European Investment Bank

The EU bank

Financing energy efficiency

EIB support to energy efficiency, including EFSI

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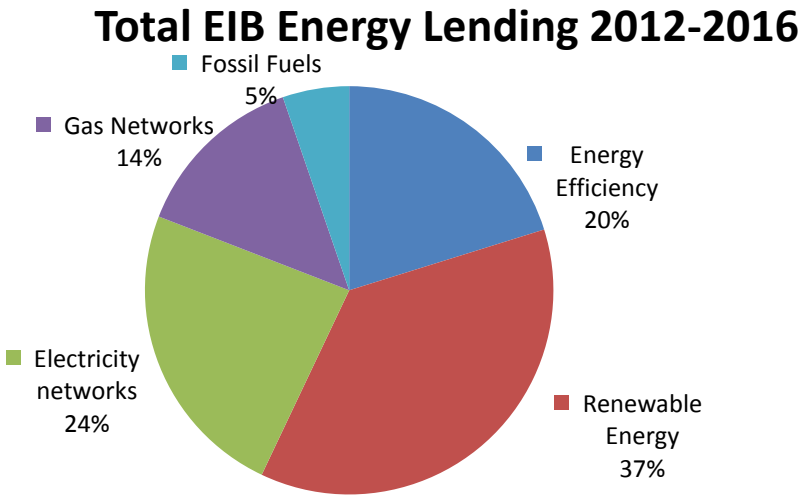
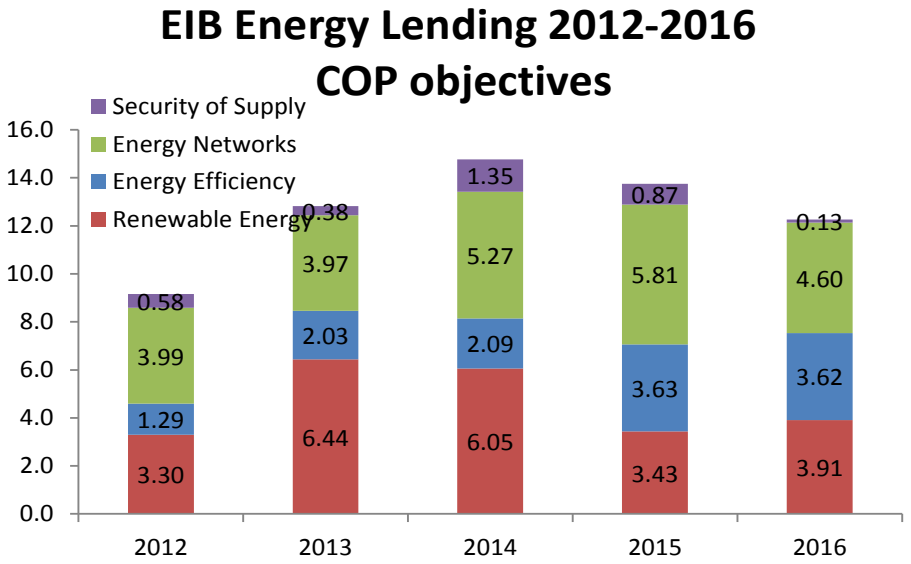
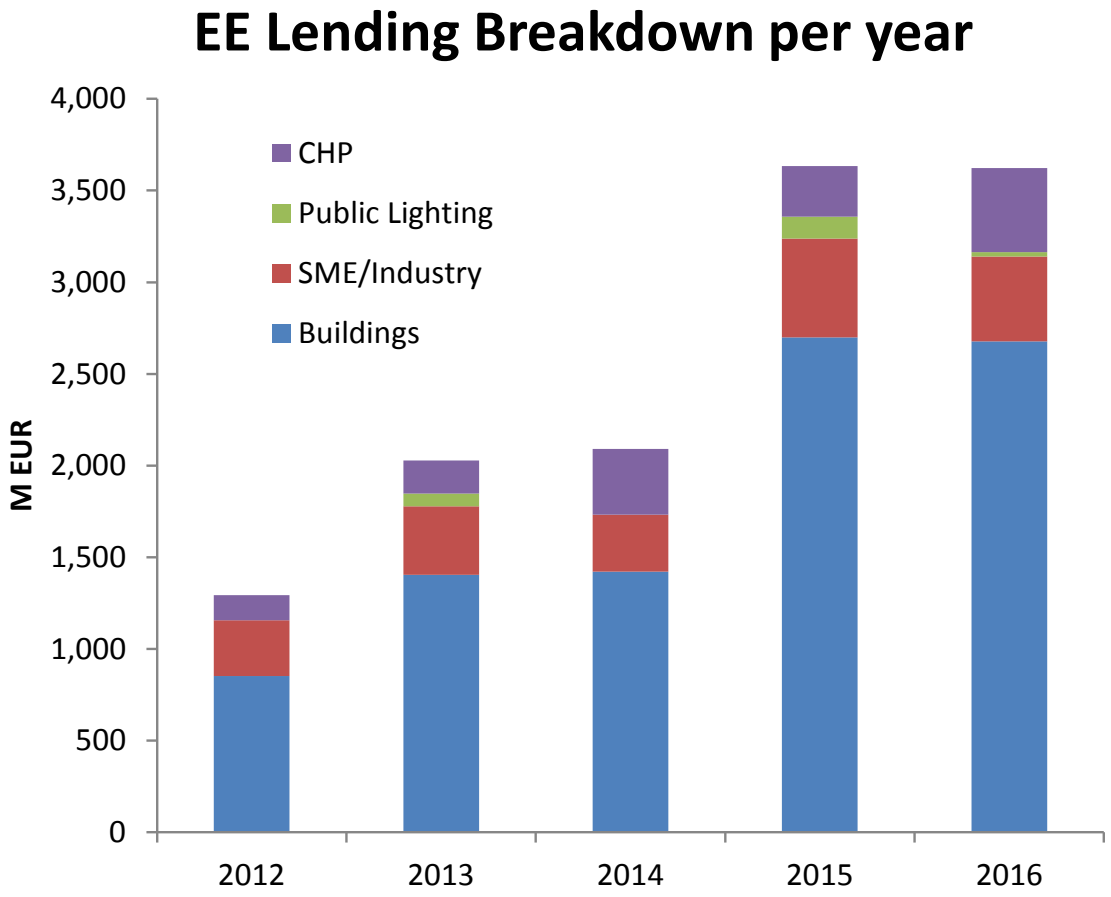
EIB Energy Lending



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



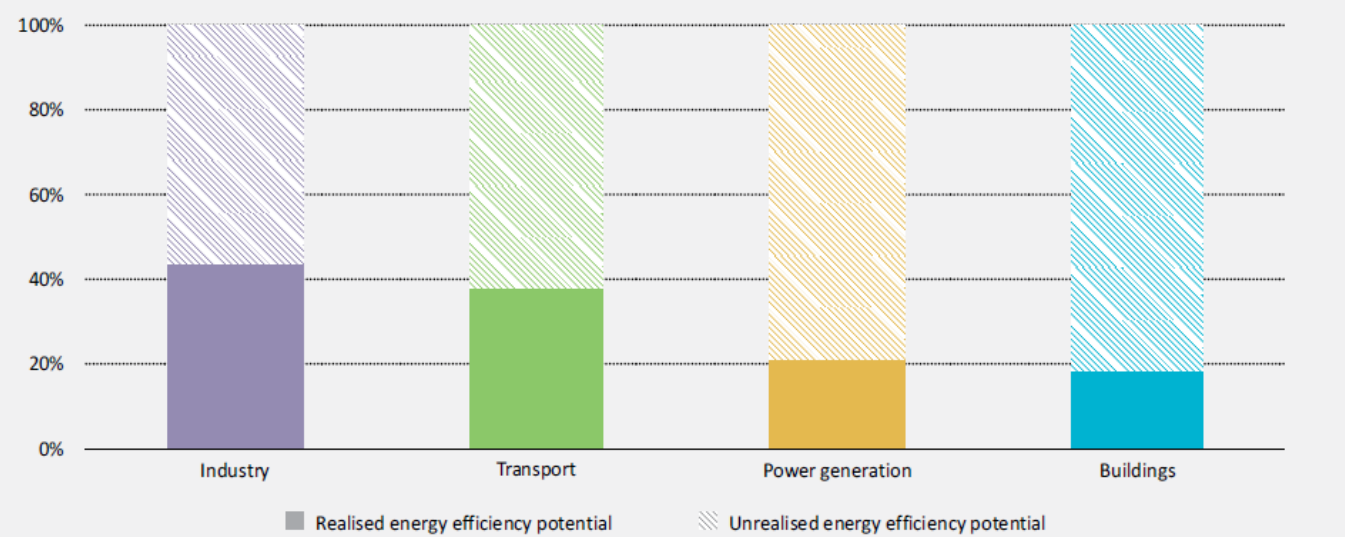
EIB lending to Energy Efficiency



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

The potential for EE investments

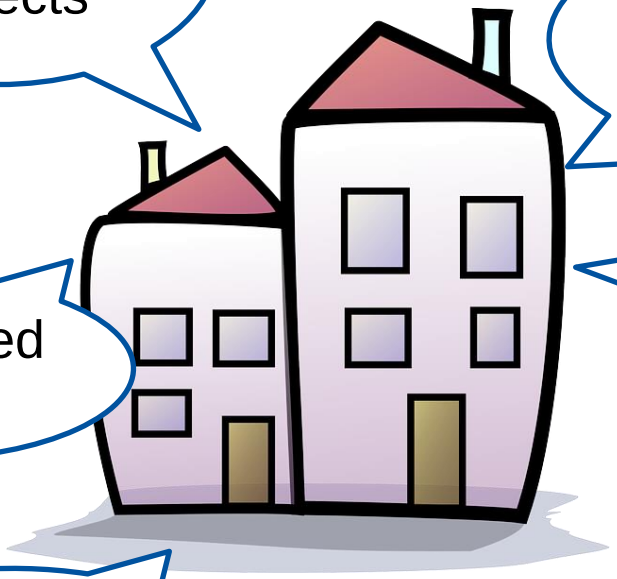
- EUR 1.1 trillion of EE investments needed to comply with new 2030 framework of 40% GHG target (75% in buildings)
- Buildings account for ~ 40% of EU final energy consumption. Given low annual new build rate (1.5%). Even if NZEB standards are adopted, 50 years to renovate the existing building stock. We can't afford it!



Typical barriers to delivering energy efficiency

Fragmentation of projects

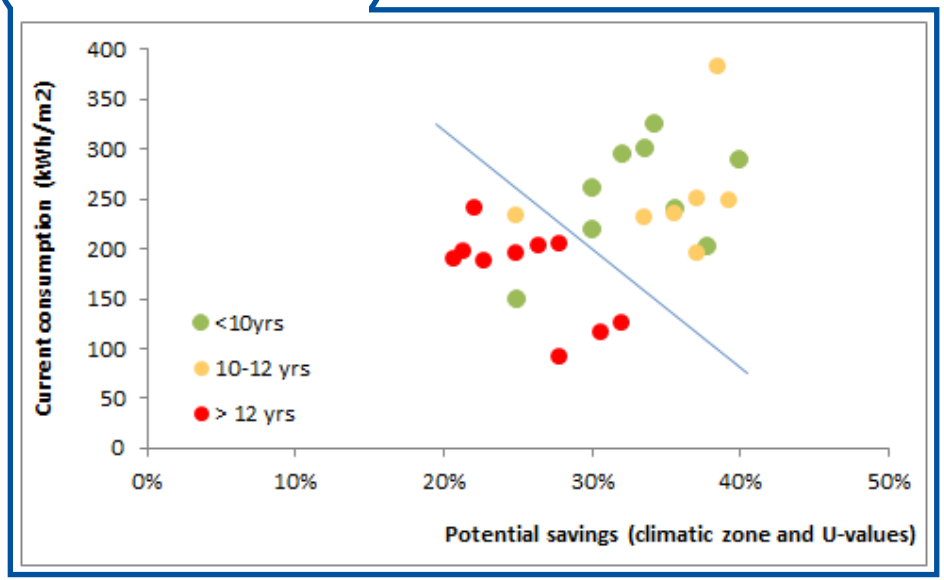
Capacity of beneficiaries to define and implement projects



Long pay-back

Subsidized tariffs

Split incentives



EIB dedicated instruments for EE

- Investment Loans (direct)

  Examples: Energy Efficiency Private Housing (France)
  Navarra Social Housing

- Framework Loans

  Examples: Private Finance 4 Energy Efficiency (PF4EE)

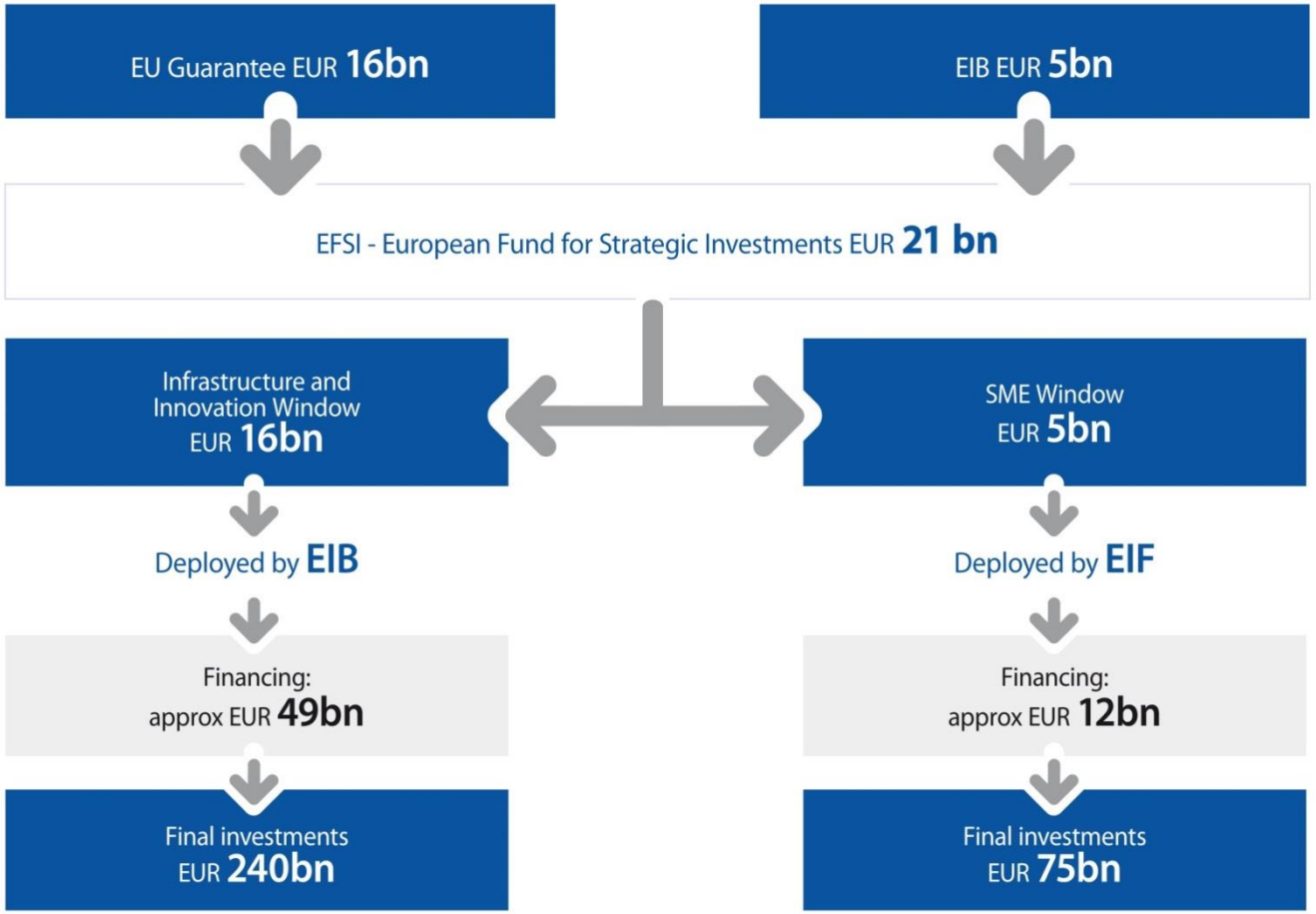
- Investment Funds

  Examples: Impax Property Fund
  European Energy Efficiency Fund (EEEF)

- Technical Assistance

  Examples: European Local Energy Assistance (ELENA)
  Assistance to MAs for better use of ESIF

EFSI
General Overview



EFSI. Role in the Energy sector

Scaling up EE investments

- Technical, financial & regulatory barriers
- EFSI : TA & risk sharing instruments

Meeting EU RE targets

- Regulatory uncertainties, emerging technologies
- EFSI : can accelerate projects (project finance)

Networks integration, modernisation

- Permitting, cross-border issues, financial strength of TSO/DSOs
- EFSI: increase support for weaker grid companies;
  reinforce Bank capacity to support project financed operations

Energy Efficiency Investment Loan

Energy Efficiency Private Housing (France)

Barrier: Fragmentation → Solution: Aggregation

- Refurbishment of residential buildings to reduce energy consumption by up to 75%
- One-stop shop, technical assistance, implementation and monitoring. Financial assistance provided directly by the promoters (tiers-financement) or through financial intermediaries
- Total project cost of EUR 800m. Average investment of EUR 20,000

Energy Efficiency Investment Loan – EFSI project

Navarra – NZEB social housing (Spain)

Challenge: Promote new building standards → Solution: Support to NZEBs

- 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

Energy Efficiency Investment Loan – EFSI project

SATO – NZEB buildings (Finland)

Challenge: Accelerate building renovation

Solution: Support to deep renovation

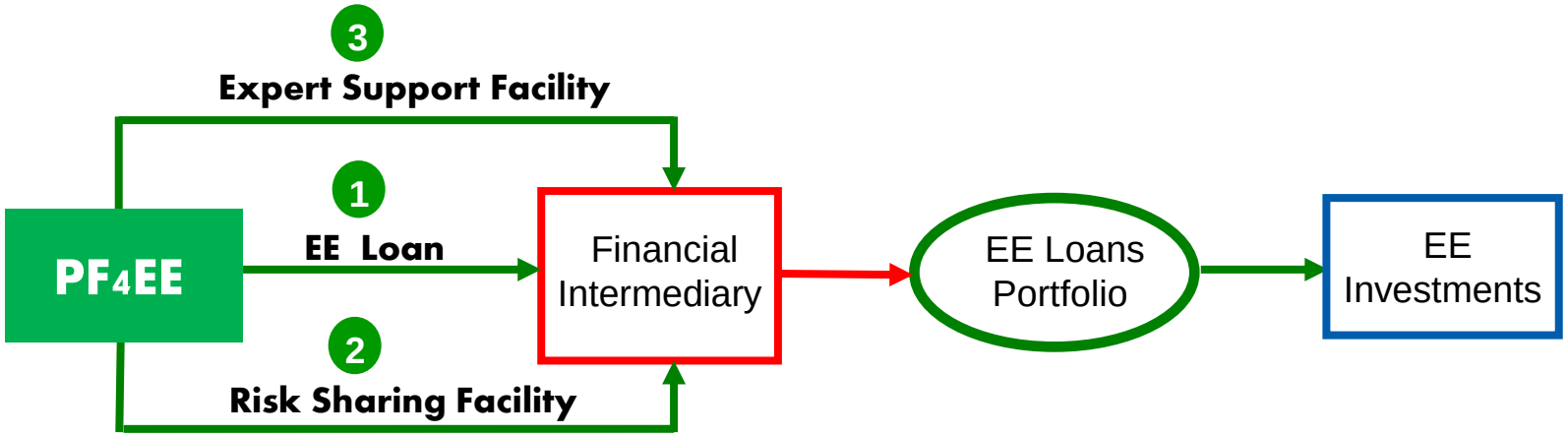
- Financing of deep renovation of existing buildings and NZEBs in the Helsinki metropolitan area.
- Expected energy savings estimated at 2,461 MWh/y of primary energy.
- Total project cost of EUR 320m. Corporate EIB loan of 150m.

Energy Efficiency
Framework Loan

Private Finance 4 Energy Efficiency (PF4EE)

PF4EE comprises three components

- A loan to the financial intermediary to be on-lent for financing of energy efficiency investments (**"EE Loan"**)
- A risk mitigation mechanism, which covers losses incurred in the portfolio of EE loans granted by the financial intermediary to on-lend the EE Loan (**"Risk Sharing Facility"**)
- Consultancy services aiming at supporting the financial intermediary to create the abovementioned EE loans portfolio (**"Expert Support Facility"**)



Energy Efficiency
Framework Loan

Private Finance 4 Energy Efficiency (PF4EE)

Financial Intermediaries

- Private sector financial institutions
- Capacity to reach Financial Recipients in line with EE priorities of the MS
- Sound financial standing and acceptable counterpart to EIB
- One financial intermediary per country on “first-come first-served” basis

Investments

- Consistent with NEEAP priorities
- Fulfil EIB EE technical and economic criteria
- Compliant with EU directives
- Capital costs not exceeding EUR 10m

Final Recipients

- Natural persons, home-owner associations, enterprises, public institutions/bodies and any other legal entities undertaking EE Investments

EE Loans

- Maximum amount EUR 5 million (EUR 1.125m for non-SME corporates)
- Tenor between 3 and 20 years
- Dedicated to the financing of an EE investment

Energy Efficiency
Framework Loan

Private Finance 4 Energy Efficiency (PF4EE)

Over **25 active discussions** with intermediaries that have expressed their interest

12 applications received

Czech Rep (KB and Ceska)
Spain (Santander)
France (Cred. Cooper.)
Greece (Attica Bank and Piraeus Bank)
Belgium (Belfius)
Croatia (ZABA)
Portugal (Banco BPI)
Cyprus (CCB)
Italy (BPER)
UK (BNP Paribas)

1 formal expressions of interest

Bulgaria (CIBANK)

Energy Efficiency

Equity Fund – EFSI project

Impax Property Fund

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

Energy Efficiency
ELENA

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

Conclusion: Unlocking EE

Huge investment needs and real potential to consume energy more efficiently

But…

- Fragmentation (small projects and high transaction cost)
- Split incentives (landlords vs tenants)
- Subsidized energy costs
- Capital constraints to expand into new products
- Lack of technical expertise

EIB's response

- Aggregation (intermediated lending, investment Funds, etc.)
- Broad range of instruments : direct and intermediated operations
- Provision of TA: PF4EE, ELENA and high-involvement in direct operations (NZEBs)
- However, some barriers non-addressable by EIB (e.g. regulatory barriers, ESCO market, public sector limitations)

THANK YOU!

Any questions?