

Incentive schemes and success stories for building renovation

Mariangiola Fabbri, Head of Research

4th ZEB Insight: Incentive Schemes for Energy-Efficient Buildings in the EU and Korea

27 August 2020

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90% OF OUR TIME IS SPENT INDOORS



97% OF EU BUILDINGS IS NOT FUTURE PROOF*



*BPIE, 2017, [97% of buildings in the EU need to be upgraded](#)

Buildings in Europe

BUILDINGS 2018 =

40%
Of total energy
consumption



36%
Of our CO₂ emissions



9%
EU GDP



18million
Direct jobs



50%
OF THE BUILDINGS BUILT
< **1975**

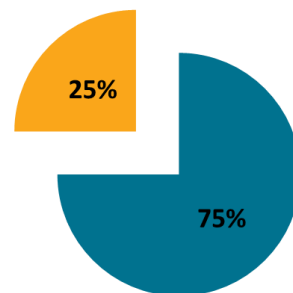
> 2050



WILL STILL BE IN USE

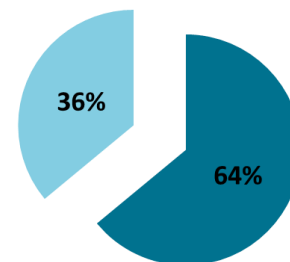
- EU to become climate-neutral in 2050
- Renovating building stock is a priority:
 - Step-by-step renovations dominate the market
 - Average annual renovation rate is 1%

EU buildings



■ Residential
■ Non-residential

Residential buildings

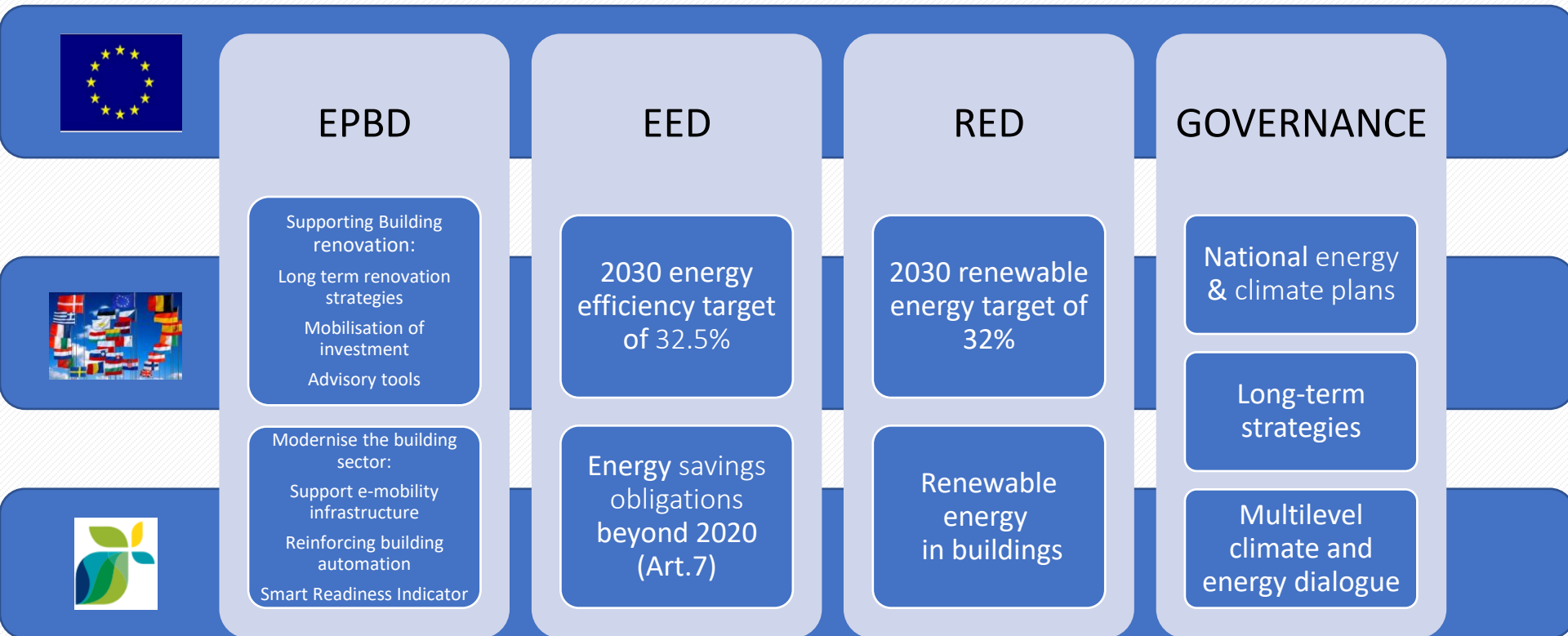


■ Single Family Houses
■ Multiple Family Houses

Renovation Wave to be
published in October 2020

EU regulatory framework on buildings

Clean Energy Package



Note: Ecodesign and energy labelling directives cover products (incl. heating and cooling appliances)

National long-term renovation strategies (EPBD Article 2a)



Strengthened goal:

- Highly energy efficient and decarbonised building stock by 2050
- Existing buildings to become nearly-zero energy buildings

Milestones set out: 2030, 2040 and 2050

Special attention to:

- worst performing buildings
- split-incentive dilemmas and market failures
- energy poverty
- all public buildings

New measures suggested:

- Building renovation passports
- Trigger points

Public consultation required



BPIE, 2019, [Future-proof Buildings for all Europeans](#)

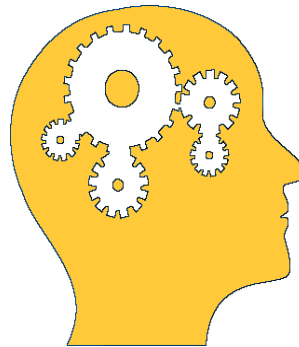
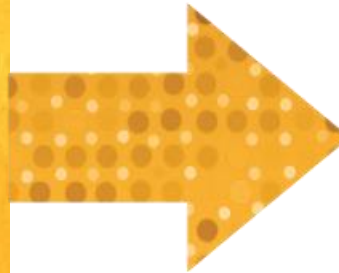
Building Renovation Passport: incentive to stimulate renovation

DATA GATHERING

ON-SITE AND OFF-SITE

- Owners needs and wishes
- General Information & Administration
- Building construction information
- Building energy performance (such as EPC information)
- Building operation & use
- Smart information

PROCESSING



BUILDING RENOVATION PASSPORT

RENOVATION ROADMAP

- Renovation steps in a sensible order
- Comprehensive audit
- Long-term perspective
- Tailored to individual context

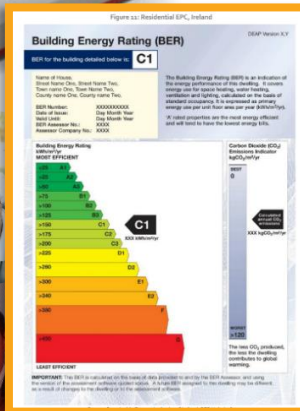


BUILDING LOGBOOK

- Inventory of building-related information
- Manage and monitor real-time energy consumption
- Functionalities to users
- Linking building owners (users) and third parties



Figure 10. Rendering of a building model



Most developed Building Renovation Passports



Woningpas and EPC+ combine the BRP with an integrated database with building data and beyond.
Financing: public (Flanders Region, inter-ministerial cooperation)

individueller Sanierungsfahrplan provides a detailed individual renovation roadmap for single family houses
Financing: public (Federal government)

Several (regional) examples of models, promoting and offering BRPs to owners, auditors and craftsmen

- Passeport Efficacité Energétique
 - Passeport Énergie Habitat
 - Picardie Pass Rénovation
- Financing: Both private and public

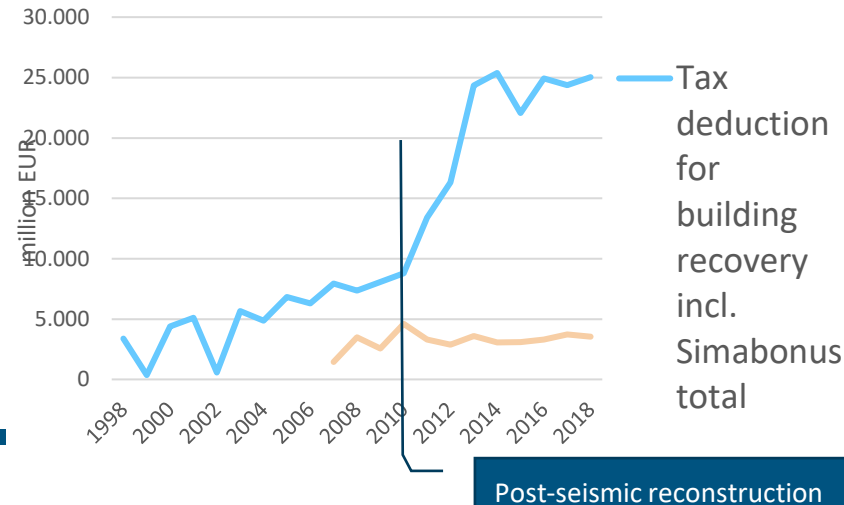


Financial incentive to renovation Italy Ecobonus



Overview

- Tax credit scheme (up to 85% renovation costs refunded in 10 years)
- BAU (50%) and energy renovation (65%) + seismic
- Residential and non-residential buildings



Insights

Success factors

- One of the few schemes using tax credit
- Broad scope and complementary (EE, seismic, building heritage recovery)
- Estimated reach: 57% of the buildings
- 251,000 direct jobs created per year (2011-2018); 378,000 including indirect jobs
- 2017-2020 Multi-annual programme extension

Areas for Improvement

- Initial lacking long-term horizon (annual budget)
- Funding used for non-EE renovations (maintenance, asbestos, security, furniture)
- Did not trigger deep renovation at necessary scale

Superbonus: renovation to stimulate post Covid economic recovery

Overview

Post Covid recovery: tax credit scheme extended to 110%

Tax credit can be transferred in total or partially to third parties (e.g. banks and construction/renovation companies)

Eligibility: projects started between 1/07/2020 and 31/12/2021

Potential positive spill-over effect of €21 billion (against €7 billion invested).

Insights

Strengths:

- Based on existing programme and delivery system (familiarity of supply chain and building owners)
- Renovation must result in higher EPC class
- Could help renovate worst performing buildings (incl. low-income) and multifamily buildings
- Combines EE & seismic renovation, PV, EV charging stations
- Directly linked to tax systems (easy tracking and transfer)
- Expenditure limits (to avoid speculation)

Potential drawbacks

- Expensive for public finances (Next Generation EU)
- 2 classes EPC improvement too low
- Short-term horizon (ends in 2021)
- Owners needs to cover initial investment (account) to start application
- Inflation of intervention costs (if real costs of intervention not closely monitored)
- Limited ability of supply chain to deliver and ensure quality (reliable monitoring & compliance system required, incl. on-site checks)

Innovative financing: On-Bill Financing in EU

How on-bill schemes could be put in practice in the EU?

What are the policies we may need?

- Financing energy improvement by using utility bills as means of repayment
- Easier aggregation of projects to portfolios.
- History of paying utility bills as an additional credit score metrics.
- Securitisation via disconnection from the energy supply grid.



<https://www.renonbill.eu/>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 847056

Thank you...



Mariangiola Fabbri

mariangiola.fabbri@bpie.eu

- www.bpie.eu
- www.ibroad-project.eu

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