European Investment Bank

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EIB support to Energy Efficiency Investments

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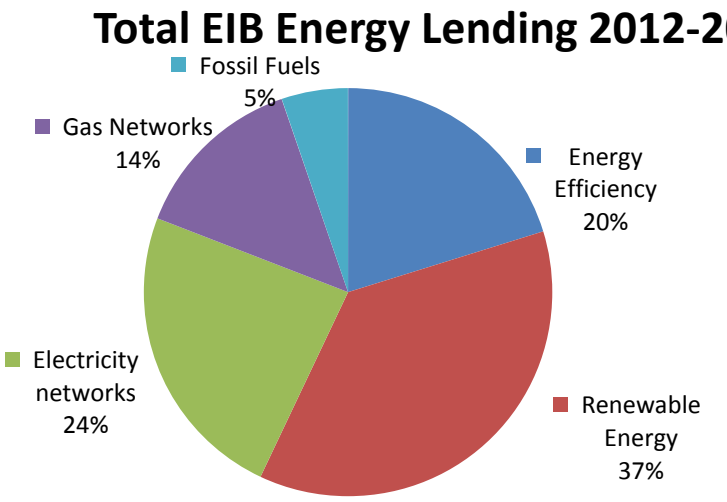
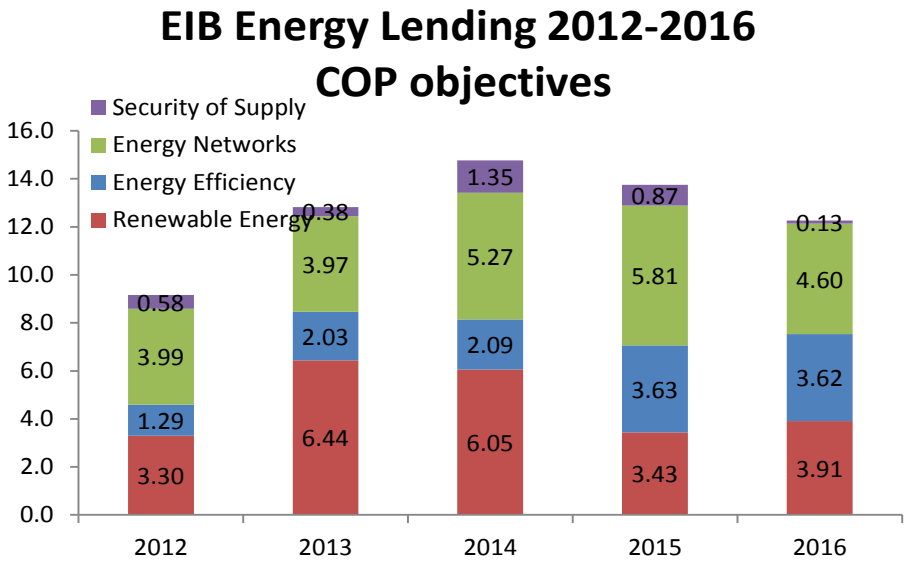
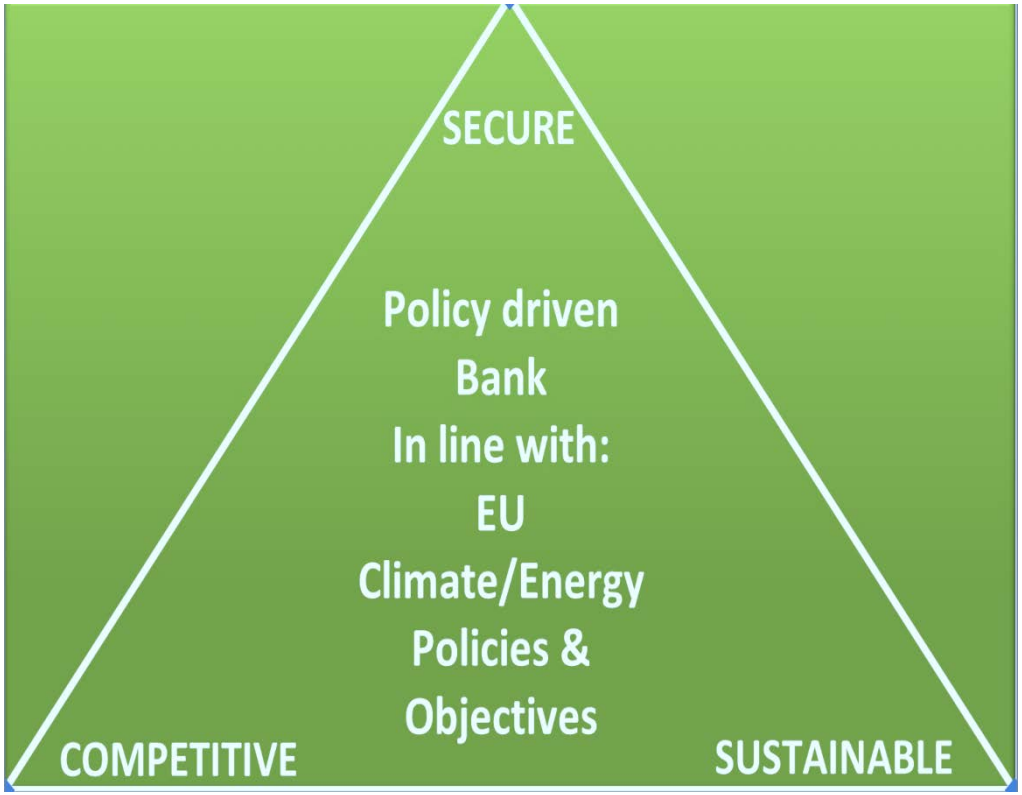
EIB Energy Lending



- Signatures 2012-2016: EUR 62.7 billion
- Sectors: Renewable Energy, Energy Networks, Security of Supply and Energy Efficiency
- Evolution over the last 5 years

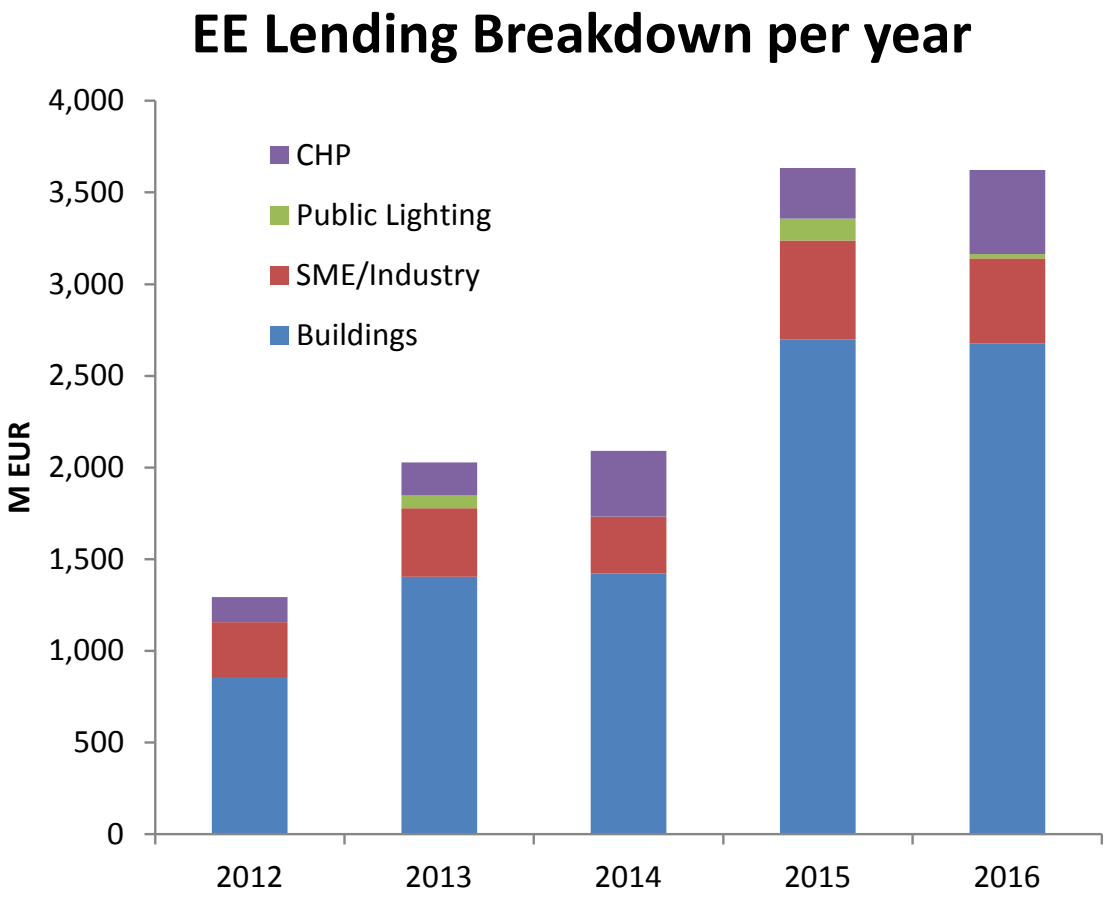


EIB Energy Lending Criteria (2013)



- EIB's energy lending policy approved in 2013 after public consultation
- Prioritise EE, RE, Energy Networks & RDI
- EE: "mainstreaming", TA & tailored instruments
- Support to RE mature & emerging technologies
- EPS for fossil fuel power generation
- Energy lending criteria aligned with 5 dimensions of Energy Union

EIB lending to Energy Efficiency

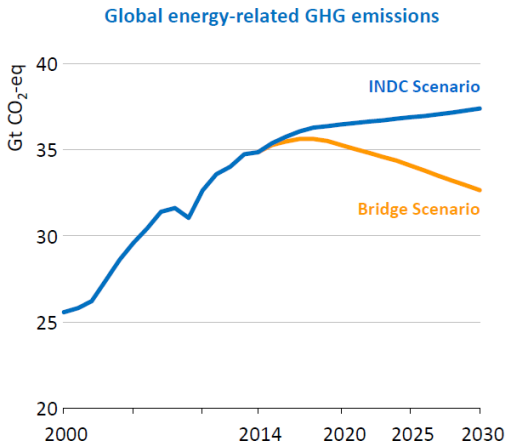


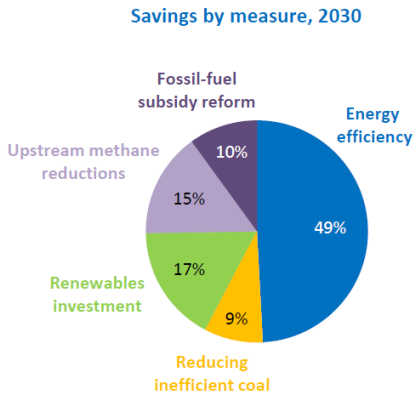
- Overall EE-lending increased by 3x since 2012
- 75% of EE-lending volume to Buildings

Why Energy Efficiency?

- Energy trilemma

- Role in decarbonization scenarios





- Potential of EE investments

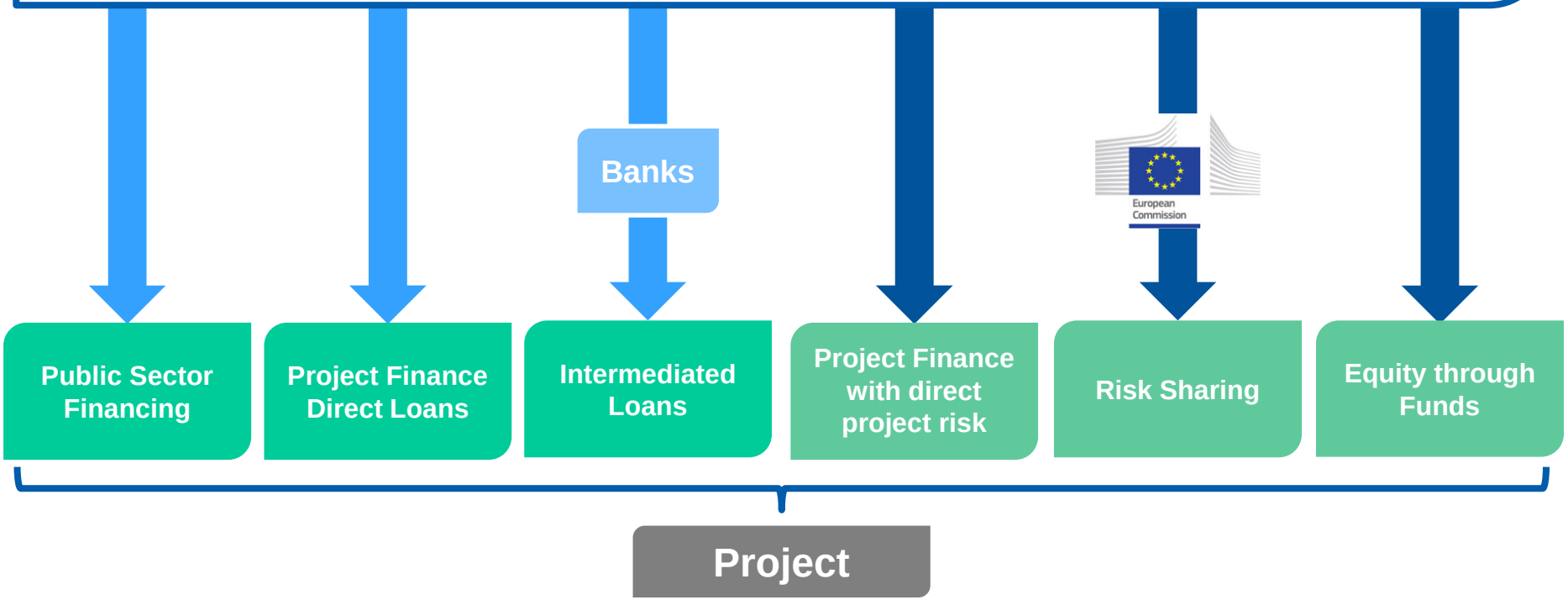
EUR 1.1 trillion of EE investments needed to comply with new 2030 framework of 40% GHG target (75% in buildings)

Range of Financing Instruments

The EIB has an **extensive range of instruments** to finance public and private sectors at investment and sub-investment grades of risk to its disposal.

EIB lending instrument
For Investment Grade operations

EIB special activities
For Low and Sub Investment Grade operations



EIB examples of climate action financing

- Investment Loans (direct)

  Examples: Social Housing, Public/Private buildings

- Framework Loans

  Examples: Private Finance 4 Energy Efficiency (PF4EE)

- Investment Funds

  Examples: IMPAX, Lithuania example…

- Technical Assistance

  Examples: Municipal Project Support Facility (MPSF) and European Local Energy Assistance (ELENA)

Investment Loan – NZEB project

POTENTIAL TYPE OF PROJECT IN THE REGION

NZEB social housing

Objective: Promote new building standards (EPBD)

- 524 units with consumption of 20 Kwh/m2, (EPC of A, passivhous)
- Expected energy savings of 2,298.3 MWh/y (75% reduction versus the baseline), corresponding to 748.8 ton/y CO2 savings
- Levelized cost of the final energy saved (LCOE) by the NZEB buildings is between 64 and 128 €/MWh

Investment Loan – Public Buildings Yerevan, Chisinau

Objective: Aggregation of Fragmentation

Athletic Centre	
CAPEX:	175000 EUR
Energy Savings:	140 MWh/y
Cost Savings:	5000 EUR/y
Simple Payback:	24 years of payback without RE

Children's Polyclinic	
CAPEX:	198000 EUR
Energy Savings:	90 MWh/y
Cost Savings:	8100 EUR/y
Simple Payback:	15 years of payback with RE

Investment Loan – Private Buildings Croatia

Objective: Aggregation of Fragmentation

Residential building (Private)	
CAPEX:	131720 EUR
Energy Savings:	342 MWh/y
Cost Savings:	24800 EUR/y
Simple Payback:	6/7 years depended on prices

Office building (Private)	
CAPEX:	157000 EUR
Energy Savings:	155 MWh/y
Cost Savings:	7500EUR/y
Simple Payback:	21 years

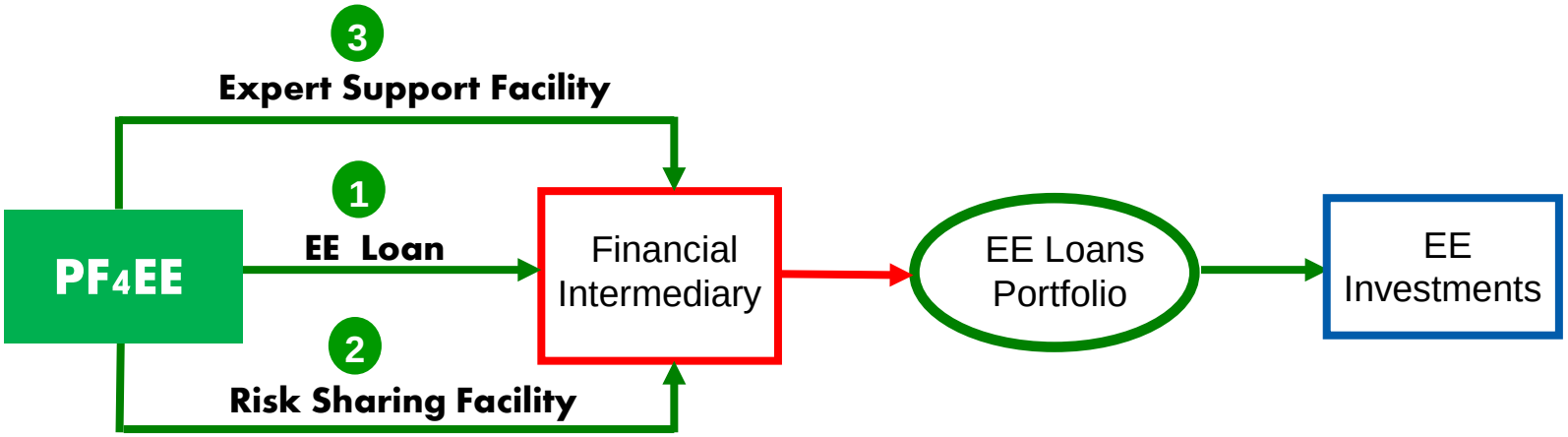
Framework Loan
(+Risk sharing+TA)

Private Finance 4 Energy Efficiency (PF4EE)

Objective: Increase private lending to EE

PF4EE comprises three components

- A loan to the financial intermediary to be on-lent for EE investments (**"EE Loan"**)
- A risk mitigation mechanism, covering losses incurred in the portfolio of EE loans granted by the financial intermediary (**"Risk Sharing Facility"**)
- Technical assistance aiming at supporting the financial intermediary to develop the EE portfolio (**"Expert Support Facility"**)



Investment Fund

Impax Climate Property (UK)

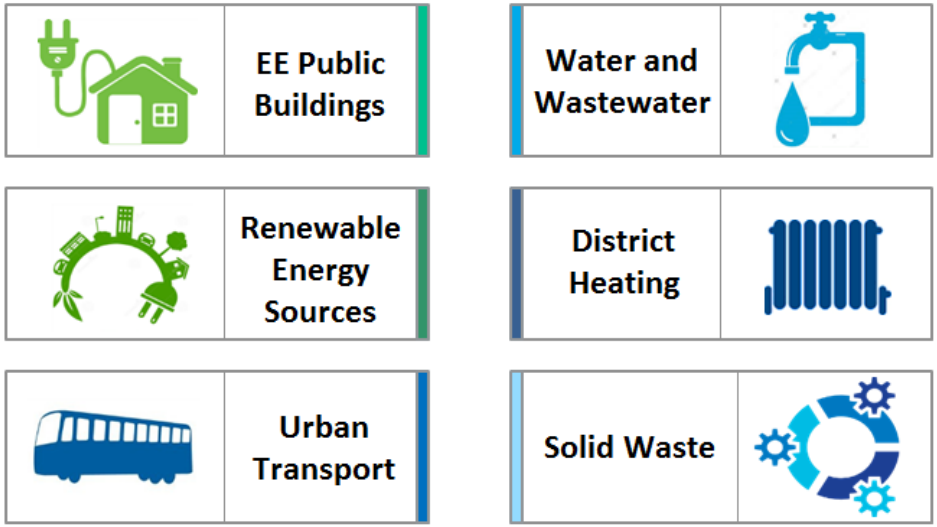
Barrier: Split incentives ⇨ Solution: Aggregation

- Infrastructure fund targeting the refurbishment of UK commercial buildings
- Renovation of 8 to 12 properties, increasing EPC ratings in at least 2 levels (30-50% energy reduction)
- Total project cost (renovation) GBP 150m
- EIB investment 25m, under EFSI

Technical Assistance - MPSF

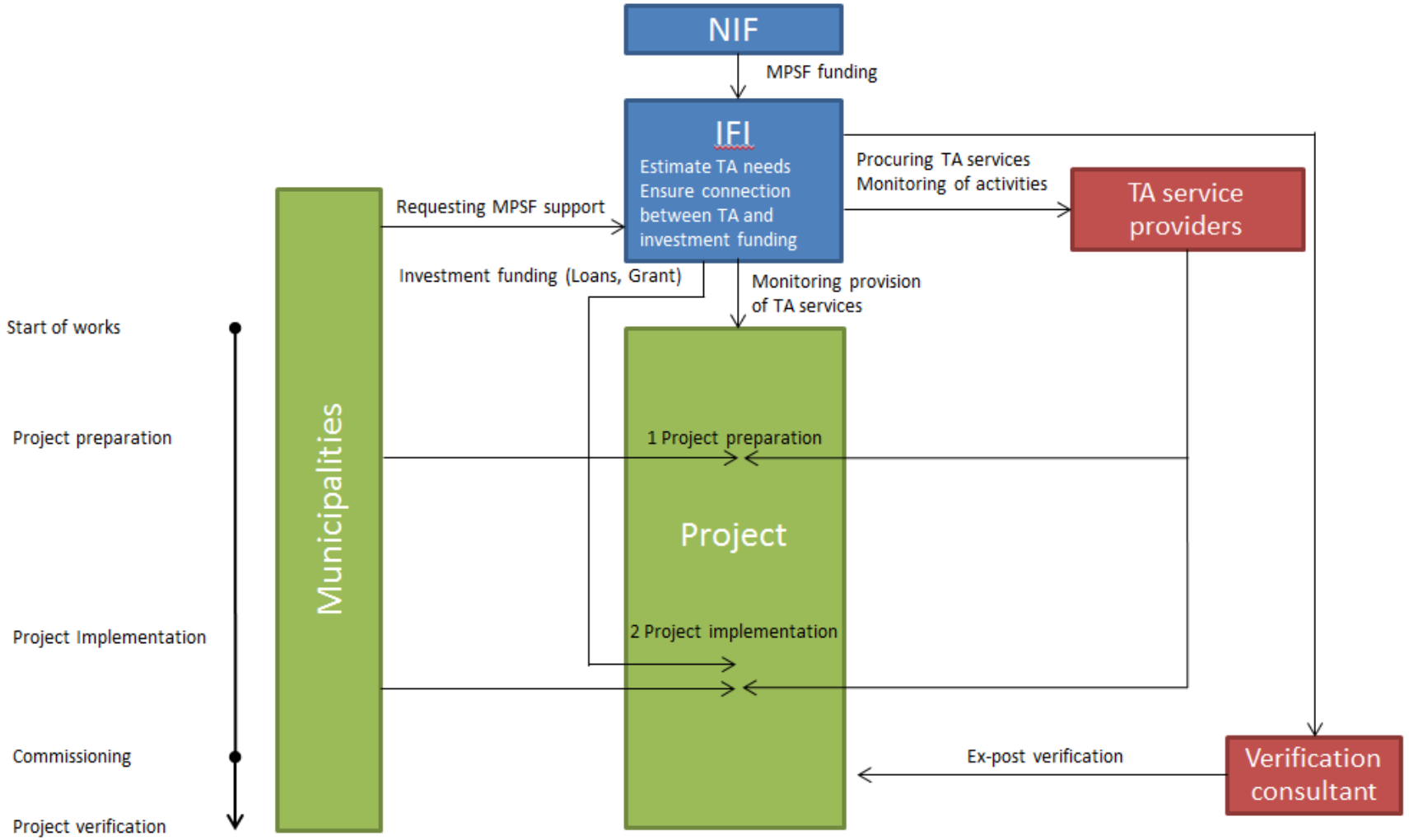
Geographical coverage: Ukraine, Moldova, Belarus, Georgia, Azerbaijan, Armenia

Sectors:



- Beneficiaries: Municipalities (CoM, SEAP)
- Budget: EUR 12m for TA services
- Commencement 31/03/2015, 92 months
- Implementing IFIs: EIB, KfW, EBRD

Structure of the Municipal Project Support Facility



MPSF: Current Status

- 12 PROJECTS APPROVED [EIB] - EUR 10.2m

  Armenia (2), Moldova (1), Ukraine (8), Georgia (1)

  out of which:

- 2 CONTRACTED [EIB] - EUR 455k
  - Yerevan EE in Buildings
  - Chisinau EE in Buildings

  for: project preparation and implementation support

  Progress: satisfactory

- PIPELINE:
  - EBRD Batumi Bus Project – EUR 580k
  - EBRD Solid waste Georgia – EUR 1m

Technical Assistance – ELENA

European Local Energy Assistance

ELENA

ELENA
Technical Assistance

Support for
Project developers (public or private) for e.g.:

- Additional personnel
- Technical studies
- Preparation, evaluation of calls for tender
- Financial structuring

INVESTMENT PROGRAMME
Energy efficiency and distributed renewable energy
in public and private buildings,
public lighting and traffic light network
roof top photovoltaics,
heating/cooling systems (e.g. biomass);

Efficient urban transport and mobility
clean and energy - efficient road transport vehicles,
trams, trolleybuses, metros, and trains;
investments to improve public transport;

Local energy facilities that support EE/RE
smart grids, district heating and cooling
infrastructure for recharging electrically powered vehicles,
information and communications technologies,

Provided over 100m in grants supporting ~5 bn in CAPEX

EE tool: energy performance contracting

- Mobilising EE potentials in buildings and industry by using the know-how of specialised energy service companies (ESCO) through energy performance contracting (EPC)
- Access to private financing means for EE investment (EUROSTAT Note)
- Obtaining a guarantee from the ESCO, that the energy savings will be achieved, leaving the implementation risk to them

Croatia	
CAPEX:	20 MEUR
Energy Savings:	9,500 MWh/y
ELENA Assistance	711,000 EUR

EPC : advantages and limits?

Conclusion: Unlocking EE investments

Huge investment needs and real potential to consume energy more efficiently

But…

- Fragmentation (small projects and high transaction cost)
- Split incentives (landlords vs tenants)
- Capital constraints
- Limited technical expertise

EIB's response

- Aggregation (intermediated lending, investment Funds, etc.)
- Broad range of instruments : direct and intermediated operations
- Provision of TA: PF4EE, ELENA, MPSF
- However, some barriers non-addressable by EIB (e.g. regulatory barriers, public sector limitations, subsidized energy costs)

Current projects – future pipeline EE

UKRAINE MUNICIPAL INFRASTRUCTURE PROGRAMME

EE in Public Buildings, DH, SL (EUR 800m)

UKRAINE HIGHER EDUCATION

EE in Universities (EUR 160m)

CHISINAU ENERGY EFFICIENCY→ ROLL-OUT

EE in Public Buildings (EUR 25m - Pilot)

MOLDOVA ENERGY EFFICIENCY

EE in public and residential buildings (EUR 130m)

YEREVAN ENERGY EFFICIENCY → ROLL-OUT

EE in Public Buildings (EUR 20m – Pilot)

Economic Resilience Initiative

THANK YOU!

Any questions?

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