

REEP EVOLUTION: PROPOSED CONCEPT

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European Bank
for Reconstruction and Development

INTRODUCTION

EE IN BUILDINGS

CASE STUDIES

PROPOSED PUBLIC BUILDINGS EE PROGRAMME

EBRD REEP EXTENSION PROPOSAL

WINDOW	DONOR FUNDING NEED		RELATED EBRD INVESTMENT	TIMING OF DONOR FUNDING	
	(EUR million)		(EUR million)		
WINDOW 1: POLICY DIALOGUE (EBRD)		1	N/A	2019:	1m
WINDOW 2: INTERMEDIATED FINANCE (EBRD)	Incentives	20	100	2019:	15m
	TA	5		2020:	10m
WINDOW 4: LENDING FOR PUBLIC BUILDINGS EE (EBRD)	Grants	25	100	2019:	23m
	TA	8		2020:	10m
TOTAL		59	200		



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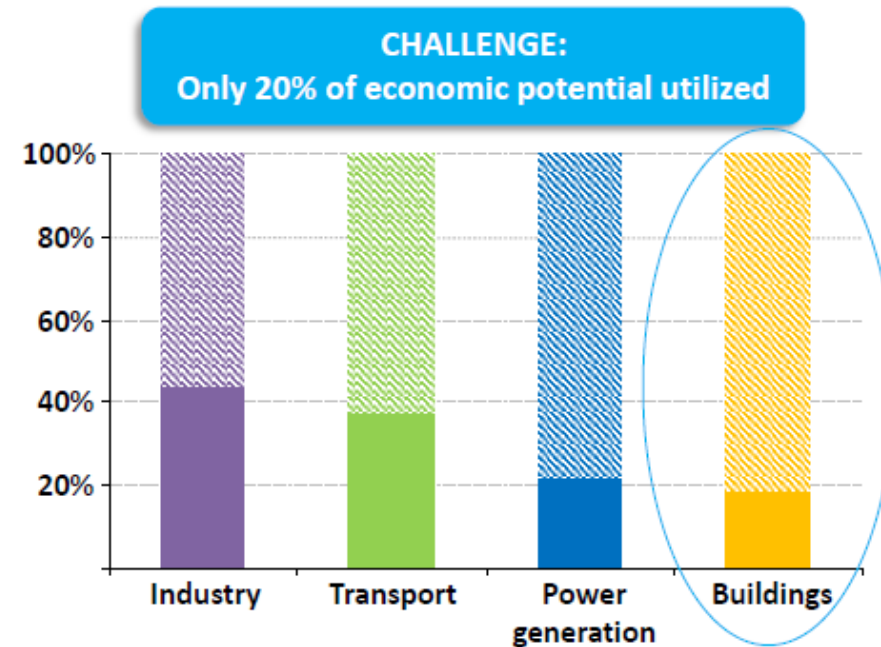
CASE STUDIES

PROPOSED PUBLIC BUILDINGS EE PROGRAMME

MARKET POTENTIAL – EE IN BUILDINGS

There are many reasons for targeting EE in the building sector:

- **High Energy Demand**
 - **33%** of World's Energy and **55%** of electricity
 - **40%** of energy consumption in EU
- **High GHG Impact**
 - **19%** of World's GHG emission
- **Large Impact on growth & employment**
 - **5 jobs** created per housing unit built



Around **11% of energy consumed** in buildings are publicly owned in the EU

BENEFITS FOR STAKEHOLDERS

EE IN PUBLIC BUILDINGS

Government Municipality

- ❑ Modern infrastructure, visibility of Gov. initiative
- ❑ Energy cost saving, reduced budget subsidies
- ❑ Awareness raising
- ❑ Improved energy accounting and facility management
- ❑ Investment, job creation, tax revenue
- ❑ Regulatory compliance (health and safety), energy saving target
- ❑ Extending building lifetime and sustainability
- ❑ Higher user/society satisfaction
- ❑ Increased productivity (equipment and process)
- ❑ Ability to attracting co-financing

Society/Users

- ❑ More efficient use of public funds
- ❑ Improved comfort level
- ❑ Improved health and safety level
- ❑ Employment/business opportunities
- ❑ Renewed availability of public services

Donors

- ❑ Compliance with agreements and directives (NDCs, EED)
- ❑ Leveraging impact
- ❑ Energy/GHG emission savings
- ❑ Social benefits (health, safety, comfort, service, environment)
- ❑ Economic development and employment
- ❑ Capacity building
- ❑ Transition towards market approach (financing, technology, development)
- ❑ High visibility (large number of visitors)

MARKET POTENTIAL – WESTERN BALKANS

Total approx. public building floor area and total estimated investment needs for refurbishment



Serbia

26 million m²

Investment € 722 - 2,709 million



Bosnia & Herzegovina

18 million m²

Investment € 498 - 1,869 million



Albania

7 million m²

Investment € 185 - 693 million



FYR Macedonia

2 million m²

Investment € 64 - 242 million



Kosovo

2 million m²

Investment € 51 - 190 million



Montenegro

2 million m²

Investment € 43 - 163 million

Total Public building floor area in Western Balkans:

56 million square meter

Total stock expected to be refurbished*:

39 million square meter

Total investment needs*:

Light Renovation € 1.6 billion

Deep Renovation € 5.9 billion

Potential energy savings**

Light Renovation 1,408 GWh/a

Deep Renovation 2,815 GWh/a

*Assumption – 70% of public building stock to be refurbished

**Light Renovation at 40 €/m²; Energy saving 20%;

**Deep Renovation at 150 €/m²; Energy saving 40%

- What are examples of financing public building retrofits in your country and which ones were the most successful?
- What is the potential for public buildings EE investments in your Country?
- What are the key challenges hindering the scaling up of investment in public buildings EE?



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Chisinau Public Buildings



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EBRD Loan	€10 M
Total Project	€ 25 M
Technical Assistance	€1.1 M



Background:

Support Municipality of Chisinau to conduct energy efficiency retrofit of **up to 119 buildings** (kindergardens, schools and hospitals).

Scope of the investment:

- Energy efficiency improvements to building envelope (wall, roof, windows and doors)
- EE enhancement of HVAC systems (heating, ventilation, air-conditioning).
- Individual measures targeting lighting systems and heat distribution systems.

Expected results: significant energy savings for the municipality (37,000 MWh/annum).

Additional benefits: strengthening the structure of the building, ventilation works and removal of asbestos, increasing the health safety and comfort.

Kremenchuk Municipal Buildings, Ukraine



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EBRD Loan	€6 M
Total Project	€10.7 M
Technical Assistance	€0.7 M



Background:

Finance energy efficiency refurbishment of **66 public buildings** in City of Kremenchuk (kindergartens, schools and hospitals).

Scope of the investment:

- a selection of energy efficiency measures with short-medium payback periods will be implemented in 34 buildings (non-capital repairs, level 1)
- full energy conservation measures (ECM) with longer paybacks will be implemented in 32 selected buildings without major need for structural repairs (capital repairs, level 2).

Expected results: energy savings of 19,500 MWh per annum.

EBRD Loan €10 M

Total Project €13.6 M

REEP grant €1 M

REEP TA €0.7 M



Background: finance energy efficiency refurbishment of Zenica Regional Hospital (6 buildings);

Scope of the investment:

- rehabilitation and insulation of building envelope (walls, roofs and external fittings)
- EE refurbishment of HVAC system and introduction of central ventilation and cooling system;
- Construction of energy efficient building extension of ca. 2,800 m²;
- Replacement of a lignite heat boiler with a more energy efficient gas boilers and the rehabilitation of the heat distribution system;
- Introduction of anti-flooding measures (waste and storm water drainage rehab)

Expected results: annual energy savings of 62 % of the hospital's consumption (13,831 MWh/year)



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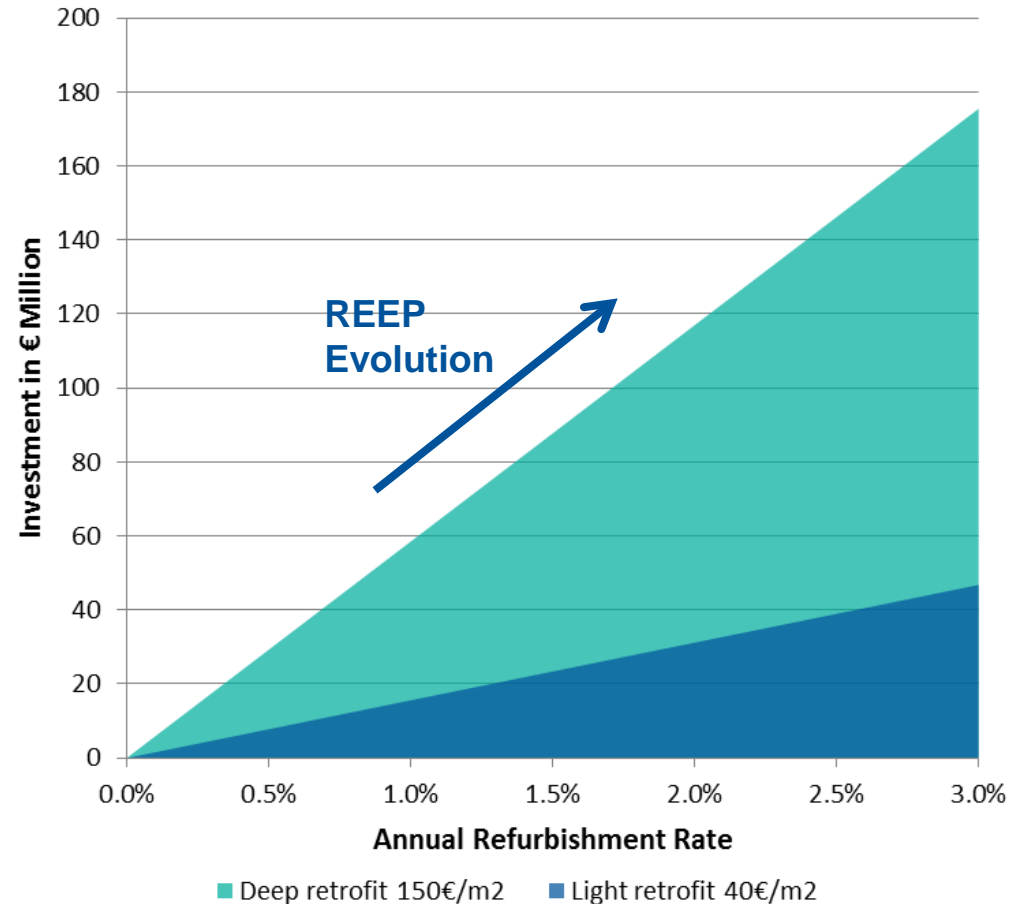
PROPOSED PUBLIC BUILDINGS EE PROGRAMME

MARKET POTENTIAL

ESTIMATED ANNUAL INVESTMENT IN WB

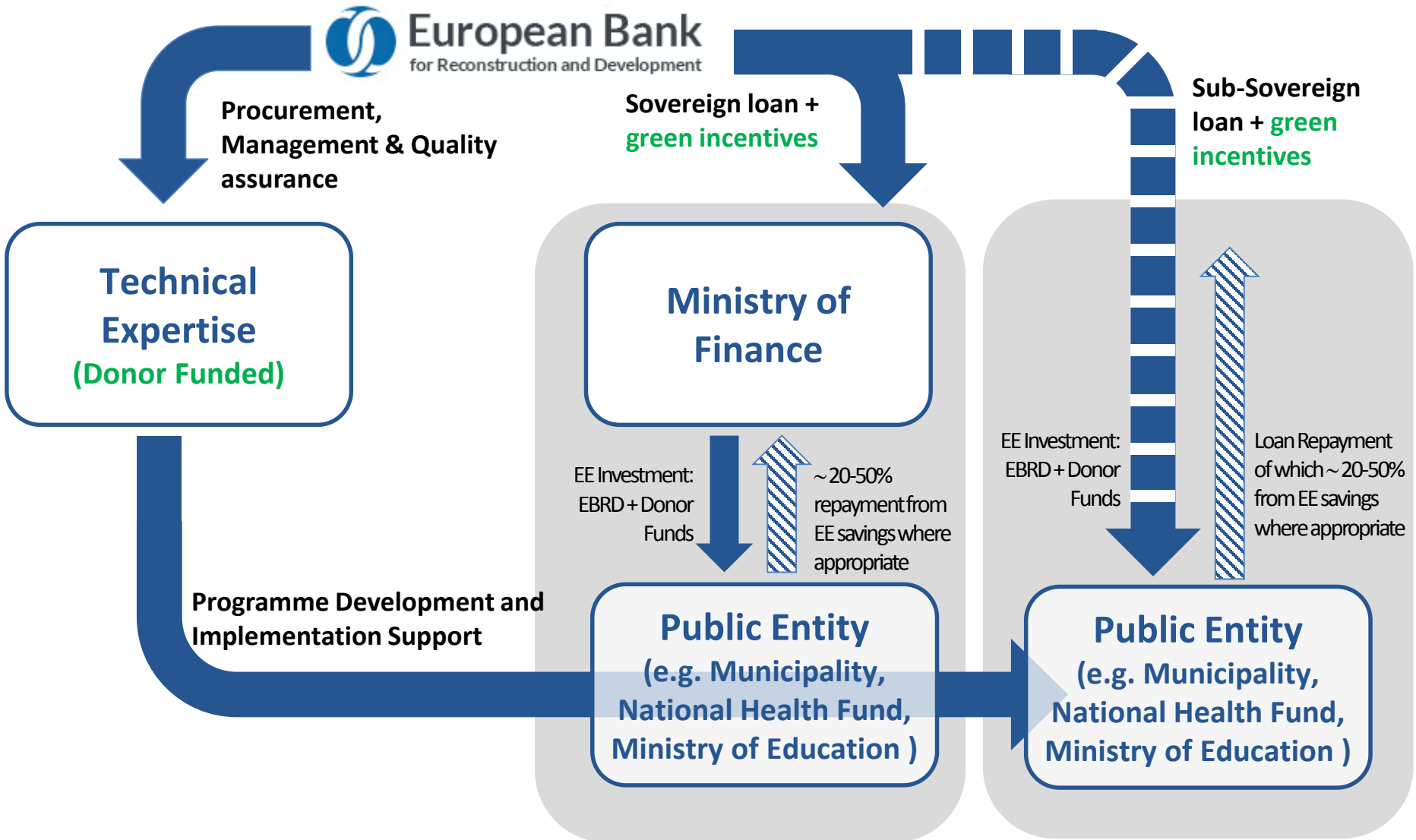
- EU annual renovation target is 3%
- Annual renovation for EU neighbourhood countries is 1.5%
- To refurbish building stock within its lifetime a renovation rate of 2.8% is required

Potential Annual Investment*



* Indicative annual investments based on multiple assumptions

PROPOSED PROGRAMME STRUCTURE



Thank you!



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