiency
- Renewable energy
- Reduction of GHG emissions

## Investments

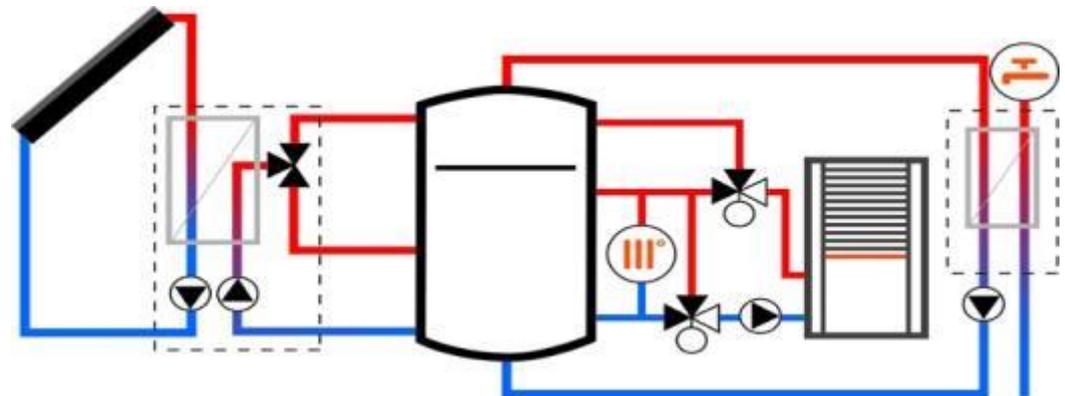
- € 462 445
- Wall insulation
- Double glazing
- Solar panels (80 m<sup>2</sup>)
- Solar water heaters
- Air-conditioners
- LED lighting

## Results

- Energy savings: 713 MWh/year
- % Energy savings: 71 %
- Reduction in CO<sub>2</sub> emissions : 453 TCO<sub>2</sub>e/year
- IRR: 12 %
- NPV: MAD 1,655,000
- SPBP: 8-14 years

The construction of this new school, was an opportunity for the owners to take energy efficient measures for both the building envelope and the technical systems, in order to both reduce the energy consumption and the environmental impact. This project uses technologies resulting in higher energy efficiency, lower operating costs, improved comfort and higher competitiveness. This project also complies with the new Moroccan Building Code, which has not been consistently applied or enforced to date in Morocco due to lack of decrees, etc. for local authorities.

The adoption of these measures should result in energy savings of 713,000 kWh/year (71%) compared to similar buildings in the local market. The savings amount to more than MAD 960,000 annually. In terms of greenhouse gas emissions reduction, they should reach more than 450 Tons CO<sub>2</sub> eq/year. The project has a positive economic and environmental impact and should also attract a large customer base due to the improved quality and comfort of the school buildings.



# Case Study – New International School in Morocco



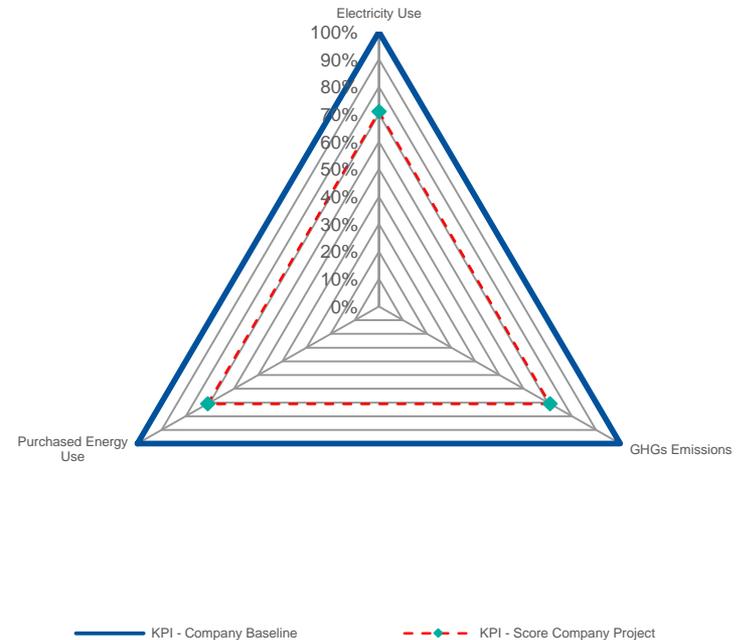
European Bank  
for Reconstruction and Development



## Demonstration Impact of Project

- This project is a showcase in the education sector for energy efficiency (EE) measures meeting the national code for energy performance in buildings.
  - There is a fierce and negative national polemic around the EE code for buildings, which has had limited application and is even less respected,
  - The demonstration effect of the benefits of adhering to the code via visible projects and bankable approaches like this is important.
- By implementing EE measures (thermal insulation, high efficiency AC, etc), the client aimed to both meet regulations while saving on operating costs, and to provide more comfort to school students.

Technical KPIs Scores (project)



# THANK YOU

**Miroslav Maly**

Associated Director

Energy Efficiency and Climate Change

European Bank for Reconstruction and Development (EBRD)

London

E-mail: [malym@ebrd.com](mailto:malym@ebrd.com)

[www.ebrd.com](http://www.ebrd.com)

For more information:

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



**European Bank**  
for Reconstruction and Development