

FOSTERING EEM MARKET DEVELOPMENT:  
PERSPECTIVES & LESSONS LEARNED FROM  
ACROSS EUROPE

NEEM HUB 

Nordic Energy Efficient Mortgage Hub

31 January 2023



## PUBLICATION INFORMATION

The Nordic Energy Efficient Mortgage Hub aims to scale-up lending to energy renovations in the Nordics and will publish a blueprint on how to accomplish this which will be implementable in other regions of Europe and, indeed, the world. In striving to increase energy renovations, the NEEM Hub will help achieve the targets of the European Green Deal and contribute to addressing ambitious national climate targets.

The NEEM Hub will be comprised of a long list of institutions from the financial sector, behavioural scientists, mortgage specialists and authorities, and digital technologies communities from across the Nordics, all guided by leading European Economics Consultancy, Copenhagen Economics.



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## CHAPTER 1

# INTRODUCTION

In 2015, the Energy Efficient Mortgages Initiative (EEMI), launched and led by the European Mortgage Federation-European Covered Bond Council (EMF-ECBC), embarked on a journey to unlock the huge potential in the mortgage industry to 'finance green' in support of the climate transition. By now, the impact of buildings in terms of energy consumption and CO2 production is well known, as is the scale of investment needed until 2050 to meet European climate targets. But it was these very facts and figures that led to the realisation that the intrinsic link between mortgage and buildings places mortgage lenders in a transformative position in relation to energy savings targets because they can bring energy efficiency considerations into the conversation with borrowers at a crucial moment and therefore incentivise borrowers to improve the energy efficiency of their properties. This was the starting point for the EEMI.

The result of EEMI's endeavours since this time has been a vast array of research and tools to support market development, addressing issues around retail/market-ing considerations and the customer journey, risk management, IT and data, partnerships with other stakeholders and the involvement of technical experts, funding considerations and investor relations. The work of the EEMI continues today and will do so into the future.

Early on this journey, it became apparent that in order to unlock the full potential of the mortgage industry, the EEMI needed to hand down its research and tools to the jurisdictional level and encourage local stakeholders across European jurisdictions i.e. lenders, investors, SMEs, utilities, national authorities and others, to join together with a view to identifying local specificities and tailoring solutions to address local challenges and take full advantage of the opportunities. The result was the creation of EEMI national hubs in some jurisdictions, the identification of pioneering banks in others, and dialogue with like-minded organisations in yet others.

Across these different entities and organisations, there is a wealth of experience and know-how which can be tapped into and shared across jurisdictions with a view to sharing outcomes, leveraging on best practice and scaling-up individual activities and outputs. To this end, we have collated 'Factsheets' from pioneers across 6 jurisdictions/regions: Belgium, Italy, the Netherlands, the Nordics (Denmark, Norway & Sweden), Spain and the UK.

For ease of reference, each of the Factsheets is structured to the largest extent around the following points:

### **1. General description**

- *Profile of the building stock, both residential and non-residential, in terms of typology, age & energy performance profile.*

- *Main challenges & opportunities in relation to energy efficiency and decarbonisation of the building stock, both residential and non-residential.*
- *Profile & primary objectives of the bank or hub work in the context of the EEMI.*

## **2. Achieved or expected outcomes**

- *Main outputs and ongoing activities of the bank or hub in the context of the EEMI.*

## **3. Perspectives & lessons learned**

- *Overview of successes.*
- *Examples of areas that still require improvement.*
- *'Golden tip' for other hubs/banks.*

In Spring 2023, the know-how and best practice in these Factsheets – and any subsequent developments - will be formally presented and discussed with a broader audience during a NEEM Webinar. Beyond these channels, exchanges between and across these banks, hubs and entities continue by way of broader EEMI events and initiatives.

We would like to express our thanks and gratitude to Frans Meel, Piet Hein Schram, Daniela Antonini, Angelo Peppetti, Serena Razzi, Jonas Bjarke Jensen, Astrid Leth Nielsen, Simone Ruth Flindhardt, Catia Alvés and Alessandra Melis for contributing to this Report.

## CHAPTER 2

### BELGIUM: BELGIAN EEMI HUB



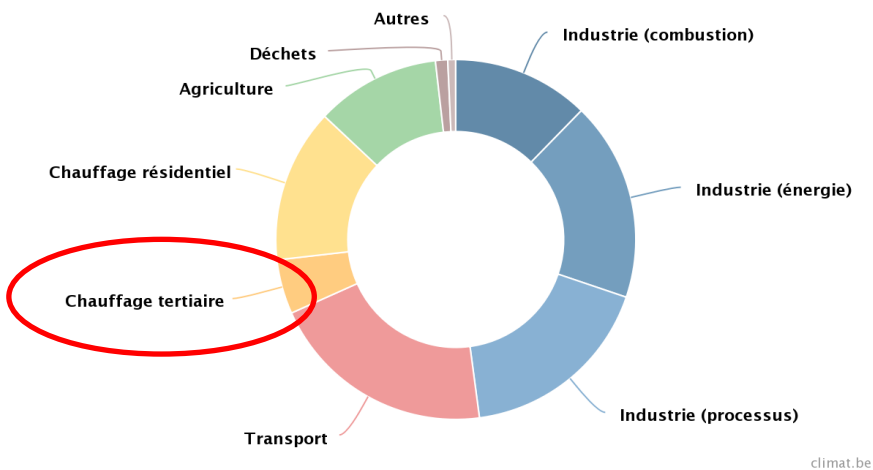
**Author: Frans Meel, Febelfin**

#### 2.1 GENERAL DESCRIPTION

##### **Profile of the building stock, both residential and non-residential, in terms of typology, age & energy performance profile in Belgium**

CO<sub>2</sub> emissions from residential real estate represent 13.8 % of CO<sub>2</sub> emissions in Belgium<sup>1</sup>.

The share of different sectors in total CO<sub>2</sub> emissions in Belgium in 2020 (%):



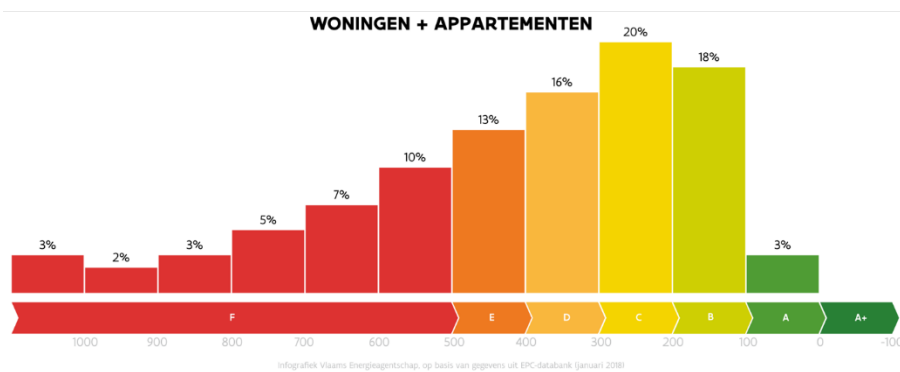
Therefore, the current housing stock needs to undergo major renovation to meet the 2050 targets.

<sup>1</sup> For more information, see the Belgian national greenhouse gas inventory [https://cdr.eionet.europa.eu/be/eu/mmr/art07\\_inventory/ghg\\_inventory/envyjceew/](https://cdr.eionet.europa.eu/be/eu/mmr/art07_inventory/ghg_inventory/envyjceew/)

Indeed, in Belgium, much of the existing building stock is not fit for the energy efficiency standard aimed at in 2050. As energy performance is a regional competence in Belgium, the situation in the 3 Belgian regions (Flanders, Wallonia and Brussels) is as follows:

### Flanders

Houses and apartments (30% label F; only 3% label A) – situation 2019:

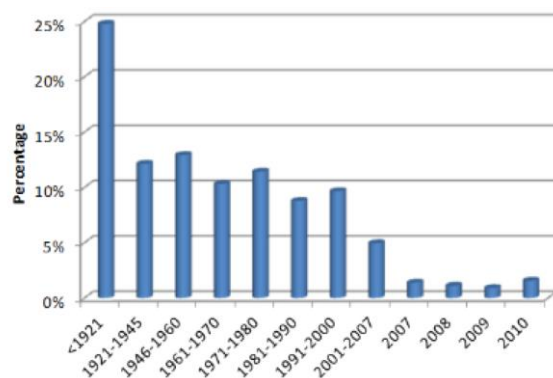


More than 3 million housing units need to be renovated, meaning that each year 3% of the housing stock should be renovated to label A!

### Wallonia

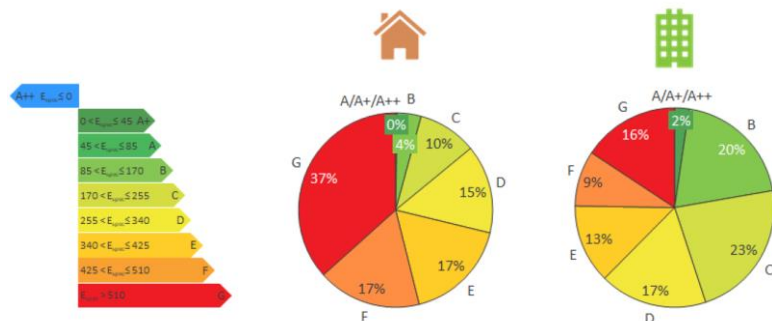
At the beginning of 2019, there were about 1.6 million housing units in Wallonia, of which about 83% were family homes and 17% apartments.

A large proportion of these housing units were built before 2000, 25% even before 1921.





Consequently, most of these housing units have poor energy performance. For family houses, more than 37 % are labelled G, 17 % are labelled F and 17 % E.



### Brussels Capital Region

Brussels is characterised by high emissions from residential buildings. They account for 56% of CO2 emissions in Brussels. 92% of buildings are residential. Of the residential buildings, 92% were built before 1970 and 40% even date from before 1945. The total number of residential buildings in Brussels is 573,256.

### Profile & primary objectives of the Belgian hub work in the context of the EEMI

The Belgian EEMI hub is made up of around 10 of the main credit providers in Belgium, accounting for around 90% of mortgage loans. Many contacts with other stakeholders such as the construction industry, regional and federal authorities, etc. take place through the secretariat of the Belgian Credit Federation. A seminar was organised in 2019 and will again be organised in 2022, bringing together key stakeholders in promoting energy renovation of the Belgian building stock.

## 2.2 ACHIEVED OR EXPECTED RESULTS

European climate legislation aims to achieve a climate-neutral economy and society by 2050. By 2030, greenhouse gas emissions must be reduced by at least 55% (compared to 1990 levels). The credit sector is highly committed to enabling this transformation and plays a key role when people buy or renovate their homes. To make this possible, it works closely with local governments and European institutions, among others.

The credit sector can certainly play a role in the transition to more energy-efficient construction and renovation. This by encouraging green loans that enable energy-efficient homes. When someone makes plans to buy a property, lenders come to the fore. Their role here is primarily to raise awareness. Moreover, lenders can also point out to their customers that a property with a higher EPC score is worth more than a similar property with a lower EPC score. Indeed, a study by the Catholic University of Leuven shows that the price of houses with a good energy performance is more than 10.6% higher than that of a similar house with poor

energy performance. And this study was conducted before energy prices went up dramatically.

## **Main outputs and ongoing activities of the hub in the context of the EEMI**

### **Access to EPC databases**

In order to collect the EPC in a cost-effective manner and ultimately deliver possible benefits to the customer, there should be digital access to the EPC databases that would allow the EPC scores to be assessed directly by the lending institutions. It should also be taken into account that when customers come knocking on the lender's door to purchase their home, they do not yet own this property (and hence the EPC data). In Flanders, such direct access is now also enshrined in a decree. Digital access also ensures that manual errors are avoided and that the most recent information is always available. Nevertheless, the data may be stored for 3 months for the time being and cannot be used for reporting purposes, making its use de facto rather useless.

The Belgian hub, through Febelfin, has worked together with the Flemish Energy and Climate Agency (VEKA) to establish this direct access to the EPC database. From now on, this will be possible for institutions that have signed an agreement with VEKA on this matter. These will be able to consult the information via an API or a web service. This will be possible in the context of a new credit application and its follow-up. The intention is to make such access possible in the other regions as well.

### **Proposals to encourage energy-saving renovations**

The Belgian hub has also participated in the elaboration, at sectoral level, of a number of proposals to encourage energy-saving renovations. These include both proposals independent of lending and proposals related to mortgage or consumer credit.

### **Cooperation with the Flemish government on the creation of an "interest-free" renovation loan**

Since 2021, the Flemish government offers an "interest-free" renovation loan through commercial banks, whereby the borrower is reimbursed for the interest paid if they renovate their house or flat in an energy-efficient way after purchasing a house with poor energy performance.

### **Energy Efficient Mortgage Label**

The Belgian hub also supports the EEM label developed by the EMF and encourages lenders to be part of it.

## 2.3 PERSPECTIVES & LESSONS LEARNED

The Belgian hub has certainly achieved results, but there are always possibilities to do more. For example, a permanent structure could be set up to bring stakeholders together on a more regular basis.

For that reason, the Belgian hub, through sector federation Febelfin, will this year act as lead applicant for a European project application (LIFE-2022-CET-FIN-ROUND) aimed at establishing national funding roundtables for sustainable energy investments.

## CHAPTER 3

# ITALY: “TECHNICAL TABLE TO STIMULATE THE REDEVELOPMENT OF BUILDINGS”

**Authors: Daniela Antonini, Banco BPM, Angelo Peppetti, Italian Banking Association & Serena Razzi, Italian Banking Association**

### 3.1 GENERAL DESCRIPTION

**Profile of the building stock, both residential and non-residential, in terms of typology, age & energy performance profile in Italy**

#### **Residential buildings**

Italy has 12.42 million buildings intended for residential use. Over 60% of this stock is over 45 years old. Over 25% of these buildings have annual consumption ranging from a minimum of 160 kWh/m<sup>2</sup> per year to over 220 kWh/m<sup>2</sup>. The situation of the building stock in the residential sector is illustrated in Table 1, broken down by year of construction.

Table 1 “Residential buildings, number and floor area 2018, by period of construction”<sup>2</sup>

Period of construction	Number of buildings	m <sup>2</sup>
<1919	1,832,503	824,318,007
19-45	1,327,007	596,929,863
46-60	1,700,834	765,089,112
61-70	2,050,830	922,528,420
71-80	2,117,649	952,585,727
81-90	1,462,766	657,998,570
91-2000	871,017	391,811,090
2001-2005	465,092	209,213,142
2006-2011	359,991	161,935,377
2011-2018	232,714	104,682,143
Total	12,420,403	5,587,091,450

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<sup>2</sup> Source: “Integrated national energy and climate plan” produced by the Ministry of Economic Development, the Ministry of the Environment and Protection of Natural Resources and the Sea and the Ministry of Infrastructure and Transport sent to the European Commission - implementation of Regulation (UE) 2018/1999 - [https://www.mise.gov.it/images/stories/documenti/it\\_final\\_necp\\_main\\_en.pdf](https://www.mise.gov.it/images/stories/documenti/it_final_necp_main_en.pdf)

## Non-residential buildings

Buildings intended for non-residential purposes are grouped into the most common categories: schools, offices, shopping centres, hotels, health-sector facilities.

There are approximately 435,000 non-residential buildings in Italy intended for these purposes, as shown in the table 2.

Table 2 "Non-residential buildings (schools, offices, shopping centres, hotels)"<sup>3</sup>

Number of non-residential buildings	m <sup>2</sup>
148	173,490
22,515	23,421,687
84,233	83,915,666
102,264	95,050,723
206,451	125,487,887
19,119	13,231,516

## Energy performance of the national stock of buildings

The National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) published in December 2021 the "Annual Report on the Energy certification of buildings"<sup>4</sup>.

The report provides an assessment of the energy performance of the national stock of buildings based on the analysis of different parameters present in the Energy Performance Certificates – EPC (APE in Italy). This information was acquired through the consultation of the "Information System on Energy Performance Certificates (SIAPE in Italy), the national database of the "EPC" of buildings.

As of 1 April 2021, the database contained data relating to over 2,000,000 EPCs.

The distribution by energy class of buildings built before 1991 confirms the prevalence of properties with lower performance (60-70%), with few cases in the best energy classes (A4-B around 3-4%). The trend towards improving the efficiency of buildings, thanks to the progressive application of regulations with more stringent requirements, is visible in distribution by energy class of buildings built between 2016 and 2020. See table 3 (source ENEA).

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<sup>3</sup> Source: "Integrated national energy and climate plan" produced by the Ministry of Economic Development, the Ministry of the Environment and Protection of Natural Resources and the Sea and the Ministry of Infrastructure and Transport sent to the European Commission - implementation of Regulation (UE) 2018/1999 -

[https://www.mise.gov.it/images/stories/documenti/it\\_final\\_necp\\_main\\_en.pdf](https://www.mise.gov.it/images/stories/documenti/it_final_necp_main_en.pdf)

<sup>4</sup><https://www.pubblicazioni.enea.it/component/jdownloads/?task=download.send&id=552&catid=3&m=0&Itemid=101>

Table 3 "Percentage distribution of APEs by period of construction and energy class"

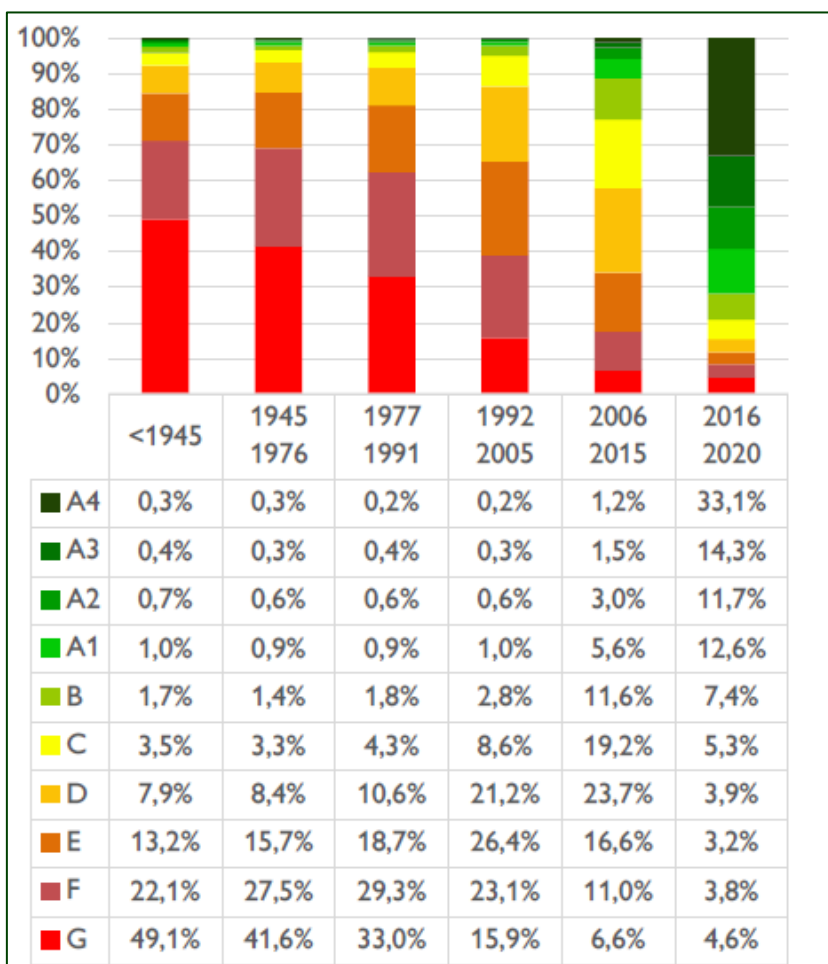


Table 4 "Percentage distribution of APEs by energy class for the Residential buildings (a) and for the Non-residential buildings (b)"

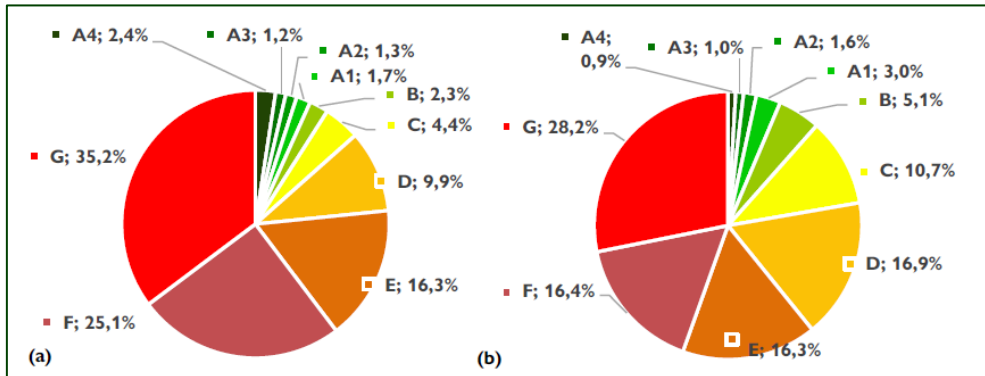
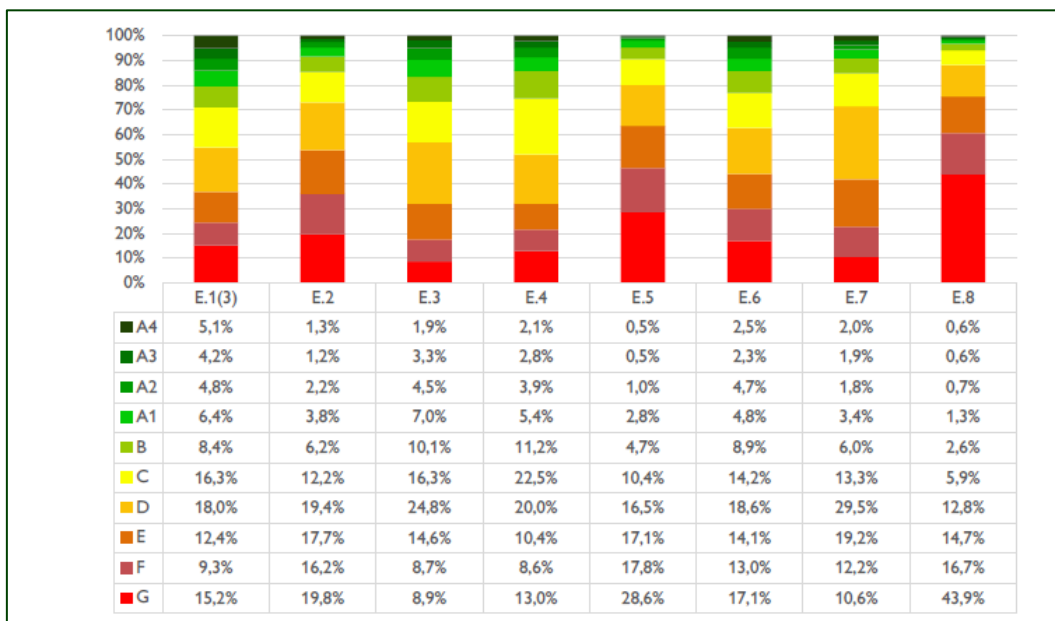


Table 5 "Percentage distribution of APEs relating to non-residential buildings by energy class and intended use"



E.1 (3) buildings used as hotels, guesthouses and similar activities

E.2 Offices

E.3 Health-sector facilities

E.4 buildings used for recreational, associative or religious activities and similar

E.5 shopping centres

E.6 buildings used for sports activities

E.7 schools

E.8 industrial and similar activities

## **Main challenges & opportunities in relation to energy efficiency and decarbonisation of the Italian building stock, both residential and non-residential**

The renovation of buildings is an important process for promoting environmental sustainability in the economy, especially in Italy where the buildings have characteristics that require significant investments to promote energy efficiency.

Real estate assets refer to the more general topic of the real estate market.

In Italy, 60% of the total assets of Italian families are invested in real estate assets<sup>5</sup>. Loans to households for real estate mortgages amount to 422 billion euros<sup>6</sup>.

In 2021, the total number of homes sold in Italy amounted to 748,523<sup>7</sup>, representing an increase of 34% compared to 2020 and about 24% compared to 2019, accelerating the positive trend started in 2014, only interrupted by the negative figure of 2020 (-7.7%) essentially due to the effects of the COVID-19 pandemic.

Another aspect that deserves particular attention concerns the "safety" of buildings, also aimed at mitigating the potential damage arising from natural events (e.g floods, earthquakes).

### **3.2 ACHIEVED OR EXPECTED RESULTS**

#### **Main outputs and ongoing activities of the Italian Technical Table in the context of the EEM**

In this context and in order to identify solutions to the challenges arising from climate change and related to the need for building renovation, a "Technical Table to stimulate the redevelopment of buildings" was established as a multi-stakeholder table composed of the main public and private institutions involved in this issue, to identify and undertake concrete activities in a synergistic way. The actors involved include:

- the European Commission,
- the Organisation for Economic Co-operation and Development (OECD);
- the Presidency of the Council of Ministers,
- the Ministry of Economy and Finance,
- the Ministry of Ecological Transition,
- the Minister of Sustainable Infrastructure and Mobility,
- the Bank of Italy,
- the Italian Banking Association - ABI,
- The Research and Innovation Center for the bank promoted by ABI - ABILAB,
- the Italian National Agency for New Technologies, Energy and Sustainable Economic Development - ENEA,

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<sup>5</sup> Bank of Italy -January 2019.

<sup>6</sup> Bank of Italy – July 2022 – Stock.

<sup>7</sup> Source: "The 2022 Residential Real Estate Report" produced by the Real Estate Market Observatory of the Income revenue authority, in collaboration with the Italian Banking Association.



- the National Association of insurance companies - ANIA,
- the Italian Consumers Association, the National Association of Building Constructors - ANCE,
- CDP real estate,
- the Italian Confederation of Building Property - Confedilizia,
- Confindustria Assoimmobiliare that represents real estate operators and institutional investors,
- the Italian Federation of Professional Real Estate Agents – FIAIP,
- the “Technical table on the valuation of properties as collateral for credit exposures” and
- the European Mortgage Federation (EMF-ECBC).

In order to tackle climate change and stimulate Italy's economic and social growth, the main objectives of the Technical Table are:

- i) encourage communication and updating on tax and regulatory changes and on European or national initiatives affecting energy efficiency and "making safety" of real estate assets;
- (ii) disseminate the culture of property renovation at national level;
- (iii) identify the tools that can facilitate the offer of loans / investments for the renovation of buildings in Italy.

Based on the experience gained at national and European level, the Technical Table has drawn up a document containing reflections aimed at promoting interventions to develop demand for and facilitate the offer of investments in energy renovation and for the mitigation of seismic and hydrogeological risks of buildings:

- creation of a public guarantee fund to finance the renovation of buildings in order to facilitate access to credit, especially for condominiums;
- favour the continuity of tax subsidies for long terms (i.e. the Italian "earthquake bonus" and "ecobonus") to encourage renovation projects;
- favour a “low taxation strategy” for energy efficient and secured properties to increase investments;
- review of energy performance certificates (EPC) in order to standardise the information at national and European level;
- provide a better supervisory capital treatment for energy efficient mortgage loans by demonstrating lower risk compared to traditional mortgage loans;
- identify real estate valuation methodologies that highlight the increase in the market value after renovation.;
- increase awareness of the importance of renovating properties through communication initiatives.

The Technical table works in synergy with the “GreenRoad Project - Growing Energy Efficiency through National Roundtables Addresses” funded by the European Commission's Horizon 2020 program.

The aim is to structure together a solid path of comparison and study on issues that are common to the two national initiatives.

The work of the Technical Table has contributed to achieving a series of important results such as “National Guidelines for the evaluation of properties as collateral for credit exposures”.

In April 2022, the Italian Banking Association presented the fourth update of these Guidelines developed in collaboration with the main national associations of expert valuers and also with the collaboration of the Royal Institution of Chartered Surveyors (RICS) and the European Group of Valuers' Associations (TEGoVA).

The update considers the indications relating to ESG factors in real estate valuation contained in the EBA Guidelines on Loan Origination and Monitoring, and in the most recent versions of the international (International Valuation Standards - IVS and RICS Global Valuation Standards) and European (European Valuation Standards - EVS) valuation standards

The Guidelines aim to bring to the attention of valuers a series of insights that may be useful in considering the energy performance of buildings when calculating market value.

This is very important because this aspect increases the awareness of the importance of energy renovation and stimulates the investment demand.

### 3.3 PERSPECTIVES & LESSONS LEARNED

In order to develop the European green mortgage market, it would be necessary to promote specific public guarantees schemes (e.g. Public Guarantees funds) and fiscal incentives, which can encourage lenders to grant green loans, together with specific preferential supervisory rules.

It is also important to collaborate with the European authorities in the revision process of “The Energy Performance of Buildings Directive” in order to:

- allow lenders to collect and process data on building energy performance and to access EPC databases to facilitate development of the green loans market. This data is essential for lenders to correctly assess the creditworthiness of a green renovation loan and to determine alignment with the building related elements of the EU Taxonomy for Sustainable Activities;
- encourage mortgage lenders, on a voluntary basis, to define a clear path for their mortgage portfolios towards 2030 and 2050, underpinned by efforts to support potential clients in improving the energy efficiency of their properties;
- extend the deadline proposed by the European Commission in relation to “Minimum energy performance standards”. In some European countries (for instance in Italy) the most part of commercial and residential

realestate (about 60%) have an energy performance of class G. Af-ter the deadlines proposed by European Commission the market value of these commercial and residential building would be equal to "zero". This event would have an important impact especially on low-income owners who may not have access to credit for renovation purposes and on the quality of banks' mortgage portfolios and, consequently, on the financial stability of the European banking industry.

## CHAPTER 4

# THE NETHERLANDS: ENERGY EFFICIENT MORTGAGES NL HUB



**Author: Piet Hein Schram, EEM Mortgages NL Hub**

### 4.1 GENERAL DESCRIPTION

**Profile of the building stock, both residential and non-residential, in terms of typology, age & energy performance profile, in the Netherlands**

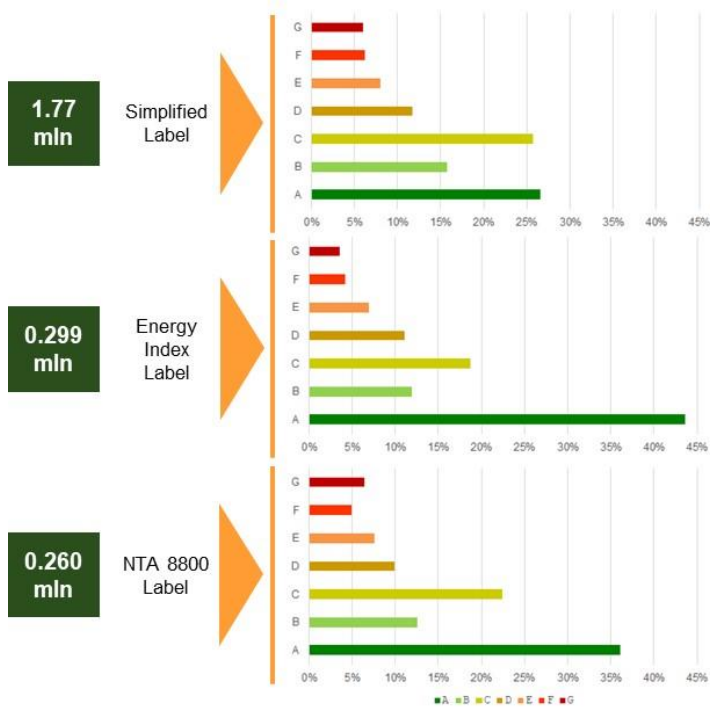
#### **EPBD & NZEB and Dutch Building Code**

Based on data provided by the NEA as per 31 August 2022, the Dutch property stock can be classified as follows:



*Diagram: Overview of the Dutch property stock.*

As depicted in the diagram above, of the 8.30mln residential properties in the Netherlands, approximately 3.02mln are the public rental sector properties and 5.28mln properties are privately owned (so owner-occupied and private rental). As per end of August 2022, of the 5.28mln properties 2.32mln had a valid EPC (44%) and 2.96mln (56%) did not. Of the privately owned properties with a valid EPC, 260k properties had an EPC based on the NTA 8800 methodology, 299k an EPC based on the EI methodology and 1.76mln a simplified energy label (VEL) (see diagram below).



As of August 2022, for 260k privately-owned properties in the Netherlands, an EPC is available that contains a PED value.

Diagram: overview of valid energy distribution of the Dutch property stock and different methodologies.

Diagram below contains the energy label distribution for the 5.28mln privately owned properties in the Netherlands, including (for the properties that do not have a valid EPC) the energy label is estimates, using the same methodology that was applied to determine the estimated energy label ("voorlopig energie label"). This estimate is likely to be conservative as it does not account for actual renovations that have taken place over time (but have not been demonstrated by means of a valid EPC).



Diagram: Overview of (estimated) energy label distribution of the Dutch property stock.

What is notable from the diagram above, is that of the properties with a valid EPC, a relatively large share has an energy label A and only 12% have an energy label of F or G. The estimated distribution of energy labels within the properties without a valid EPC is significantly worse (with more than 30% of properties having an F or G label).

### Main challenges & opportunities in relation to energy efficiency and decarbonisation of the Dutch building stock

#### State of the Dutch residential property stock

Although it appears that the Dutch (residential) building stock is already relatively energy efficient compared to other European jurisdictions, as highlighted in the above diagrams, for approximately 60% of the privately owned residential property stock, no actual energy label is available. The general expectation (based on estimates using basic property characteristics) is that the energy efficiency of this portion of the Dutch residential property stock is significantly worse than the portion that has a valid energy label. However, this is highly uncertain as property owners are likely to have made improvements to the buildings over time (not sufficiently covered by the estimates on basic property characteristics).

The first main challenge therefore lies in creating a clear and comprehensive overview of the actual state of the complete Dutch property stock. At the same time, as part of the requirement for Member States to submit National Building Renovation Plans, it will be necessary to determine the starting point for the Dutch NBR

## **Decision-making process by Homeowner Associations**

A second challenge that is faced by all Member States including the Netherlands, is the problem in relation to the decision-making process where homeowner associations are involved. The decision-making process itself and the differing objectives of individual members make it very challenging for energy efficiency renovations to be implemented in buildings where HOAs are involved.

A relevant example in relation to the decision-making process is the fact that in the Netherlands many HOAs (under their by-laws) are not allowed to borrow funds - they are only allowed to save. This means that many HOAs are simply not allowed to propose an energy efficiency renovation if the funds to complete it, would need to be borrowed.

Secondly, for many large buildings with many building units, the up-front investment required to develop a plan for the energy efficiency improvement is prohibitively expensive and would need to be funded as well, or at least need to be approved by the HOA, creating a chick-egg situation.

And finally, in many cases a super-majority is required to vote in favour of any proposed renovation plan which is difficult to achieve given the different interests of parties involved.

The Dutch government is looking into these specific constraints to determine if new legislation can be put in place to facilitate the process.

## **Market leading in Europe**

Although the Dutch market faces challenges that are very similar to other European countries in terms of number of properties that need renovating, the starting point of the Dutch residential property market is relatively strong.

A high proportion of properties are already deemed 'energy efficient' (EPC Class A) and would need relatively small further improvement to become zero-emission properties. In addition, over the next decade, some 900,000 new properties will have to be added to the residential property stock to meet housing demand. This is a huge opportunity as these properties can be constructed as 'future-proof' properties.

Another unique feature of the Dutch market is that the majority of Dutch financial institutions is highly dependent on the capital markets for their funding. In order to meet the requirements of capital markets investors, these institutions will have to source 'green' assets to raise the necessary funding, providing an additional incentive to improve the energy efficiency of their mortgage loan books (in addition to the regulatory requirements applicable to financial institutions).

A concrete consequence of this dependence on capital markets is that the Dutch mortgage market stakeholders have decided to join forces through the Energy Efficient Mortgages NL Hub.

## 4.2 ACHIEVED OR EXPECTED RESULTS

### **Main outputs and ongoing activities of the EEM NL Hub in the context of the EEMI**

#### **Who we are and what we do**

The Energy Efficient Mortgages NL Hub is an initiative from a diverse group of stakeholders in the Dutch residential housing and mortgage market such as lenders, investors, service providers and other institutions. The objective of the EEM NL Hub is to support and promote the acceleration and adaptation of energy efficient housing in the Netherlands and the financing thereof.

To meet this objective, it is critical to have a thorough understanding of the relevant regulations and other sector developments. By joining forces, the members of the EEM NL Hub aim to be more efficient in digesting, applying, and responding to such regulations and developments and secondly, be able to participate in relevant European initiatives such as the EU-wide Energy Efficient Mortgages Initiative (“EEMI”)<sup>8</sup>.

The EEM NL Hub was formally established in September 2021 and is intended to function as a true ‘hub’ i) where knowledge, ideas and best practices can be shared between participants, ii) where expertise can be created, and iii) through which the dialogue with the EEMI and other relevant stakeholders can be maintained.

An important condition for the realisation of the transition to a climate-neutral economy is the successful financing thereof. Energy efficient mortgage loans are expected to play an important role in the financing of the sustainability conversion of the Dutch residential property stock.

As Dutch mortgage lenders are highly dependent on funding obtained through capital market transactions (such as Residential Mortgage-Backed Securities, Covered Bonds or direct investments), a common understanding of what a ‘Dutch green mortgage loan’ is and a method for investors to determine if the mortgage loans included in a funding transaction meet such classification or not, are considered critical elements in the investment decision.

The EEM NL Hub will develop and maintain a framework for energy efficient mortgages that facilitates the translation and application of European regulation (such as the EU Taxonomy) and other sector initiatives, to the Dutch residential property and mortgage market. This common interpretation and application is aimed at facilitating standardisation and creating transparency that will benefit

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<sup>8</sup> Source: ENERGY Efficient Mortgages Initiative ([energyefficientmortgages.eu](http://energyefficientmortgages.eu))



both consumers and investors and thus contribute to the energy efficiency transition of the Dutch housing stock and the financing thereof.

### Members and affiliated members of the EEM NL Hub

As of January 2023, the EEM NL Hub has 25 members<sup>9</sup> and 20 affiliated members



Diagram: EEM NL Hub affiliated members as per 1 January 2023.

### Organisation and governance

The EEM NL Hub is an association (“vereniging”) registered in the Netherlands. The members of the EEM NL Hub are represented by the Board of Directors, which is currently comprised of six members. Any decisions that require membership approval is presented to the General Members Meeting where each member has a single vote (and for the avoidance of doubt, affiliated members have no vote).

The activities of the EEM NL Hub are currently organised around three ‘pillars’: compilation of a Dutch Energy Efficient Mortgage Framework, ‘Data & Disclosure’ covers data & disclosure and ‘Representation & Alignment’ (see below). For each pillar a separate working group has been put in place with representation from both members and affiliated members.

<sup>9</sup> Several members of the EEM NL Hub participate in combination with their subsidiaries.

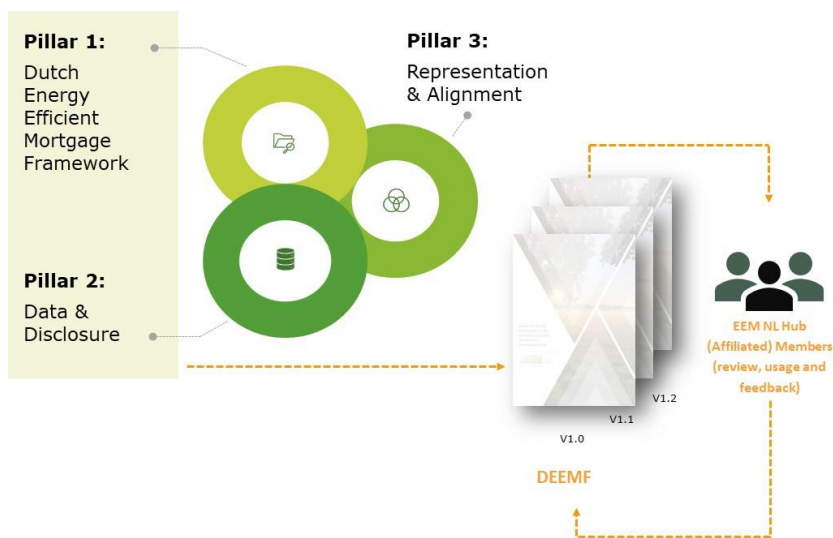


Diagram: Activities of the EEM NL Hub and the working groups.

### 4.3 PERSPECTIVES & LESSONS LEARNED

The Energy Efficient Mortgages NL Hub is unique in the sense that it has been established as a formal independent association representing nearly all mortgage lenders active in the Dutch market and other related stakeholders.

The publication of v1.0 of the Dutch Energy Efficient Mortgage Framework in October 2022 was an important first milestone in creating transparency and improving the understanding of the EU Taxonomy. DEEMF v1.0 contains a proposal on how to interpret the current EU Taxonomy and how to apply it to the Dutch market. It was composed through input from all members and affiliated members of the EEM NL Hub and reflects their joint perspective.

It is the intention that in 2023 further versions of the DEEMF are published, incorporating a.o. the DHSN analysis and more detailed definitions for paragraphs 7.3 – 7.6.

Setting up the local hub as a formal association offers multiple benefits:

- The members required the EEM NL Hub to clearly articulate its objectives and to present an annual roadmap – provides the association with a real focus on what is to be done and what not.
- Through a modest annual membership-contribution, the members provide the EEM NL Hub with funds that enable the association to appoint dedicated resources. Instead of relying on 'voluntary' contribution in the form of hours spent by its members, these dedicated resources can coordinate the activities of the hub in an effective manner;
- The EEM NL Hub organises working group sessions where knowledge of the members and affiliated members is pooled and combined. Together the members know more than they do individually;

- By jointly (through the EEM NL Hub) appointing external advisors, significant cost-savings can be realised.
- Through the by-laws of the association potential conflicts can be formally addressed and avoided (e.g. competition regulation).

It is recommended to carefully discuss the objectives of the association (and its by-laws, including governance) to avoid future disputes amongst members.

For a set-up of this kind to be successful it is important that:

- the members agree on the objectives of the association;
- are all willing to contribute to the joint-initiative by sharing knowledge and resources;
- the governance is well documented in the by-laws of the association.

## CHAPTER 5

# NORDICS: NORDIC ENERGY EFFICIENT MORTGAGES HUB (NEEM)



**Authors: Jonas Bjarke Jensen, Astrid Leth Nielsen, Simone Ruth Flindhardt, Copenhagen Economics**

### 5.1 GENERAL DESCRIPTION

#### **Profile of the building stock, both residential and non-residential, in terms of typology, age & energy performance profile, in the Nordics**

In the Nordics, residential, detached houses make up by far the largest part of the building stock followed by farm buildings and detached houses and vacation homes. A common, specific-to-Nordics type of property ownership is equity sharing. It is mandatory for all buildings to be energy-labelled when sold.

The Nordic Energy Efficient Mortgages (NEEM) Hub is comprised of experts from the financial sector, behavioural scientists, mortgage specialists and authorities on digital technologies from across the Nordics, all guided by Copenhagen Economics. The project is a part of the existing Energy Efficient Mortgages Initiative and is supported by Horizon 2020.

The EU green deal proposes a 'renovation wave' of the EU's public and private building stock and requires Nordic governments to commit to ambitious climate targets and massive private investment. Over the next decade, we estimate that investments of up to EUR 50 bn are needed in the Nordics to be sure of reaching the current targets.

However, a substantial amount of the necessary investment, though profitable on paper, is not being carried out. This issue, which has come to be labelled the "energy efficiency gap", is well-publicised and has been described in numerous research papers and articles. The focus of the NEEM Hub is to break down the factors contributing to this energy efficiency gap and promote energy renovations in the Nordics. We have identified five barriers to address:

1. Behavioural barriers, including limited information and high perceived complexity, lead to profitable renovations not being undertaken.
2. Transaction costs can amount to up to 40% of the total costs when undertaking renovations.

3. Lack of finance-ready data causes a fundamental problem in the entire value chain of energy renovations.
4. Financial barriers such as potential risk mitigating factors of green mortgages not being fully exploited.
5. Regulatory barriers need to be addressed to ensure, among other things, that the newly adopted taxonomy is fit for lending to energy renovation projects in Nordic countries.

A common denominator for the barriers is that, through their touchpoint with end customers and ability to finance the investments, financial institutions are in a perfect position to overcome them. Therefore, the NEEM Hub adopts a bank-centric approach in breaking down the identified barriers to develop concrete, core solutions ready for implementation in the banking sector throughout the Nordics. Nordea, Swedbank, and the green fintech start-up, Hemma, act as market demonstrators, testing the developed solutions.

There will be a green energy shortage in the future and an increased need for smart energy management. In Denmark, a larger part of the energy mix is fossil fuel-based, so energy renovations will aid with decarbonisation goals. In Sweden and Norway, energy is already mostly renewable, so energy renovations will allow green energy to be better used in other sectors of the economy.

## 5.2 ACHIEVED OR EXPECTED RESULTS

### **Main outputs and ongoing activities of NEEM in the context of the EEMI**

In the hub we started by identifying solutions to the five barriers to energy renovations:

1. We must prioritize consumer guidance by providing targeted information with the right timing (when buying a new home and considering other renovations) to nudge the customer in the right direction.
2. Reduce transaction costs by facilitating cooperation between different stakeholders to reduce the number of contact points for customers. Both private stakeholders, but also by automating public processes.
3. Increase the level of data by utilizing a new type of data, e.g., weather data, combined with existing databases and allow digitalised automated verification process of the renovation.
4. Ensure appropriate risk management and capital issuance by focusing on proper risk management in a Nordic perspective based on the ongoing work in EeMMIP.
5. Guide policymakers based at a national and European level to ensure coherency to the taxonomy and national energy classification systems.

In particular, we have developed the NEEM core solution with a coherent value chain to enable a smooth customer journey. Now, we are in the market demonstration phase where we have tested the solution with two banks in all Scandinavian countries and are currently expanding the pilots.

The NEEM core solution is centred around five steps:

1. Screening of potential candidates for energy renovations: We use public data on housing characteristics to do an initial screening of “predicted energy label” before reaching out to candidates
2. Gathering of detailed data upon consent: We retrieve weather data and detailed energy consumption data from potential candidates
3. Model actual energy efficiency performance: Looking at changes in energy consumption to separate out the effects from behaviour, we can identify if energy renovations are profitable and which renovations we would recommend
4. Translating model results to recommendations to households: We provide estimates of the impact of energy renovations from improvement in the predicted energy label. Impacts include annual CO2 reductions, savings on their monthly energy bill, increase in housing value
5. Behavioural optimised outreach and test of solution: We hand out a one-pager to customers with relevant information on their specific houses and a strong call-to-action, when renovations would be profitable

Nearing the end of the project, we will publish blueprint reports to demonstrate the feasibility of replicating and scaling up the initiative and to enable financial institutions to provide energy-efficient mortgage loans to their customers.

### 5.3 PERSPECTIVES & LESSONS LEARNED

#### **Overview of successes**

- The core solution has proven to be very effective. After gaining consent from the bank customers, we retrieve their house and energy data to determine the possible energy benefits and financial gains from renovating. Shortly and efficiently, the results are communicated to the customers.
- During the hub's work, we have increased the knowledge level on energy efficient mortgages within the banks and have analysed the regulatory demands for the taxonomy.

#### **Examples of areas that still require improvement**

- Going forward, we will focus on some of the areas that could be improved: the core solution needs to be digitalised to allow for upscaling. Developing an automated workflow is essential.

#### **‘Golden tip’ for other hubs/banks**

- A ‘golden tip’ from our learnings is, how beneficial it is to reach out to consumers as they indispensable feedback. They are also very appreciative of being contacted by their bank for an offer of an energy-efficient mortgage as they consider this a proactive and customer-friendly way of engaging.

- Furthermore, it has become evident, that it is not sufficient that the data and modelling for energy renovations exist. Customers rarely seek the information themselves despite the potential for profit.
- Thus, it is key to find ways to put this information in front of customers.
- Banks are great at playing an active role in this, as customers will often have to reach out to their banks to get a loan anyway. In this way, banks are ideal to advise customers on renovations.

## CHAPTER 6

# SPAIN: UNIÓN DE CRÉDITOS INMOBILIARIOS (UCI)



**Author: Catia Alvés, UCI**

### 6.1 GENERAL DESCRIPTION

#### **Profile & primary objectives of UCI in the context of the EEMI**

##### **Who we are and what we do**

At UCI, Unión de Créditos Inmobiliarios, we are specialists in sustainable financing. Our purpose is to promote responsible home buying through loans and mortgages that put our clients and their vital projects at the center.

Our challenge is to achieve the decarbonisation of cities by 2050, thus contributing to the challenges to be addressed by the SDGs (Sustainable Development Goals). We promote the purchase of energy-efficient homes and the renovation of the housing stock.

Around 65% of the Spanish population lives in flats, only surpassed by Latvia (66%) and well above the European average, which stands at 48%, according to Eurostat.

On average, the age of Spanish properties exceeds forty years, with 42% of them built between 1950 and 1980 (10.4 million) and almost 30% (6.5 million) before 2000, according to data from the INE and the Ministry of Public Works. Of these, 4 out of 5 buildings are energy inefficient because they consume more energy than they would really need due to their poor insulation and energy conditioning (so 90% of the Spanish building stock is Inefficient).

It is important to note that, since 2012, renovation activity has exceeded the volume of business for new-build construction and renovation activity represents an annual turnover of 45,386.5 M€, exceeding the turnover related to new construction, which stood at 43,728.5 M€, for the eighth consecutive year.



Consequently, the Spanish government has put in place a strong strategy in this area:

- ERESEE 2020- Update of the Long Term Strategy for Energy Renovation in the Building Sector in Spain (ERESEE).
- Plan Nacional Integrado de Energía y Clima (PNIEC) 2021-2030
- Long term strategy for decarbonisation (ELP) to achieve climate neutrality on 2050.
- Plan de Recuperación, Transformación y Resiliencia (PRTR). Aid program for the comprehensive renovation of residential buildings and homes.

UCI's Strategy to tackle Iberian building stock decarbonisation (Why, What, How) is as follows:

### **Why**

We want to support building decarbonisation: for the climate, in support of health and well-being and to stimulate job creation.

With the aim of continuing to enhance our strategy in the field of sustainability, improve coordination, and support integration at European and national levels, in particular in support of the 2030 Climate Target Plan of reducing greenhouse gas emissions to at least 55% below 1990 levels and of the Paris Agreement, UCI has developed a Sustainable Energy Action Plan which intends to decarbonize our cities and provide health and jobs in our society.

### **How**

Creating Ecosystems that complement each other in perfect harmony, with well designed, attractive and differentiated products.

### **What**

UCI is involved in a number of projects which focus variously on the energy renovation of multi-apartment buildings via homeowner associations and on the development of an ecosystem based on a one-stop-shop principle to stimulate appetite for the renovation of residential buildings and strengthen public and private collaboration.

Our key building decarbonisation projects are:

Green Mortgages & Loans



In collaboration with EIB- Green Belém RBMS



In collaboration with EIB- Prado VIII



ELENA RER Project



ENGAGE Project



### **Main challenges & opportunities in relation to energy efficiency and decarbonisation of the building stock, both residential and non-residential, in Spain**

The main challenges and opportunities in relation to energy efficiency and decarbonisation of the Spanish building stock, both residential and non-residential, are as follows:

- The focus for the years to come will be on fostering building renovation loans in an exponential way and creating real marketplaces where ecosystems will be the primary tools to tackle demand challenges.
- The goal is to create coordination and synergy among financial entities to manage the current and future sustainability 'tsunami', in particular relating to the EU Taxonomy, EPBD IV, Pillar 3 ESG disclosure requirements, among others.

Participating in the EEMI has empowered UCI to gather all national financial entities together to tackle the challenges associated with the renovation of the building stock, and other key market stakeholders, such as government, energy efficient companies, associations etc. The EEMI has been a crucial driver to create ecosystems and help citizens to decarbonise their homes.

## **6.2 ACHIEVED OR EXPECTED RESULTS**

### **Main outputs and ongoing activities of UCI in the context of the EEMI**

UCI has secured crucial partnerships with government and with key technical partners. There are plans to create a financial national working group to tackle the EU Taxonomy Delegated Act. Main outputs and ongoing activities of UCI in the context of the EEMI in Spain are:

- UCI is considered as a reference on building stock decarbonisation. The EEMI has helped UCI to create strategic partnerships: EIB; Ministerio para la Transición Ecológica y el Reto Demográfico; Ministerio de transportes, Movilidad y Agenda Urbana; ICO - Instituto de Crédito oficial; GBCe; among others.
- The EEMI has brought UCI in contact with very interesting people that have been and still are crucial for a climate transition in which no one is left behind.
- Our opinions and views are appreciated in the market because we collaborate with the EEMI and UCI is regularly invited to present EU trends in relation to building stock renovation to the market.
- UCI is in the process of creating a national taxonomy financial working group, in which we are seeking to unite the sector. In this working group, the Energy

Efficient Mortgage Label will be highlighted as an opportunity and a powerful tool in support of these 'unity' goals.

## 6.3 PERSPECTIVES & LESSONS LEARNED

### **Overview of successes**

Commitment, hard work and collaboration are crucial among different jurisdictions, extending to a wider perspective beyond our company.

### **Examples of areas that still require improvement**

Formal national working groups to achieve real frameworks to guide the market in harmony.

### **'Golden tip' for other hubs/banks**

Engage yourselves. Find key partnerships, ask for help, share your ideas in the forums you are in. The input is the passion for working on a greater good, the outcome will come.

## CHAPTER 7

# UNITED KINGDOM: GREEN FINANCE INSTITUTE



**Author: Alessandra Melis, GFI**

## 7.1 GENERAL DESCRIPTION

### Profile of the residential building stock in the UK

- In 2017 there were 27.2 million households in the UK, with the following tenure split<sup>10</sup>:
  - 62% owner occupied (of which 34% owned out-right)
  - 20% private rented
  - 17% social rented
- Energy efficiency rating bands in England in 2020 were as follows<sup>11</sup>:

Tenure/EPC	EPC A/B	EPC C	EPC D	EPC E	EPC F	EPC G
Owner occupied	3.1%	39.2%	46.4%	8.6%	2.2%	0.5%
Private rented	2.4%	39.4%	44.3%	9.6%	3.4%	0.9%
Social rented	2.9%	62.6%	30.9%	2.6%	0.8%	0.2%

- Property types in England and Wales as of March 2021 are split as follows<sup>12</sup>:

Property type	31 March 2021
Bungalows	2.46 million
Flats and Maisonettes	6.10 million
Terraced houses	6.93 million
Semi-detached houses	6.27 million

<sup>10</sup> ONS, UK private rented sector: 2018 <https://www.ons.gov.uk/economy/inflationandpriceindices/articles/ukprivaterentedsector/2018>

<sup>11</sup> Department for Levelling Up, Housing and Communities, English Housing Survey 2020 to 2021: headline report <https://www.gov.uk/government/statistics/english-housing-survey-2020-to-2021-headline-report>

<sup>12</sup> Valuations Office Agency, Council Tax: stock of properties, 2021 <https://www.gov.uk/government/statistics/council-tax-stock-of-properties-2021>

Detached houses	4.21 million
Annexes	0.05 million
Caravans, house boats and mobile homes	0.12 million
Unknown type	0.20 million
<b>Total</b>	<b>26.34 million</b>

- The number of properties by build period in England and Wales as of 31 March 2021 are split as follows<sup>3</sup>:

<b>Build period</b>	<b>31 March 2021</b>
<b>Pre-1900</b>	<b>4.17 million</b>
<b>1900-1918</b>	<b>1.41 million</b>
<b>1919-1929</b>	<b>1.30 million</b>
<b>1930-1939</b>	<b>2.67 million</b>
<b>1945-1954</b>	<b>1.74 million</b>
<b>1955-1964</b>	<b>2.66 million</b>
<b>1965-1972</b>	<b>2.55 million</b>
<b>1973-1982</b>	<b>2.40 million</b>
<b>1983-1992</b>	<b>1.86 million</b>
<b>1993-1999</b>	<b>1.36 million</b>
<b>2000-2009</b>	<b>1.90 million</b>
<b>2010-2019</b>	<b>1.87 million</b>
<b>2020-2021</b>	<b>0.01 million</b>

<b>Unknown</b>	<b>0.25 million</b>
<b>Total</b>	<b>26.34 million</b>

- Direct greenhouse gas emissions from buildings in the UK were 87 MtCO<sub>2</sub>e in 2019, around 17% of the UK total. Including indirect emissions, buildings account for 23% of the UK total<sup>13</sup>:
  - Direct building CO<sub>2</sub> emissions: 85 MtCO<sub>2</sub> in 2019, split between homes (77%), commercial buildings (14%) and public buildings (9%)
  - Indirect building emissions: buildings are responsible for 59% of UK electricity consumption, equivalent to a further 31 MtCO<sub>2</sub>e of indirect emissions

**Main challenges in relation to energy efficiency and decarbonisation of the UK building stock, residential sector**

- The Green Finance Institute report “Financing energy efficient buildings: the path to retrofit at scale” identified barriers to retrofit projects for each of the tenures of UK homes<sup>14</sup>:
  - Owner occupied:

<b>Financial Barriers</b>	<b>Non-Financial Barriers</b>
<ul style="list-style-type: none"> <li>• High upfront costs for improvements.</li> <li>• Lack of access to capital.</li> <li>• Low confidence in energy bill savings: A barrier for homeowners seeking full repayment via energy savings.</li> <li>• Duration of tenancy: Energy bill savings may not accrue to the original homeowner if they move property.</li> <li>• Property value-add: Efficiency improvements not considered to increase and/or protect property values.</li> <li>• Availability and accessibility of products: Low penetration and availability of attractive financial offers for efficiency measures.</li> </ul>	<ul style="list-style-type: none"> <li>• Low awareness among homeowners, and disconnect between a genuine concern about climate change and the energy efficiency of their property</li> <li>• Professional influencers fail to inform and educate homeowners of benefits.</li> <li>• Lack of good quality information and support on products, choices and suppliers. to embark on a renovation 'journey'.</li> <li>• Duration, hassle and complexity (i.e. supply chain, installation, finances) of retrofit projects.</li> <li>• Lack of confidence in the supply chain.</li> </ul>

<sup>13</sup> CCC, Sixth Carbon Budget, Buildings (2019) <https://www.theccc.org.uk/wp-content/uploads/2020/12/Sector-summary-Buildings.pdf>

<sup>14</sup> Green Finance Institute, Financing energy efficient buildings: the path to retrofit at scale, 2020 <https://www.greenfinanceinstitute.co.uk/wp-content/uploads/2020/06/Financing-energy-efficient-buildings-the-path-to-retrofit-at-scale.pdf>

	<ul style="list-style-type: none"> <li>Leaseholders gaining permission: Getting collective agreement amongst groups of share-of free-holders.</li> </ul>
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- Private rented:

<b>Financial Barriers</b>	<b>Non-Financial Barriers</b>
<ul style="list-style-type: none"> <li>Split incentive: Most landlords do not pay energy bills, hence do not benefit from energy savings that help justify retrofits.</li> <li>High upfront costs, particularly for landlords with multi-property portfolios.</li> <li>Access to capital: Landlords with medium-sized portfolios (3-5 properties) are not well served by financial products suitable for renovation projects.</li> <li>Uncaptured value: Energy improvements do not translate into increase rental rates or property valuations.</li> <li>Leasehold limitations: Leasehold are landlords not permitted by default to recoup costs of improvements via increased service charges, only for replacements or repairs.</li> <li>Freeholder incentive: Freehold owners of leasehold rental properties typically interested in ground rent only, which is unaffected by property improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Low awareness of MEES: Particularly amongst smaller landlords, whilst tenants have limited appreciation of their rights and relatively weak position. Influencers (e.g. letting and management agents) and tenants often fail to raise efficiency issues.</li> <li>Duration, hassle and complexity of projects, coupled with uncertainty about tenancy length (to plan projects for void periods). A challenge for tenants as well, especially those in short-term lets.</li> <li>Lack of good quality information and support on how to meet or exceed MEES, product choices (technical and financial) and suppliers.</li> <li>Regulatory uncertainty about future requirements, in particular MEES and how compliance fits in with future regulation.</li> </ul>

- Social rented:

<b>Financial Barriers</b>	<b>Non-Financial Barriers</b>
<ul style="list-style-type: none"> <li>Limited funds: New construction and renovation of existing stock compete for small budgets in Councils.</li> <li>Access to capital is acute in smaller RSLs.</li> <li>Bureaucracy: Financing models for renovation projects have long lead-times for approval.</li> </ul>	<ul style="list-style-type: none"> <li>Supply chain constraints: Renovation on the scale needed, at an acceptable cost, cannot be routinely relied upon.</li> <li>Project development, delivery expertise and capacity often in short supply at many Councils and smaller housing associations, where capacity struggles to match net-zero ambitions and</li> </ul>

<ul style="list-style-type: none"> <li>• Planning horizons: Short-term government grant programmes are difficult to reconcile with longer term stock improvement plans.</li> <li>• Interest rates: Housing associations have the highest share of stock and face higher borrowing rates than local authorities.</li> </ul>	<p>complexity of renovation projects.</p> <ul style="list-style-type: none"> <li>• Reluctant private leaseholders in flats and terraces are rarely compelled to permit or contribute to changes, which can suppress economies of scale.</li> <li>• Multi-property retrofits impacted by Right to Buy, such that a portfolio of properties is not centrally controlled.</li> </ul>
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### **Main opportunities in relation to energy efficiency and decarbonisation of the UK building stock, residential sector**

- The Climate Change Committee estimates that £250 billion of investment is required to decarbonise the UK's housing stock. The scale of investment cannot be addressed using public capital alone – this presents a significant investment opportunity for the private finance sector.
- The cost of living crisis has also increased the importance of energy efficiency to help households manage their energy bills, especially when considering recent estimates that price rises in 2021 and April 2022 will lead to an increase in the number of households in fuel poverty of more than 50%<sup>15</sup>
- There is also a consideration around job creation opportunity, with recent studies estimating that a plan to retrofit 8.7 million homes by 2023/24 could create over 500,000 new jobs<sup>16</sup>
- Health co-benefits are also an opportunity: it is estimated that currently the UK's National Health Service (NHS) spends over £1.4bn each year treating people affected by poor housing.<sup>17</sup> According to figures by the Energy Savings Trust, insulating every loft and cavity wall that needs it amongst the UK's 29 million homes would cost £12.5 billion, saving almost £4 billion a year in heating bills and thereby paying for itself in three years.
- The Green Finance Institute report "Financing Home Energy Security: How the Government can Catalyse Green Homes For Growth" sets out key priorities for the UK Government to drive finance, supply chains and consumer demand<sup>18</sup>:
  - Driving finance:
    - Incentives to spur investment at scale
    - UK Infrastructure Bank offers concessional loans and guarantee scheme
    - Struggling households supported with upfront costs

<sup>15</sup><https://www.nea.org.uk/energycrisis/#:~:text=In%20February%202022%2C%20National%20Energy.house-holds%20were%20in%20fuel%20poverty.>

<sup>16</sup> <https://neweconomics.org/2020/07/a-national-house-retrofitting-programme>

<sup>17</sup> <https://bregroup.com/press-releases/bre-report-finds-poor-housing-is-costing-nhs-1-4bn-a-year/>

<sup>18</sup> Green Finance Institute, Financing Home Energy Security: How the Government can Catalyse Green Homes For Growth, October 2022 <https://www.greenfinanceinstitute.co.uk/wp-content/uploads/2022/10/GFI-FINANCING-HOME-ENERGY-SECURITY-1.pdf>



- Driving supply chains:
  - Supercharge skills and training programme
  - Ensure High quality services and support for consumers
- Driving consumer demand:
  - Provide confidence and certainty through long-term policies
  - Underpin the consumer journey with advice and engagement
  - Boost consumer confidence with better green home data

## **Profile & primary objectives of the GFI in the context of EEMI**

### **Green Finance Institute**

- The Green Finance Institute was established in 2019 as a direct response to a key policy recommendation made by the industry-led Green Finance Task-force to the UK Government in March 2018.
- Sitting at the nexus of the public and private sectors, the Green Finance Institute convenes and leads sectoral coalitions of global experts, that identify and unlock barriers to investment towards impactful, real-economy outcomes, to benefit our environment, society, and business.
- We are an independent, commercially focused organisation backed by government and led by bankers. We are fuelled by science and data and propelled by the creativity and ingenuity of the finance sector.
- We design, develop and launch portfolios of scalable financial solutions that accelerate sector-specific transitions to a low-carbon future.

### **Built Environment Programme**

- The Green Finance Institute's Built Environment programme was established in 2019 by the Green Finance Institute, with support from E3G, to catalyse new markets for financing the decarbonisation of buildings and their construction, promote the enabling conditions for market growth, and deliver a scalable model for stimulating financial innovation, both at home and internationally.
- In the UK, the programme has brought together over 400 members representing all sectors involved in the built environment – from finance and business, to academia, civil society and the public sector.
- The programme is designed to identify the barriers to investment in net-zero homes, and actively develop the financial solutions and data tools needed to unlock these barriers and support widescale investment into greening the building stock.
- By anticipating and exploiting market developments, the built environment programme co-creates and accelerates these solutions from inception, through the pre-commercial and pilot phases, to launch and then scale. The Coalition also provides a crucial bridge between the finance sector, business and government to ensure the latest thinking and experience is shared in a 'community of best practice'.
- The portfolio of financial solutions includes the following products:

- Green Mortgages: Collaborating with national and regional mortgage lenders, brokers and influencers to increase awareness and engagement across the market (see below for a deep-dive on areas of focus).
  - Demand Aggregation Financing (DAF): A service that establishes a 'critical mass' in demand in an area to bring down the price of zero carbon heating solutions, enabling customers to access cheaper solutions, while scaling supply chains through guaranteeing a minimum number of purchases.
  - Green Rental Agreements (GRAs): Innovative form of rental agreement to address the "split incentive" between landlords and tenants in privately rented, cold-rent homes.
  - Property Linked Finance (PLF): known as PACE in the US, a new, innovative financial instrument that enables homeowners to receive financing to support 100% of the upfront costs for a retrofit project, by "linking" the financing to the property, rather than the individual property owner.
  - Local Climate Bonds (LCBs): A crowdfunding approach to create an efficient, scalable and cost-effective source of funding for local authorities to finance projects that address the climate emergency.
  - Other financial and data solutions are available on the GFI's website.<sup>19</sup>
- In 2022, the Green Finance Institute announced its first local partnership with the Greater Manchester Combined Authority (GMCA) to trial and scale these innovative financing solutions for home energy efficiency improvements. This announcement forms part of a wider strategic direction of the GFI's Built Environment Programme towards partnerships with local authorities in the UK to support energy-efficiency improvements at scale in local regions.

## 7.2 ACHIEVED OR EXPECTED RESULTS

### Main outputs and ongoing activities of the GFI in the context of EEMI

Workstream	Headlines
<b>Place Based Partnerships</b>	Continue our collaboration with GMCA to introduce a portfolio of innovative financial solutions into the region, including a targeted campaign to raise awareness on green mortgages.
<b>Individual projects</b>	<p><b>Green Mortgages:</b></p> <ul style="list-style-type: none"> <li>● <u>Green Home Finance Principles (GHFPs)</u>: a framework of guidelines that promote integrity in the market by providing financial institutions with a consistent and transparent methodology for the allocation of finance towards retrofitting works in the UK's domestic buildings.</li> </ul>

<sup>19</sup> <https://www.greenfinanceinstitute.co.uk/ceeb/>

	<ul style="list-style-type: none"> <li>• <b>Green Mortgage Hub:</b> page that provides a holistic overview of the Green Mortgage products in the UK.</li> <li>• <b>Handbooks:</b> guidance documents provided to <b>lenders</b> (published) and brokers (upcoming) to inform about different green home retrofit solutions and technologies by providing a profile of the options available and their associated opportunities and risks, as well as quality assurance standards.</li> <li>• <b>Upcoming Green Mortgage Campaign:</b> work with national and local authorities to increase awareness and engagement across the market in their region, via engagement with main lenders.</li> </ul> <p><b>DAF:</b> Facilitating collaboration between retrofit platforms and finance providers .</p> <p><b>GRA:</b> Pilot a new type of rental agreement with major institutional landlords.</p> <p><b>PLF:</b> Develop a prototype model for this new-to-market proposition in the UK.</p> <p><b>LCB:</b> New pipeline of issuances and stakeholder engagement.</p>
<b>Government Engagement</b>	Publication of report on built environment policy levers and continuous engagement with policymakers.

### 7.3 PERSPECTIVES & LESSONS LEARNED

#### Overview of successes

- 11 institutions aligned one or more financial products with the GFI's Green Home Finance Principles, and two committed to align<sup>20</sup>
- Over 50 green mortgage products catalysed into the UK market
- Regular engagement with the UK's leading financial institutions
- Regularly invited as expert speakers on the topic
- Asks from industry to adapt existing lenders' handbook for a broker audience (see above)
- Strong engagement and interest in all dedicated reports published
- National and local coverage of announcement of partnership with GMCA, followed by expression of interest for similar partnerships from other authorities
- Published thought piece on the state of the UK's green mortgage market<sup>21</sup>

#### Examples of areas that still require improvement

- Need for an increased demand for retrofits to be driven in order for Green Mortgage market to really take off, such as through a nationwide awareness raising campaign on the benefits of energy saving measures

<sup>20</sup> For more detail, visit <https://www.greenfinanceinstitute.co.uk/programmes/ceeb/ghfp/>

<sup>21</sup> <https://www.greenfinanceinstitute.co.uk/news-and-insights/unlocking-the-potential-of-the-uks-green-mortgage-market/>

- Need to put greater focus on home improvements with new financial products or incentives, considering households are likely to invest in home improvements at point of sale, including energy efficiency and new heating systems
- Current data should be improved and made more accessible to verify home improvements and boost consumer confidence
- Lack of clarity on timings and applicability of upcoming policies, such as minimum energy efficiency standards (MEES)
- Slow progress on improving EPCs as a guide for homeowners, factoring in energy and carbon savings of clean heat

#### **'Golden tip' for EEMI national hubs/banks**

- The Green Finance Institute's impartiality, market expertise and convening role in the green mortgage sector has allowed the creation of a broad network of financial institutions and relevant stakeholders that can drive meaningful responses from decision-makers
- Our "golden tip" is to regularly convene financial institutions across the spectrum (i.e. those who have fully developed green mortgage propositions and those at the very start of their journey) to collectively create the enabling environment for green mortgages, leveraging market feedback and connections into policymakers to rapidly develop tools to support product innovation. The key to this convening is to ensure it is a "pre-competitive" space that allows market participants to openly discuss the barriers they face and then set up the structure by which you can co-develop the tools to overcome these. These tools need to be specific enough to add value, but general enough so as to be agreed by all parties. Market participants can then take these tools in-house and adjust to their own governance requirements and particular target market.