

Yerevan Energy Efficiency Project





- Largest multilateral lender and borrower in the world (EUR 84bn in 2016)
- Shareholders: 28 EU Member States
- Around 450 projects each year in over 160 countries
- AAA-rated by the three major rating agencies
- Attractive products
 - Large amounts,
 - Long maturities (up to 25 years)
 - Attractive **interest rates**
 - Low **fees**

Project preconditions

Energy Efficiency is a priority for:

- Republic of Armenia
 - City of Yerevan
 - **EU**
 - **EIB**
- Energy Efficiency is one of the EU deliverables that EIB has to contribute to (the EU Deliverable n. 15)**

Although important steps implemented in Armenia legislation, policy fund, support to introduction of best practices and technologies)

EE potential remains untapped, mainly due to:

- Limited Sovereign borrowing capacity
- Financial viability: Seismic resilience and accessibility costs create longer payback periods, and reduce the attractiveness of the investments
- Lack of awareness
- Lack of enforcement capacity of primary EE legislation



The project, the buildings

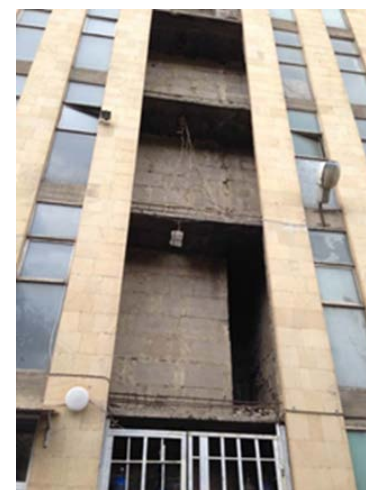
- The project aims to support the Municipality of Yerevan (MoY) in implementing a rehabilitation programme involving Energy Efficiency (EE) and renewable energy (RE).
- The project targets **147-190 public buildings** (330.000m² 400.000m²) depending on the availability of grants to support the project
- **Municipality of Yerevan with the assistance of the Municipal Project Support Facility (MPSF) TA consultant selected:**

122 kindergartens

22 hospitals

2 cultural buildings

1 athletic center



An innovative and transformational project

Project cost EUR 15-20m

EIB Loan – EUR 7m

E5P grant – EUR 10m *in two
tranches (5+5m EUR)*

Municipality's funds – EUR 2m

MPSF grant EUR 250.000 +
GCF by UNDP EUR 1m

Thermal refurbishment and other EE/RE components:

- building envelope
- heating, ventilation, and air conditioning (HVAC) systems, including boiler replacement
- renewable energy sources and energy management systems including solar heat and/or solar power generation
- geothermal heat generation, heat pumps, small cogeneration
- overall technical condition of buildings
- lighting systems
- **Seismic resilience and accessibility components**

Technical Assistance
for implementation and for
scaling up to next phase



Project Management Group:
Municipality with support of
UNDP, EIB Consultant

Savings

- Buildings

147 buildings /
330,000 m²

- Energy saving

27,782
MWh/year

- CO₂ saving

5,502
t/year

- Costs saving

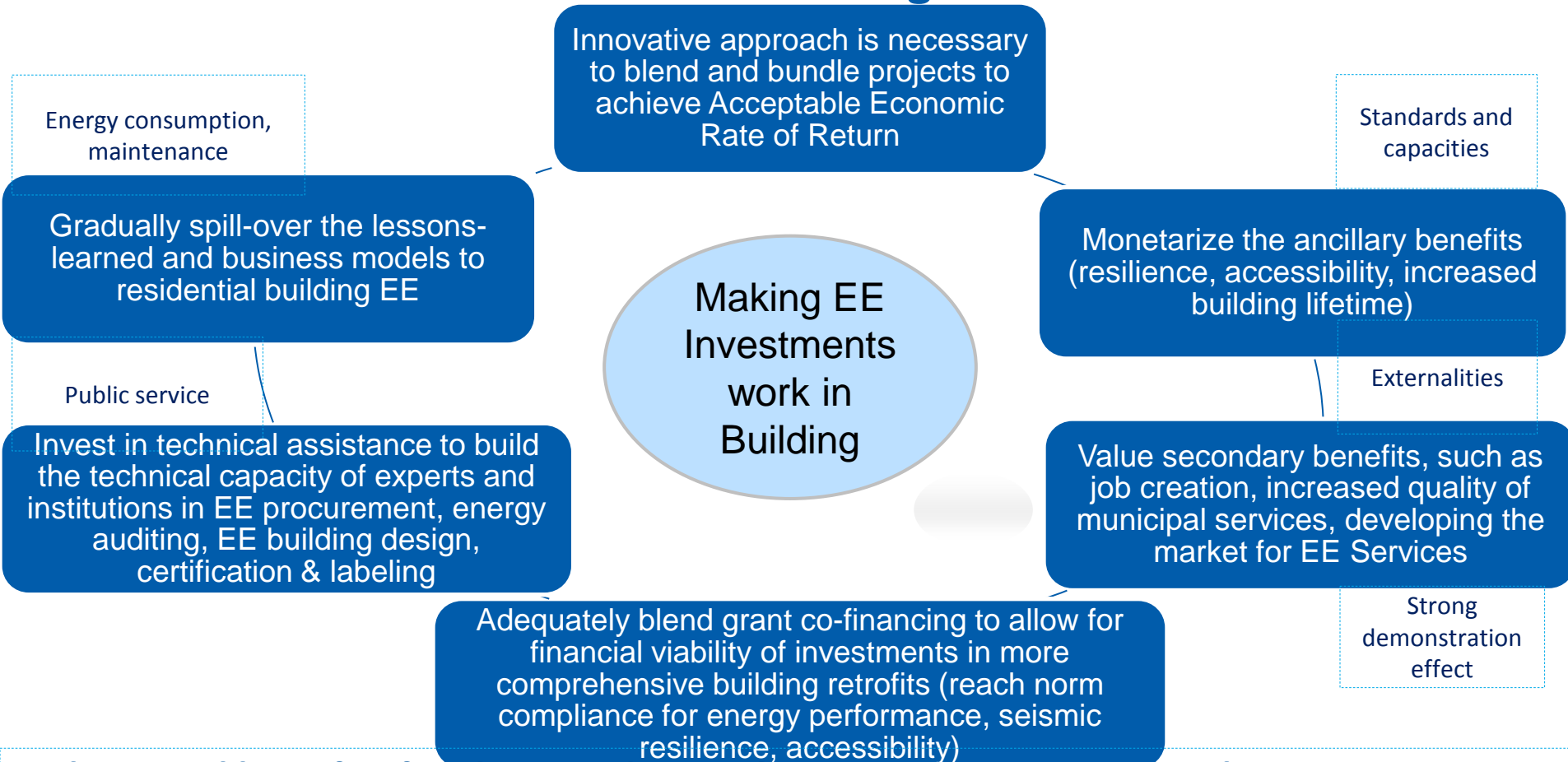
1,094,604
EUR/year

- Ratio of CO₂ savings to the total capital costs of EUR 15m

903 t of CO₂
per m EUR
invested

Compared to base line:
deep renovations savings expected at about 60%.
 Overall with horizontal measures electricity savings expected at 70% (due to PV)
 thermal energy savings at 30%

Key Remedies to Overcome Barriers for EE Investments in Armenia's Building Sector



Substantial benefits for the population, for MoY, Impact on growth, energy security, GHG emissions

Thank you

Violaine Silvestro – Senior Loan Officer

Astghine Pasoyan – Local Team Leader, LDK, EIB TA team

Lending in EU Neighbouring Countries – Public Sector East

Tel: (+352) 4379-84809 – E-mail: v.silvestro@eib.org

