Scaling up investments in green and affordable housing:the housing providers point of view

Julien DIJOL
julien.dijol@housingeurope.eu

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Taking stock on green social housing

Figure 1: Trends of stock evolution in the residential sector (million homes)

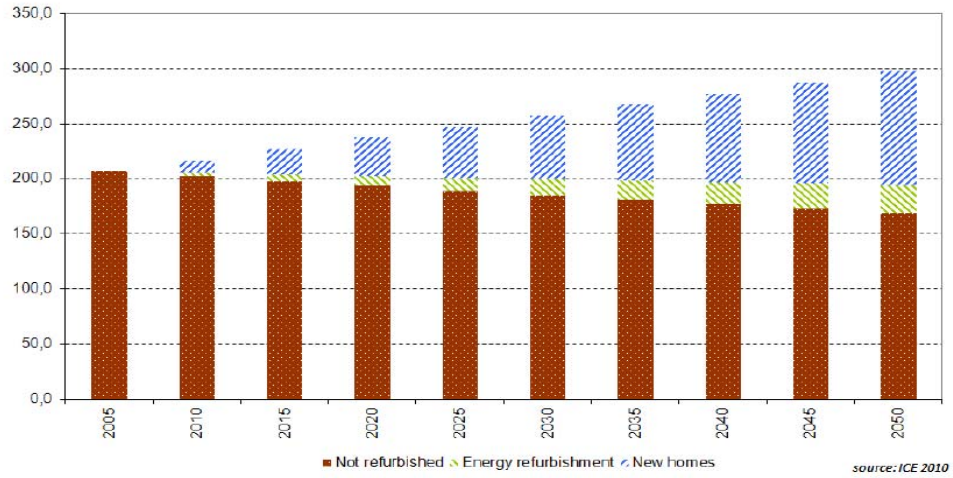
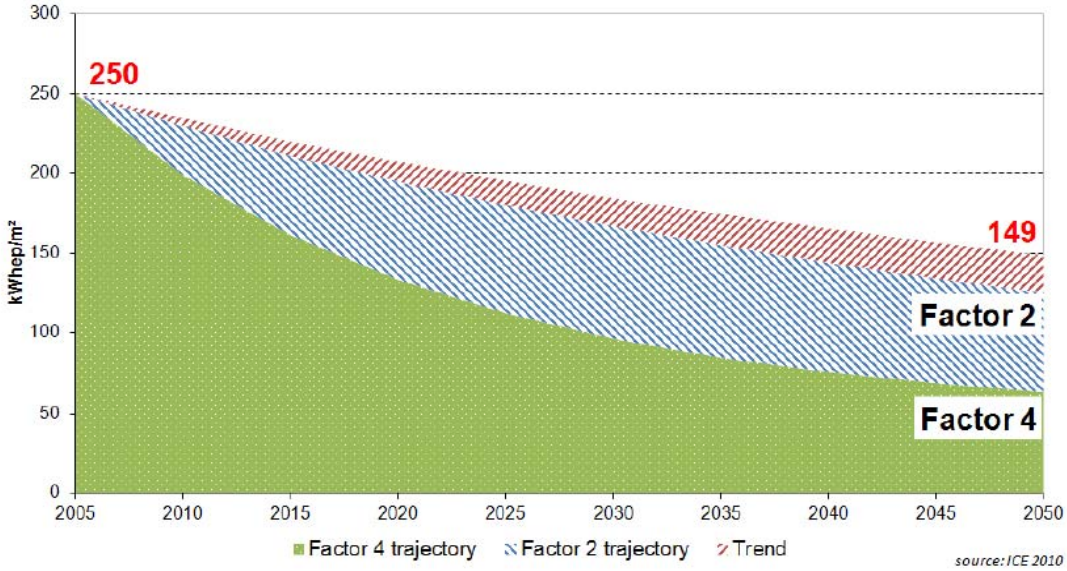


Figure 2: Average evolution of energy consumption in the residential sector.



How can the housing sector truly trigger a fair ecological/energy transition ?

A fair energy transition is a situation where:

- Energy efficient refurbishment should not lead to disproportionate increase of rents, forcing people to leave their homes
- The supply of new homes should not be reduced, due to budgets being diverted to meet energy challenges
- Policies and funding schemes should embrace those hardest to reach, most likely to be in fuel poverty
- energy needs are met by renewable and local sources of energy

How can the housing sector truly trigger a fair ecological/energy transition ?

- By bridging the gap between finance and projects
- Develop new supply of finance:
  - Soft loans, revolving investment funds with public money
  - Guarantee funds to leverage in private financing (loans, but also bonds or equity)
  - Market finance
  - Third-party financing / investment
- Develop a pipeline of projects:
  - Assistance to develop bankable projects: technical maturity & critical size
  - Aggregation of small individual projects
  - Standardisation of contracts

Is there a rationale for stricter energy performance standards?

- Current framework is made of :

- For renovation: National minimum requirements for the energy performance level of buildings which leads to the lowest cost during the estimated economic lifecycle (EPBD)
- For new construction : obligation of nearly-zero energy buildings by 2018 and 2020 (EPBD)
- National indicative targets on Energy efficiency until 2020 (EED); for instance Romania, 17% reduction in final energy use compared to 2009 level ; Lithuania, 17% reduction in final energy use compared to 2009 level (reduction of 740 ktoe); Germany, Annual improvement of energy intensity (energy productivity) by 2.1% pa on average until 2020

- **Reality-check : the view from housing providers about cost-efficiency**
- The view of the majority of housing providers is however that the energy efficiency investments cannot pay for themselves in the sense that the energy savings are never sufficient (and often lower than expected) to reimburse the bulk of the investment.
- Any successful business case for energy efficiency in buildings will have to take the role of public finance into account
- Either through the form of grants, or subsidised loans or first loss guarantee, public funds are still a crucial part of all energy efficiency investment models.
- This is particularly true for the affordable housing sector, whereby the capacity of tenants to contribute to the investments is extremely limited.

- any increase of the energy performance standards **alone**, in particular beyond the cost-optimal level, would decrease the profitability of energy efficiency investments
- Recent assessments from DK, DE, AT show that cost efficiency of nearly zero energy buildings remain an issue – costs can not be compensated by decreased energy bills alone (rent increase, public subsidies)
- **the most cost efficient way to use financial resources would be to design low energy buildings and to strike the carbon balance with on-site production of renewable energy → holistic approach of the global carbon footprint of a building, area, neigbourhood**

Finding the right financial models for housing refurbishment

❑ SOFT LOANS SCHEMES: THE EXAMPLE OF KFW

Soft loan schemes are a mechanism whereby public funding decreases the cost of loans, which are usually distributed by private banks. Interest rates are between 1 and 2 % for 10 to 30 years BUT focus on « easy » target groups first to trigger a bigger market for energy efficiency

❑ THIRD-PARTY INVESTMENT AND ENERGY PERFORMANCE CONTRACTING

ESCO finances and guarantees the savings, and recoups most of the cost savings in order to repay the upfront costs. BUT it is rarely used today to finance investments in deep renovation of buildings. Most EPCs are based on the guaranteed savings model, which does not provide new financing solutions: most energy retrofit projects use a loan taken by the building owner

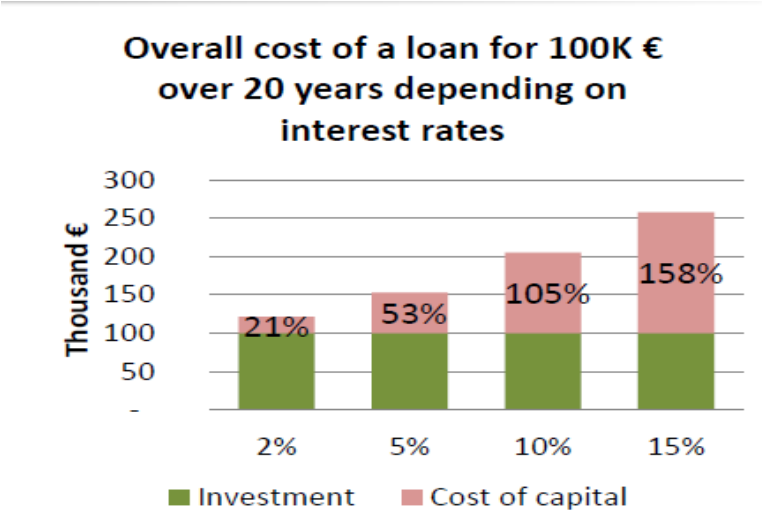
❑ ON-BILL FINANCING AND THE UK'S GREEN DEAL

loan facility attached to the property not the householder, which could last as long as 25 years, that enables efficiency improvements to be funded with no upfront costs and repaid via a charge on energy bills BUT loans are expected to be at an interest rate around 7 %, above usual mortgage rates

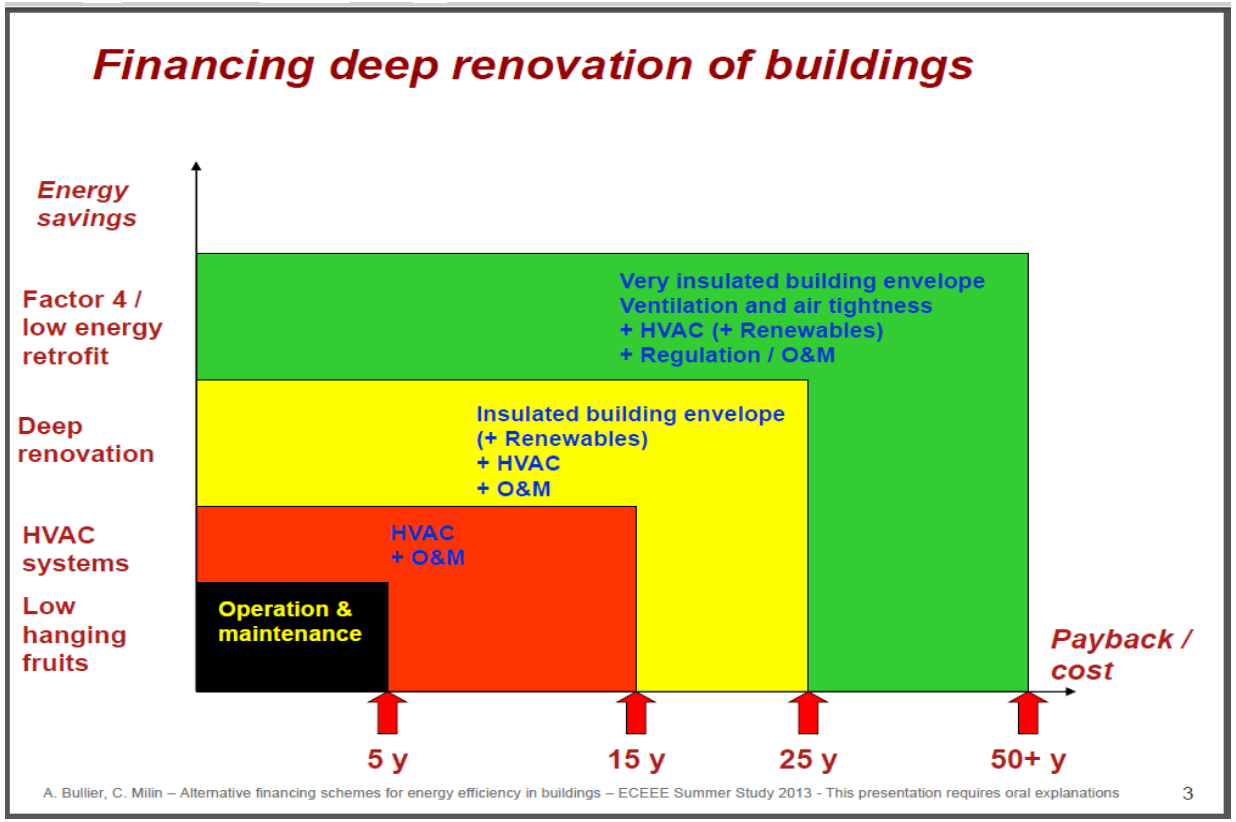
❑ Financial guarantees

For instance the Bulgarian energy efficiency fund BgEEF provides loan guarantees for ESCOs carrying out EPCs, which means it will pay for the first losses in case of non-payment by an ESCO; provides EPC portfolio guarantees for ESCOs, which reduces the risk of payment delays thus reducing the overall cost of financing.

- All those schemes have a common feature : reduce the perceived risks of investments → reducing the interest rate



- They also have the same kind of limit : not adapted to large-scale, long term, deep renovations


Financing deep renovation of buildings
Energy savings
Factor 4 / low energy retrofit
Deep renovation
HVAC systems
Low hanging fruits
Very insulated building envelope
Ventilation and air tightness
+ HVAC (+ Renewables)
+ Regulation / O&M
Insulated building envelope
(+ Renewables)
+ HVAC
+ O&M
HVAC
+ O&M
Operation & maintenance
Payback / cost
5 y
15 y
25 y
50+ y
A. Bullier, C. Milin – Alternative financing schemes for energy efficiency in buildings – ECEEE Summer Study 2013 - This presentation requires oral explanations
3

The missing ingredients

- Intermediary entities (private or public) that will both pool financial needs of housing providers and pool financial resources from different stream → reach critical mass to reduce transaction costs

Ex: the Housing Finance Corporation, Public Third Party Investor ENERGIES POSIT IF, Bulgarian Energy efficiency fund (BEEF)

- Apropriate legistlation that will allow development of low carbon market finance

Standardisation of EPC contracts

Transfer of receivables (energy savings) into asset portfolios of investors or as underlying assest for bonds

- Project development assistance
- Applied research on construction material

The role of the European Union

- Energy efficiency is part of the 2030 energy and climate framework

  - European Commission considers that to reach a reduction of GHG of 40% in 2030 compared to 1990, we need approximately 25% of energy savings in 2030 (still compared to 1990).

  - "**this will require large investments in the building sector […].**"

- In its Communication on a European Industrial Renaissance : **"setting up a EUR 25 billion EIB lending capacity for energy efficiency in residential housing"**

- **In the 2014-2020 European Structural and Investment Funds**

2014-2020 European Structural and Investment Funds

1) impose obligatory minimum percentages in the ERDF that must be invested in sustainable energy, including energy efficiency (from 12% for less developed regions to 20% for more developed regions);

2) more than double the funding allocation for Sustainable Energy and Energy Efficiency, to an estimated €23bn, under Thematic Objective n°4 “Transition to a Low-Carbon Economy”;

3) expand the scope of eligibility for investments in energy efficiency in buildings beyond the ERDF to encourage investments also from the Cohesion Fund (where the housing sector was previously excluded) and the European Social Fund (supporting the up skilling of the labour force for green jobs).

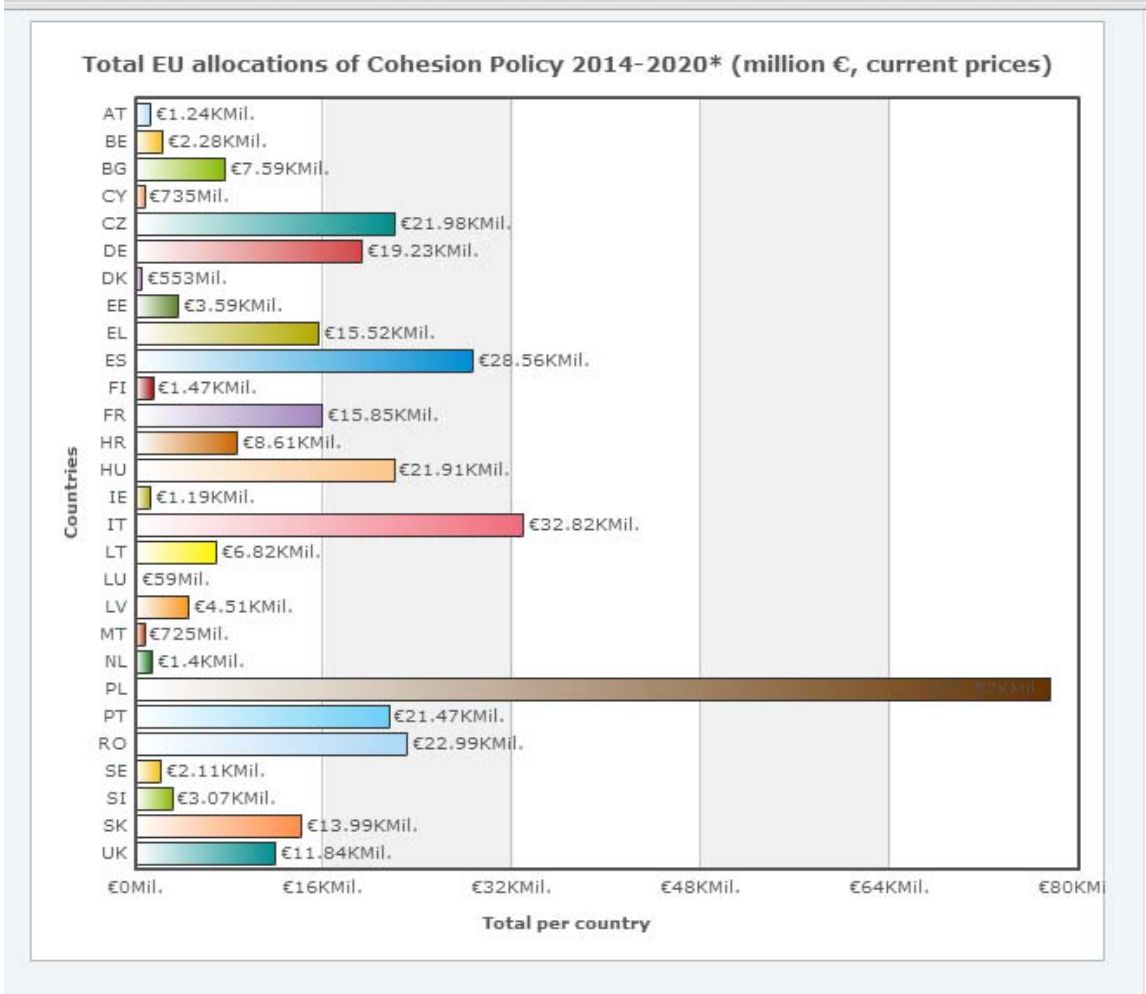
4) Give the possibility to use Funds to set up Renovation Loans

- UNITED KINGDOM: The Housing Finance Corporation Limited (THFC) (United Kingdom) was allocated in 2013 £12m from the London Green Fund (supported by the ERDF) in March 2013.

- Loans to registered social housing providers

- Up to now: 3 housing associations have secured overall £50 million loan

-Environmental requirement: level 4 of the Code for Sustainable Homes


Total EU allocations of Cohesion Policy 2014-2020* (million €, current prices)
AT €1.24KMil.
BE €2.28KMil.
BG €7.59KMil.
CY €735Mil.
CZ €21.98KMil.
DE €19.23KMil.
DK €553Mil.
EE €3.59KMil.
EL €15.52KMil.
ES €28.56KMil.
FI €1.47KMil.
FR €15.85KMil.
HR €8.61KMil.
HU €21.91KMil.
IE €1.19KMil.
IT €32.82KMil.
LT €6.82KMil.
LU €59Mil.
LV €4.51KMil.
MT €725Mil.
NL €1.4KMil.
PL
PT €21.47KMil.
RO €22.99KMil.
SE €2.11KMil.
SI €3.07KMil.
SK €13.99KMil.
UK €11.84KMil.
Countries
€0Mil.
€16KMil.
€32KMil.
€48KMil.
€64KMil.
€80KMi
Total per country

Conclusions

- The ecological transition in the affordable housing sector is a necessity (for the climate, quality of life and economy) BUT
- It requires very concrete steps (finance, regulation, project development assistance…) that can only be triggered by a public intervention : European Commission , EIB, States, Regional governments, cities.
- Key are dedicated entities that will act as financial intermediaries/aggregators
- Emerging examples (in UK, Bulgaria, France) need to be replicated

Julien Dijol, Policy Coordinator

julien.dijol@housingeurope.eu

References :

- Bullier, Adrien/Milin, Christope (2013): alternative financing schemes for energy efficiency in buildings, ECEEE summer study proceedings

- SF Energy Invest: http://sf-energyinvest.eu/

- SHELTER : http://www.shelterproject-iee.eu/

- CASH: http://urbact.eu/fr/projects/low-carbon-urban-environments/cash/homepage/