



# Energy Efficiency first The experience of the EIB

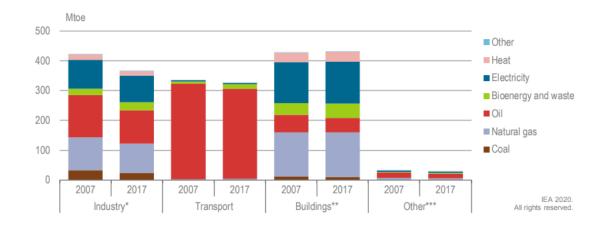
**Tatiana Bosteels** 

Senior Economist.
EUROPEAN INVESTMENT BANK

14 February 2023

### **Current Situation**

Total final consumption of energy in the EU by sector shows a strong reliance on gas



In 2022 the EU imported 40% of gas from Russia – 155bcm / year

Alternative sources (e.g. additional supply from Algeria, Azerbaijan and Norway and LNG from Qatar and the USA) insufficient

Decarbonisation of energy supply on the path to reduce dependence from gas and to be accelerated



#### RePower EU

REPowerEU aims at reducing the EU's dependence on Russian fuel fossil fuels and increase the resiliency of the power system.

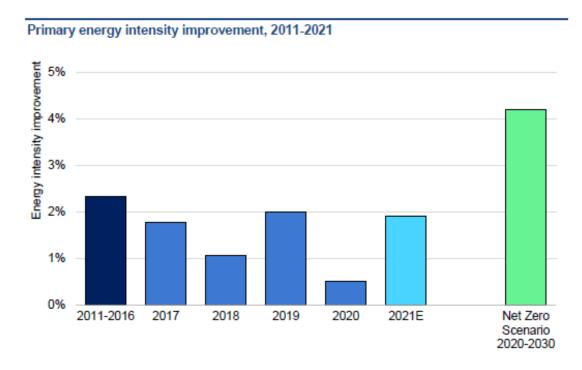
Focus on energy savings, energy diversification and acceleration of the clean energy transition.

- Increase EE to 13% vs 9% of July 2021 proposal
- Increase RE targets from 40% to 45% by 2030
- It does not change the 2030 decarbonisation target of at least -55 % GHG emissions
- Significant investments +210 EUR billion during 2022-2027 alone on top of what was already needed for the "Fit for 55



# The role of Energy Efficiency in Net Zero scenarios

- Rate of improvement in energy intensity needs to double from current levels to match Net Zero scenarios
- Rate of annual improvement >4% needed



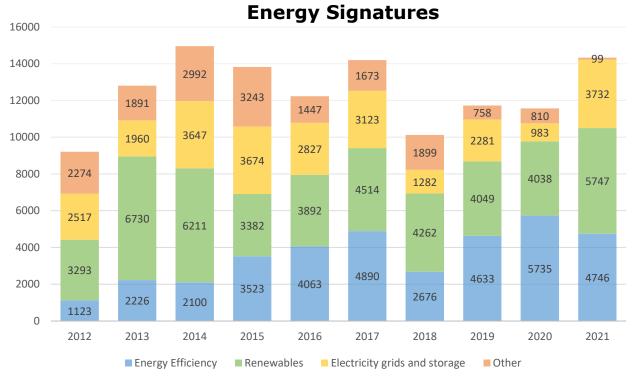
IEA. All rights reserved.

Notes: 2011-2016 five-year average. 2021 estimate based on <u>World Energy Outlook 2021</u>. Net Zero Emissions Scenario = IEA Net Zero Emissions by 2050 Scenario, 2020-2030 intensity improvements, ten year average.



#### **EIB Contribution**

The Bank is already contributing to the reduction of the dependence on gas



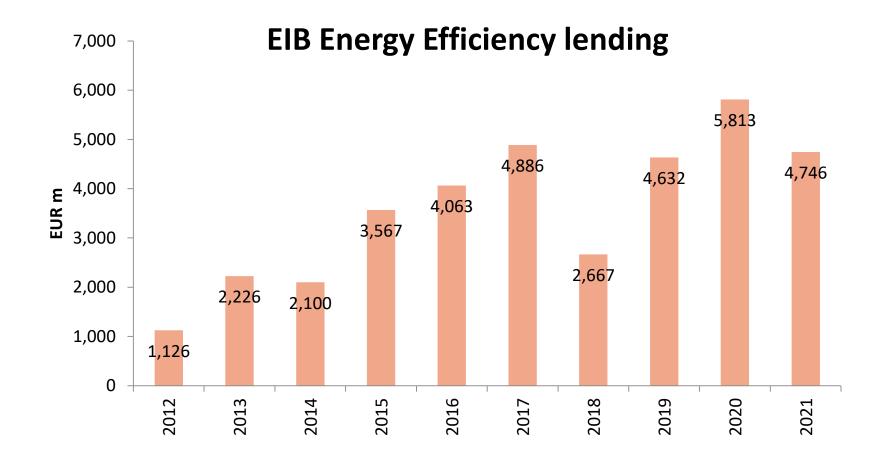
In order to increase resilience and mitigate the effects of a sudden reduction of gas supply:

- → focus on EE/RE measures that have the highest impact in the short term
- → continue the support large scale RE projects with effects in the mid/long term



# EIB financing of Energy Efficiency

Average annual EE lending of around EUR 4.5b. EE rapidly increasing (4x since 2012).

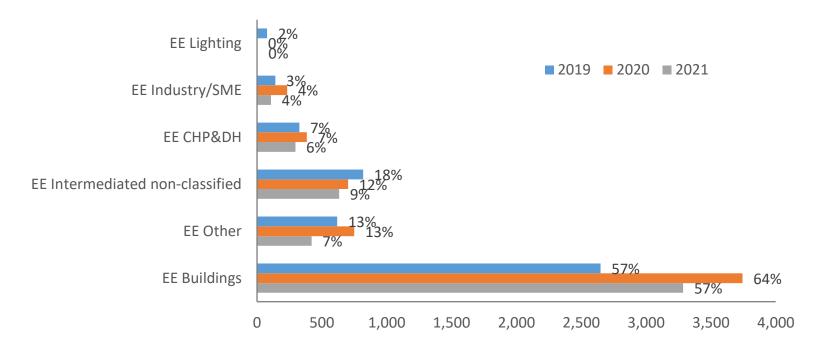




# Energy Efficiency first at the EIB

- Role of financial intermediaries
- Buildings absorb an important volume of overall lending, with several types of buildings (new-builts / renovation, public / private, residential / non-residential)

#### **EE lending breakdown**





### The Investment Gap

• Investment needs to reduce GHG emissions by -55% (vs 2005) by 2030

#### Investment in EUR bn / year

	Current	Needs	Gap
Energy efficiency	114	281	167
Renewables	50	65	15
Grids	42	60	18
Total	206	406	200

- EIB lending to the energy sector significant but still only represents around 3% of the annual investment needed
- Front-loading needed!



# **Energy Efficiency First**

The most significant impact can be achieved through energy efficiency

- Projects are quick to prepare and implement
  - > immediate reduction of heat demand
  - → positive effects in the reduction of heating bills for beneficiaries
- Largest potential on the renovation of the existing building stock
- For new buildings, focus on strict concept of reduction of gas dependency with zeroemission buildings in line with proposed new EPBD
- EIB action plan to speed up projects and increase volume already well advanced
- Technical assistance
  - JASPERS / ELENA to help public beneficiaries to develop programmes and projects
  - EIB Advisory Green Gateway support to Banks



### Acceleration of Renewable Energy Sources

- Renewable energy projects (e.g. solar and wind) key to reduce dependence from gas
- Solar rooftop projects quicker to prepare and implement
  - → immediate effects in terms of energy generation
  - → positive effects in terms of reduction of electricity bills for beneficiaries
- In parallel, continued support to large scale RE projects (longer preparation and implementation period)
- Appropriate regulatory and contractual mechanisms needed (e.g. CfDs, cPPAs)
- Risk appetite considerations



### EIB dedicated instruments: Energy Efficiency

- MBIL on-lending to Banks and NPBs
- Investment Loans (direct) Navarra NZEB social housing
- Framework Loans Snam Climate Action, UCI Building Renovation
- Investment Funds Italian Energy Efficiency Fund (EEEF)
- **EIF equity** InvestEU Climate & Environmental Solutions Equity Funds product
- EIF Guarantees InvestEU Sustainability & Green Guarantee for individuals and SMEs (EGF)

- Technical Assistance
  - European Local Energy Assistance (ELENA)
  - Japsers Project Development Assistance
  - ► EIB Advisory Hub: Green Gateway, Green Eligibility Checker



# Case study: Energy Efficiency Framework Loan



#### **UCI Building Renovation (Spain and Portugal)**

**Barrier:** Fragmentation



Solution: Aggregation

- Financing in Spain and Portugal of EE investments in buildings for EUR 90m.
- In return, the EIB participates in the senior tranche of RMBS of existing loans.
- Four products offered: 1) Green Mortgage Loans to individuals; 2) Green Mortgages for new residential buildings; 3) Personal loans to individuals for refurbishments; 4) Loans for condominium refurbishments to HOA.



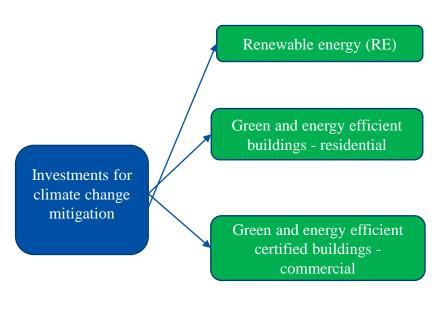
# EIF guarantee - Examples of eligibility criteria

### Sustainability Guarantee product

General eligibility areas for EE

Detailed eligibility criteria/purpose of the guarantee

Examples of eligible investments



- Renewable energy projects production and/or transmission of renewable energy. For example Solar PV installations
- Standardized building/house renovation measure from a list of pre-defined standardised measures/eligible equipment, for example efficient Boilers, triple glaze windows, led lighting, etc.
- Integral building renovation measures with energy efficiency audit or energy performance certificate to estimate the energy savings of the building/house as per national certification, as applicable. For example building insulation/lighting, electrical charging stations projects











# Energy Efficiency - European Local Energy Assistance - ELENA

#### **ELENA**

# ELENA Technical Assistance

Support for local or regional entities for :

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

#### **INVESTMENT PROGRAMME EE and RE**

in public and private buildings, public lighting and traffic light network photovoltaics, heating/cooling systems;

#### **Efficient urban transport**

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, infrastructure for recharging electrically powered vehicles, information and communications technologies,



# EIB Advisory Hub - Green Gateway

Green
Gateway
Online
Resources



#### **Green Checker**

Eligibility check & impact reporting IT tool for eligible CA&ES projects with 40 measures and 6 languages. <a href="https://greenchecker.eib.org/">https://greenchecker.eib.org/</a>

#### E-library

Knowledge-sharing library incl. key reference documents. Live, additional material under development. https://greengateway.eib.org/knowledge-guidance/index

#### **E-Learning**

E-learning courses on EIB green eligibility and reporting criteria and climate related topics, relevant to intermediated financing operations.

Under development

Green
Gateway
Bilateral
advisory



- Targeted at selected EIB partner financial institutions with climate action ambitions/operations
- Supported financial institutions include commercial banks, leasing companies, national promotional banks and institutions





# Green Gateway – Bilateral Tailored Support

#### Supporting the uptake of green investments:



# Portfolio screening & market analysis to identify new Climate Action & Environmental Sustainability (CA&ES) business opportunities

- ✓ Analysis of existing portfolio and strategy of partner institution
- Analysis of green market context considering best banking practises and existing public intervention schemes
- ✓ Identification of CA&ES target sectors, investment measures and project types in conjunction with EIB green eligibility criteria

#### Green eligibility - impact reporting and monitoring

- Review of existing procedures and tools with a view to improve and adapt to green financing needs
- ✓ Support to better address eligibility and reporting topics for identified priority investment measures

# Guidance on EU taxonomy and advice on the management of climate-related risks

- ✓ Guidance on the evolution of EU taxonomy
- ✓ Advice on data collection and modelling of climate-related physical and transition risks
- Preparing institutions for climate risk stress testing and portfolio alignment with the Paris Agreement



# **Conclusions and Way Forward**

- Increase number and volume of EE projects new EIB EE action plan
- Acceleration of project preparation through TA (e.g. InvestEU top up for ELENA, GreenGateway)
- More flexible approach to cumul rule to allow for combination of RRF/ERDF and loans
- Replication of solar rooftop projects
- Continued support to large scale RE projects, with consideration of tariffs support mechanisms and risk appetite
- Continuation and development of Pan-European Guarantee Fund EGF instrument to accelerate investment and mitigate risk for lenders





Case studies





# **Energy Efficiency Investment Loan**



#### 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 Framework Loan





#### **SNAM CLIMATE ACTION FL (Italy)**

**Barrier:** Fragmentation



**Solution:** Aggregation

- Loan of EUR 150m to one of the leading Italian ESCOs (Energy Services Companies)
- Refurbishment of residential buildings and EE in industry
- Combined with Italian Government tax deductions (Ecobonus and Super Ecobonus)



# Energy Efficiency Project Example: Equity Fund





#### **Suma Capital (Spain)**

**Barrier:** Split incentives



**Solution:** Aggregation

- Infrastructure fund targeting energy efficiency and circular economy projects primarily in Spain
- >130M€ in more tan 10 investments (EE in industry, DH refurbishment, biogas)



# EIF product pallet offering in EE

Several dedicated products shall target Energy Efficiency investments

#### 1. InvestEU Sustainability & Green Guarantee for individuals and SMEs covering:

- Energy efficiency, renovation and retrofitting for residential and commercial buildings as well as industry and services.
- The product will target standardised and non-standardised EE efficiency measures
- Target granular portfolio guarantees
- Integrates advisory/capacity building resources
- Can combine national grant programmes to improve value added for final beneficiaries

#### 2. InvestEU Climate & Environmental Solutions Equity product covering:

- Support Clean energy transition via decarbonisation of residential sectors and SMEs via equity funds
- Support energy efficiency equity investments in the generation, supply, storage, distribution networks (e.g. smart cities) including both economic and enabling technologies, products and services via equity funds.



13/02/2023

# Advisory Hub Green Gateway – Examples

Advisory Hub

#### Support provided to date: Numerous 19 partner Financial Intermediaries reports, tools, 15 countries trainings, Linked to EUR 4 bn EIB manuals delivered operations Estonia Latvia Lithuania Ireland Poland Netherlands Czechia 👝 Slovakia Austria \ () Romania France Hungary Slovenia Bulgaria Italy 🔱 Spain Portugal Greece

#### Reports with recommendations on:

- Existing and new client types suitable to undertake green investments
- Sectors, investment measures and banking products
- Measuring and managing climate risk based on best business practices

#### Tools and manuals such as:

- Integration of Green Checker tool into the operations of the supported institution
- Operational manuals for front office staff on project identification/sourcing
- · Checklists for clients and projects

#### Trainings and capacity building:

- Trainings and workshops based on identified needs
- On-the-job support with technical meetings to address questions/topics on operational matters as they emerge (incl. pipeline development)

