MORTGAGE PORTFOLIO STANDARDS

The EPBD Delegated Act process can synchronise regulatory developments, climate initiatives, and EU technologies to offer a window into the future

PREPARED BY

CLIMATE STRATEGY & PARTNERS

About Climate Strategy & Partners

Climate Strategy & Partners ("Climate Strategy") is a leading advisory and consulting firm in the areas of climate finance, innovation, and energy efficiency investments, with a focus on the corporate strategies and government policies required to effectively accelerate the transition to a net-zero emissions economy. For 14 years, the Climate Strategy team has been providing global companies, banks and Governments advice on how to deliver the economic transition to a low carbon economy. Climate Strategy's chief executive, Peter Sweatman, has authored or co-authored 20+ white papers, and was the rapporteur to the EU Commission and UN Environment Finance Initiative's Energy Efficiency Financial Institutions Group (EEFIG), leading a decade of ground-breaking work from 2013-23. Climate Strategy supported energy transition policy development at the G20 and in Spain, Mexico, France, and the UK. From 2016-2022, Climate Strategy's subsidiary Energy Efficiency Capital Advisors (EECA) structured and supported ten energy efficiency private placements totalling over Euro 50 million for Spanish cities, companies and buildings for international investors.

About this Report

This report is written by Peter Sweatman, Chief Executive of Climate Strategy and Mauricio Yrivarren, Senior Research Associate who was also responsible for its graphic design. The report builds on the regulatory progress around energy efficiency in buildings during 2024, and the inputs of in-depth research, stakeholder meetings, and high level events. The views and conclusions expressed herein are attributable only to Climate Strategy & Partners, and not to the supporting organisations nor reviewers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the European Climate Foundation nor Climate Strategy & Partners nor the authors concerning the legal status of any country, territory, city or area or of its authorities, or concerning delimitation of its frontiers or boundaries.

Acknowledgements

This document reflects the views only of the authors and not necessarily those of the expert reviewers and their respective organisations. Climate Strategy would like to thank the European Climate Foundation for their support in enabling this report.

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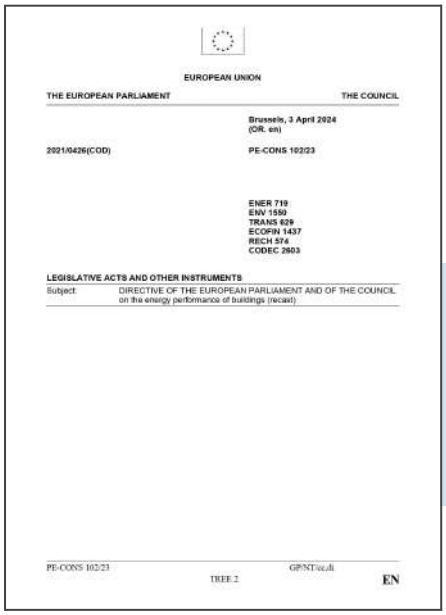
Executive summary

Support for energy efficiency investments is a clear priority in Europe, however, more work assessing buildings' energy performance and environmental footprints accurately and offering a tailored set of measures and financial solutions is needed. While energy regulation, as well as attitudes towards energy efficiency are different in every Member State of the European Union, there is an opportunity to advance EU-wide measures especially in Governments' engagement with private lenders. Mortgages are the single most frequently used financial instrument in the EU and constitute a direct connection between building owners and financial institutions (FIs). The regulatory and market pressures being placed on financial institutions to transition their main portfolios and manage the climate risks in buildings and real estate is increasing. A set of reporting and decarbonisation initiatives have emerged and have started to offer common frameworks and tools to help FIs with their own sustainability targets and to prepare them for rigorous regulatory scenarios. All of this is "on-going" and yet the agenda is not moving fast enough.



EUROPEAN UNION

THE EUROPEAN PARLIAMENT THE COUNCIL

Brussels, 3 April 2024
(OR. en)

2021/0426(COD) PE-CONS 102/23

ENER 719
ENV 1550
TRANS 629
ECOFIN 1437
RECH 574
CODEC 2803

LEGISLATIVE ACTS AND OTHER INSTRUMENTS

Subject: DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the energy performance of buildings (recast)

PE-CONS 102/23 GP/NT/ecl
TREE.2 EN

The EU Council's adoption of the Energy Performance of Buildings Directive (EPBD) recast in April 2024 completed the Fit for 55 package[1]. This recast Directive highlights the importance of investing in energy efficiency[2] to help Europe meet its decarbonisation targets and achieve energy independence from foreign sources of energy, while boosting competitiveness, lowering energy bills, and mitigating energy poverty. For the first time, this recast EPBD[3] directly implicates lenders through Mortgage Portfolio Standards (MPS) as a voluntary measure to track the decarbonisation of their mortgage lending:

"Mechanisms incentivising mortgage lenders to establish a path to increase the median energy performance of the portfolio of buildings covered by their mortgages towards 2030 and 2050, and to encourage potential clients to improve the energy performance of their property in line with the Union's decarbonisation ambition and relevant energy targets in the area of energy consumption in buildings, relying on the criteria for determining environmentally sustainable economic activities set out in Article 3 of Regulation (EU) 2020/852"

The recast EPBD also tasks the EU Commission with the adoption of a Delegated Act[4] over the course of 12 months to establish voluntary Mortgage Portfolio Standards in the following terms:

"comprehensive portfolio framework for voluntary use by financial institutions that supports lenders in targeting and increasing lending volumes provided in accordance with the Union's decarbonisation ambition and relevant energy targets, in order to effectively encourage financial institutions to increase lending volumes provided for energy performance renovations. The actions set out in the comprehensive portfolio framework shall cover increasing lending volumes for energy renovations and shall include suggested safeguards to protect vulnerable households through blended funding solutions. The framework shall describe best practices to encourage lenders to identify and act upon the worst-performing buildings within their portfolios."

This briefing document analyses the different elements inherent to MPS in the frame of new buildings and energy regulation -such as the Energy Efficiency Directive (EED) recast adopted in September 2023- and given recent technology developments related to measuring and improving buildings' energy performance, complementary innovative climate finance. It provides a set of recommendations for the European Commission to take into account when convening its own experts and third parties to draft the DA for MPS. Moreover, it also provides a way to synchronise the elements above under an all-encompassing future-looking Mortgage Portfolio Standards that can speed up the mass renovation process of EU buildings, delivering decarbonisation targets and ensuring a just transition for Europeans of all economic backgrounds.

[1] European Council. (2024). *Towards zero-emission buildings by 2050: Council adopts rules to improve energy performance*. [Website]. Retrieved from https://www.consilium.europa.eu/en/press/press-releases/2024/04/12/towards-zero-emission-buildings-by-2050-council-adopts-rules-to-improve-e nergy-performance/
[2] Euroace. (2024). *Final agreement on the Buildings Directive Time to deliver on the ground*. Retrieved from https://efficientbuildings.eu/wp-content/uploads/2024/05/05042024-PR-EPBD-Adoption-Council.pdf
[3] European Union. (2024).*DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the energy performance of buildings (recast)*. Retrieved from https://data.consilium.europa.eu/doc/document/PE-102-2023-INIT/en/pdf
[4] Ibid.

Europe has a successful track record of bringing diverse climate finance experts together under the Energy Efficiency Financial Institutions Group (**EEFIG**), whose reports, insights, and findings have built a technical consensus around buildings' solutions (including MPS), creating real intellectual assets to build on. As one of the European Supervisory Authorities (ESA), the European Banking Authority (EBA) references Mortgage Portfolios Standards as a recognised framework to address the challenges around **climate neutrality targets, the EU Taxonomy, and to improve energy performance of EU homes.**

Accurate and reliable buildings' energy performance data is critical for FIs to better address climate risks and to offer renovation loans and green mortgages to their clients. To do so, more EU technology and AI can be deployed to determine (or proxy) EPCs across the EU, and this will speed up the process of identifying lenders' worst-performing buildings and the tailored delivery of the proper finance products.

There are **global banking decarbonisation initiatives with aligned targets with the recast EPBD to** promote the voluntary uptake of Mortgage Portfolio Standards, and these also support banks delivering against EU decarbonisation and sustainable finance standards, and positioning the EU as a global leader.

Decarbonisation pathways calculated using specialist EU technology providers will enable mortgage lenders to have a clearer perspective of the depth of the renovations needed by the properties they lend to, hence preventing future stranded assets in their portfolios.

Embodied carbon is a significant part of buildings' environmental footprint and its measurement can be incorporated into a new generation of energy performance certificates, ensuring circularity efforts and preparing FIs and Member States for near-future regulatory requirements.

The implementation of the EPBD and the Energy Efficiency Directive (EED) will be carried out in parallel as both Directives are interconnected. For those banks advanced in their Mortgage Portfolio Standards processes, the need for an EU Renovation loan (ERL) is emerging. The ERL can be backed by an EU-level guarantee ensuring fair access to an EU Capital Market for citizens and to assist banks in their lending to some of the most deserving families, which is necessary to meet the Union's decarbonisation objectives.

The **impact assessments** for the EPBD and the EED indicate that the **EU needs to take on a larger role** in buildings' renovation policies. **Mortgage Portfolio Standards are a mechanism** that facilitates their joint implementation, and **can help them supersede their outcome expectations**.

Recognised by the International Energy Agency[5] as an innovative solution to increase energy efficiency finance, the momentum for MPS is building as over a third[6] of the top-30 banks in Europe already have a form of Mortgage Portfolio Standard, or equivalent, in place. Mortgage portfolio standards have become the touchstone which connects an already existing body of best practices developed by banks for banks, to the critical need to align mortgage portfolios with net-zero targets and address the potential for climate risk and stranded real estate assets through the energy transition.

[5] IEA. (2024). World Energy Investment 2024. Retrieved from https://iea.blob.core.windows.net/assets/d829545d-fab6-4c98-b266-28556d86ce8d/WorldEnergyInvestment2024.pdf

[6] Climate Strategy & Partners. (2023). *Engaging Retail Lenders in Home Renovation: Turning Sustainable Finance Commitments into Household Energy Savings and Climate Resilience.* [Website]. Retrieved from https://www.climatestrategy.com/en/informe_27.php

Delegated Acts build on expert groups for Guidance

"Delegated acts supplement or amend existing legislation[7]". The delegation should comprise a set of stipulations with particular steps for the EU Commision to act upon. While the Commission does have in-house expertise, in the case of DAs, it also relies on outside expertise to draft sound policies following the findings of "Expert Groups[8]". Expert groups can have members from both the public and private sectors and are divided into "formal" (those set up by Commission) and "informal" (those set up by a Commission directorate general[9]). In addition, the Commission ensures that the expert members hail from different backgrounds to ensure a balanced composition[10].

The European Energy Efficiency Financing Coalition will build on the work of EEFIG

At the time of print of this document, the EU's Register of delegated and implementing acts does not feature the DA tasked for the Commission on the recently adopted EPBD or an expert group dedicated for this task[11]. However, the Commission's European Energy Efficiency Financing Coalition[12] (EEEFC) is certainly a new and emerging expert group that also connects to Member States. Launched on April 22nd 2024, this new coalition will foster the exchange of insights and the cooperation between financial institutions, Member States and the Commission to assist in the implementation of financial instruments and EU funded schemes focused on energy efficiency, as well as to advance programmes to enable increased private investments in energy efficiency projects.

Moreover, the coalition will align its work with the **Energy Efficiency Directive** (**EED**) and the **Energy Performance of Buildings Directive** (**EPBD**) and help Member States implement them. The coalition's work is expected to build on the findings of the **Energy Efficiency Financial Institutions Group**[13] (**EEFIG**), created in 2013 by the Commission and the United Nations Environment Programme Finance Initiative (UNEP FI). EFFIG ended with success in 2023 having identified and documented many of the key issues both driving and preventing energy efficiency investments, and examined with precision the potential of financial institutions in enabling energy efficiency financing. Interestingly, EFFIG discussed Mortgage Portfolio Standards at length in its reports (as shown in Annex C), as well as other relevant items to promote energy efficiency such as 'digital twin' technology and improving capacity to identify EPC data gaps which are discussed in subsequent sections of this document.

Case study - Expert event dedicated to the EPBD recast and the launch of the EEEFC

On 23rd April 2024, Renovate Europe and Climate Strategy & Partners convened financial and buildings stakeholders and policy makers in a Brussels event titled "Engaging Retail Lenders in Home Renovations[14]" to discuss the potential of private financing for accelerating building renovations immediately following the launch of the new European Energy Efficiency Financing Coalition on April 22nd. Many of the speakers and panellists' had participated in EC expert groups, and it also featured European and Member State officials, members of EEFIG, leading banks on sustainability, and global decarbonisation initiatives. Annex B provides a summary of this event and its main findings.

[7] European Union. (2024). *Register of delegated and implementing acts: Frequently asked questions*. [Website]. Retrieved from https://webgate.ec.europa.eu/regdel/#/faq?lang=en
[8] European Commission. (2024). *Register of Commission Expert Groups and Other Similar Entities*. [Website]. Retrieved from https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups-explained?lang=en
[9] following the agreement of the competent Commissioner, Vice-President and Secretariat-General.
[10] European Parliament. (2021). *Briefing: Understanding delegated and implementing acts*. Retrieved from https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690709/EPRS_BRI(2021)690709_EN.pdf
[11] European Union. (2024). *Register of delegated and implementing acts*. [Website]. Retrieved from https://webgate.ec.europa.eu/regdel
[12] European Commission. (2024). *European Energy Efficiency Financing Coalition*. [Website]. Retrieved from https://energy.ec.europa.eu/topics/energy-efficiency/financing/european-energy-efficiency-financing-coalition_en
[13] EEFIG. (2023). *FINAL EEFIG BROCHURE 10 YEARS*. Retrieved from https://circabc.europa.eu/ui/group/092d1141-bdbc-4dbe-9740-aa72b045e8b3/library/8ae98527-0924-49f2-93ab-c6fcd79ebd7a/details
[14] Climate Strategy & Renovate Europe. (2024). *Engaging Retail Lenders in Home Renovations*. Retrieved from https://www.climatestrategy.es/press/RetailLenders23042024.pdf

Levering the EEFIG Legacy

EEFIG comprised over 200 organisations[15] focused on energy efficiency investments in the European Union, such as asset managers, investors, banks, associations, energy efficiency practitioners, academia and other experts across the finance market. Its steering committee[16] included DG ENER, DG FISMA, EASME, UNEP FI, the European Investment Bank (EIB), EBRD, ING, DWS and Swedbank among others, resembling the intended 3-layer system structure for the Commission's European Energy Efficiency Financing Coalition of:

- **Plenary meetings**: Chaired by the Commission, featuring high-level members.
- **Expert groups**: Composed of key stakeholders entrusted with dealing with specific requests.
- **National hubs**: Will represent the Coalition in each Member State. Member States will create their own hubs and appoint a chair.

Moving forward with the delegated act, the EEFC can build on the EEFIG's findings -as in the case of the digital twin innovators- and its analysis of Mortgage Portfolio Standards, which emerged from a consensus among the most sustainability forward-thinking financial institutions in Europe.

Elements related to Mortgage Portfolio Standards researched by EEFIG found in annex C include:

- Data gaps in energy performance standards (EPCs)
- Minimum Energy Performance Standards (MEPS)
- Stimulating consumers' demand for energy efficiency investments
- the De-risking Energy Efficiency Platform (DEEP) database
- The EU Taxonomy
- National EEFIG processes

The European Supervisory Authorities and their technical advice

There are three specialised European Supervisory Authorities (ESAs) in the context of financial services: the European Insurance and Occupational Pensions Authority (EIOPA), the European Securities and Markets Authority (ESMA), and the European Banking Authority (EBA). Clearly in the energy efficiency finance context, **the Commission has and will reach out to the ESAs for technical advice**[17], as was the case during their review of the banking macro-prudential framework[18]. The EBA[19] is tasked with the development of technical standards and guidelines to contribute to the establishment of the European Single Rulebook in banking. This rulebook's objective is to provide a single set of harmonised prudential rules for EU financial institutions. The EBA is also responsible for assessing risks in the EU banking system, and in its 2023 report "Call for Advice from the European Commission on Green Loans and Mortgages[20]" EBA mentions **Mortgage Portfolio Standards in connection to banks meeting climate neutrality by 2050, the EU Taxonomy, and to improve energy performance of EU homes** under sections:

"1.4 Interaction with other initiatives on sustainable finance":

*The increased rate and depth of renovation will have to be maintained also post-2030 in order to reach EU-wide climate neutrality by 2050. Towards this objective, the recast EPBD introduces the concept of '**mortgage portfolio standards**', which is a policy tool aiming to ensure that, over time, credit institutions as well as other mortgage lenders, increase the median energy performance of their real estate portfolios and encourage potential clients to make their immovable properties more energy performant.*

[15] EEFIG. (2024). *About us*. [Website]. Retrieved from https://wayback.archive-it.org/12090/20240119153526/https://eefig.ec.europa.eu/about-us_en?prefLang=es
[16] Ibid.
[17] Clifford Chance. (2024). *THE EU LEGISLATIVE PROCESS EXPLAINED: JUNE 2024*. Retrieved from https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2024/06/the-eu-legislative-process-explained.pdf
[18] European Commission. *Strategy for Financing the Transition to a Sustainable Economy.* [Website]. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021DC0390&from=BG
[19] EBA. (2024). *Mission, values and tasks*. [Website]. Retrieved from https://www.eba.europa.eu/about-us/mission-values-and-tasks
[20] EBA. (2023). *IN RESPONSE TO THE CALL FOR ADVICE FROM THE EUROPEAN COMMISSION ON GREEN LOANS AND MORTGAGES DECEMBER 2023 – EBA/REP/2023/38*. Retrieved from https://www.eba.europa.eu/sites/default/files/2023-12/e7bcc22e-7fc2-4ca9-b50d-b6e922f99513/EBA%20report%20on%20green%20loans%20and%20mortgages_0.pdf

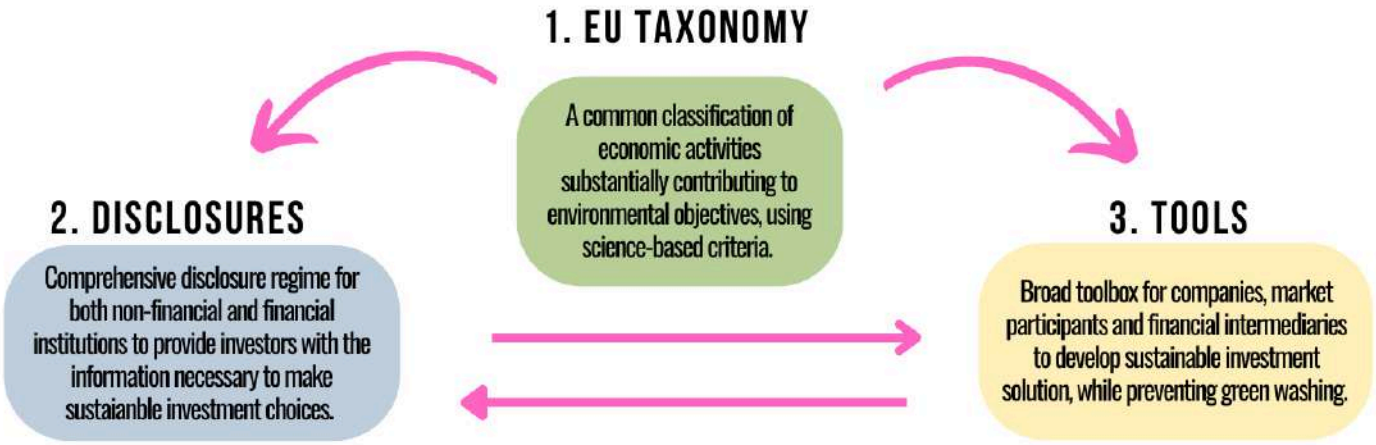
"3.1 Definition for green loans and a voluntary green loan label"

To this end, a framework that does not embrace the efforts other than those aligned with the EU Taxonomy, especially in the short and medium terms when financial market participants face challenges in the usability of the EU Taxonomy, risks not being able to accelerate and give necessary momentum to the transition wave needed to reach the EU sustainability targets. To this end, the recast EPBD, introducing the concept of ***mortgage portfolios standards****, foresees mandatory energy efficiency improvements and mechanisms incentivising mortgage lenders in this regard, which rely on the definition of sustainable economic activities in the EU Taxonomy but not necessarily the alignment with the EU Taxonomy technical screening criteria.*

"5. Green loan origination and monitoring process"

*As mentioned earlier, the recast EPBD also introduces the concept of '****mortgage portfolio standards****', so that over time, credit institutions and other mortgage lenders increase the median energy performance of their real estate portfolios and encourage potential clients to make their immovable properties more energy performant.*

EBA's referencing of Mortgage Portfolio Standards (MPS), especially under the definition for 'green loans' is significant because it recognises MPS as a framework that can help address the challenges of financial sector stakeholders in their uptake of the EU Taxonomy, encompasses present green finance and decarbonisation standards, and assists in minimising environmental harm. In addition, the EBA sees necessary the introduction of a voluntary definition for green, levering current market practices with the policy initiatives found in the EU sustainable finance framework[21] encompassing the EU Taxonomy, disclosures, and tools (see graph below), which closely resembles the key components which facilitate MPS.



The foundations of the EU sustainable finance framework

Recommendation

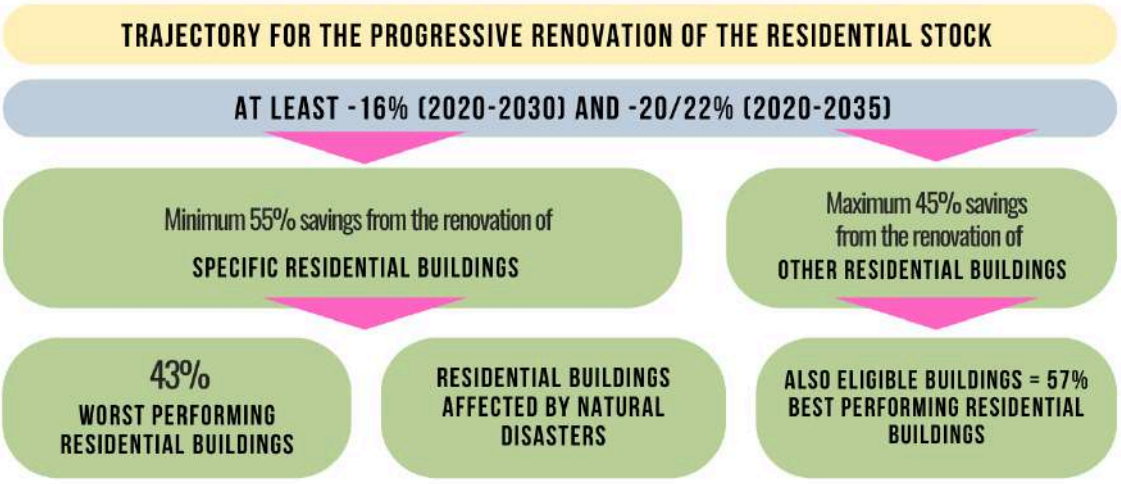
The EBA advocates the introduction of a voluntary definition of green loans and a green loan label that simultaneously lever disclosures under the EU Taxonomy. As ESAs will often conduct public consultations ahead of sharing their findings to the Commission, the EBA's 2024 consultation on "draft Guidelines on the management of ESG risks" is timely for the EU Commission to gather insights on the elements above to draft the DA it is tasked with. Moreover, Mortgage Portfolio Standards can become the mechanism that 'greens' mortgage and renovation loans through the calibration of the three elements of the EU sustainable finance framework developed in the next section.

For a more technical reference[22], the EBA's consultation on guidelines on the management of ESG risk, and EIOPA's consultation on the Prudential Treatment of Sustainability Risks, both indirectly surface Mortgage Portfolio Standards and this is explained in Annex D. WWF EU[23] also references Mortgage Portfolio Standards in their own consultation response (See Annex E).

[21] European Commission. (2022). *The EU Sustainable Finance Framework*. [Presentation]. Retrieved from https://thedocs.worldbank.org/en/doc/8dea75f98f65a824e389bdbd422f06d8-0430012022/related/Andreas-Rajchl-EU-Commission.pdf
[22] Climate Strategy & Partners. (2024). *Response to the European Banking Authority 's Consultation on Draft Guidelines on the management of ESG risks*. Retrieved from https://www.eba.europa.eu/system/files/webform/webform_consultation_16620/75214/EBA_Climate%20Strategy%20%26%20Partners_April_15_2024.pdf
[23] WWF European Policy Office. (2024). *European Banking Authority (EBA): Consultation on Guidelines on the management of ESG risks.* Retrieved from https://www.eba.europa.eu/eba-response/75214?destination=/publications-and-media/events/consultation-draft-guidelines-management-esg-risks

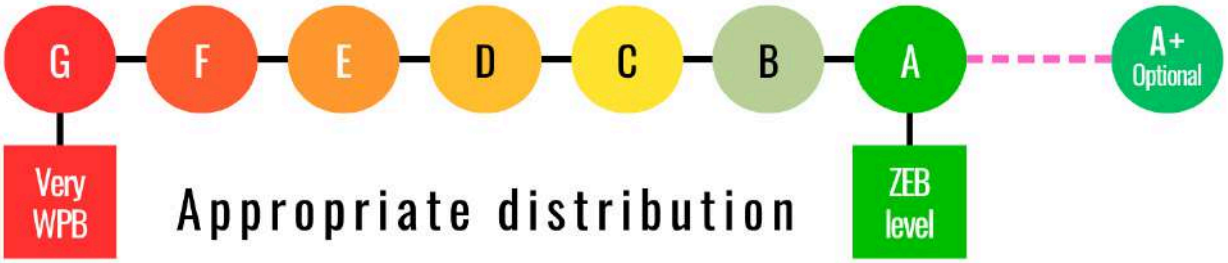
EPBD's data provisions underpin Mortgage Portfolio Standards

To develop the April 2024 EPBD recast it is critical for experts to identify interlinkages, overlaps, potential synergies, and data gaps. In terms of the Delegated Act for MPS, related provisions that address issues raised by FIs include: improved Energy Performance Certificates (EPCs), the updated standard for new buildings (along with provisions related to whole life carbon emissions), and the mandatory trajectory for the progressive renovation of the residential buildings segment (see graph below).



Summary of requirements relevant to the residential trajectory[24] (BPIE 2024)

For the first time, the EPBD recast establishes a progressive introduction of Minimum Energy Performance Standards (MEPS) for non-residential buildings. In the case of residential buildings, MEPS[25] are subject to Member States' national building renovation plans (NBRPs) as shown in the graph above. These update and renew the national long-term renovation strategies (LTRS). "Worst-performing buildings" are defined as the 43% of the building stock with the lowest energy performance and are prioritised for renovation. Member States need to ensure that no less than 55% of energy performance improvements are achieved by renovating worst-performing residential buildings. NBRPs should follow a template with energy performance certificates as a mandatory requirement. Under the EBPD recast, there will be a common A-G energy performance certificate (EPC) scale, with the 'A' rating corresponding to zero-emission buildings and the 'G' rating to the very worst-performing buildings in each Member State, with other buildings distributed among the classes in between. EPCs will disclose energy performance for primary and final energy use in kWh/m²/year and reference values (MEPS, NZEB[26], and ZEB[27]).



(BPIE 2024)

[24] BPIE. (2024). *THE EPBD DECRYPTED A TREASURE CHEST OF OPPORTUNITIES TO ACCELERATE BUILDING DECARBONISATION*. Retrieved from https://www.bpie.eu/wp-content/uploads/2024/04/082_BRIEF_The-revised-EPBD-%E2%80%93-decrypted_Final.pdf
[25] European Commission. (2024). *Questions and Answers on the revised Energy Performance of Buildings Directive (EPBD)*. [Website]. Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/qanda_24_1966
[26] Net-zero-Energy Buildings
[27] Zero-Energy Buildings

Evidently, the advancement of data technology takes on a larger role under the EPBD recast as national databases are required to display the energy performance of buildings in order to increase the access to and the quality of the information for financial institutions and public authorities. These also need to be integrated with the other administrative databases e.g. digital building logbooks (DBLs) or the national building register or land registry. The introduction of renovation passports (which can be accessed through DBLs) should allow end users to access the steps to renovate their building[28] into NZEB or ZEB. The recast EPBD does require the issuance of EPCs to be conducted by a third party expert on-site, but it also authorises a "virtual" approach in line with a common template with a set of indicators (*see Annex A), and allows MS to use 'digital twins' (described below) to facilitate the upgrade of EPCs. MS methodologies must express the energy performance of buildings in primary *energy use per unit of reference floor area per year, in kWh/(m^2.y)*, yet they are open to innovation.

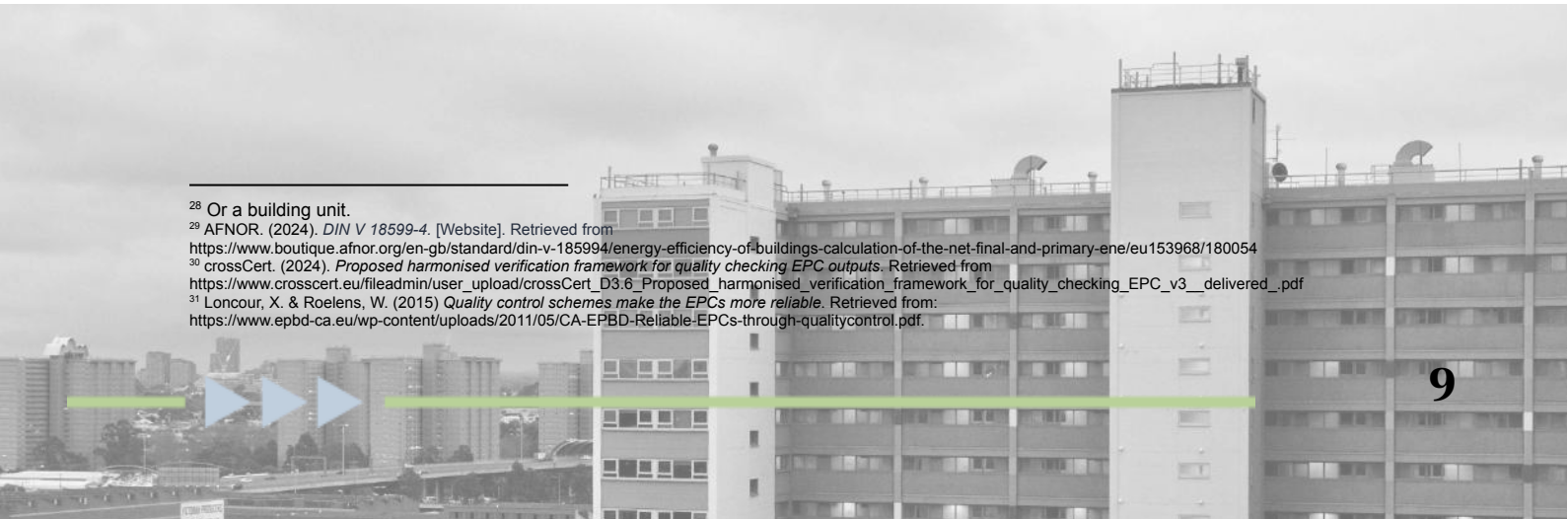
Case study - Germany's Skendata

Germany's Skendata creates digital twins for the whole building stock of a country, through combining various data sources, including the envelope and installations within the building. Users can upload a list of client addresses onto the platform to retrieve corresponding 'digital twins'. While the default mode calculation is based on the building's address, upon adding extra information the tool can provide official EPC certificates, compliant with for example the German DIN 18599[29] standard focused on the energy efficiency of buildings. Skendata's database for 'digital twins' includes the entire building stock for Germany and Austria. In addition, the company's technology follows an event-driven data mesh approach and offers monthly and yearly updates (depending on the data source), which allows it to track changes to buildings over time.

Case study - Spain's Sociedad de Sociedad de Tasación

Sociedad de Tasación (Spanish valuation company) AI tool estimates the energy performance and climate risks of mortgage portfolios. In Spain, property owners are responsible for getting EPCs, hence this information is not easily transferred to lenders. As a response, the ST tool aims to provide banks with the necessary information to align with EU supervisory expectations, assess the risks inherent in their portfolios, and build the path towards greening their mortgages. ST has developed three different models based on the dispersion available and the volume of certificates available that, by looking into the building, can infer the EPC letter of a particular asset.

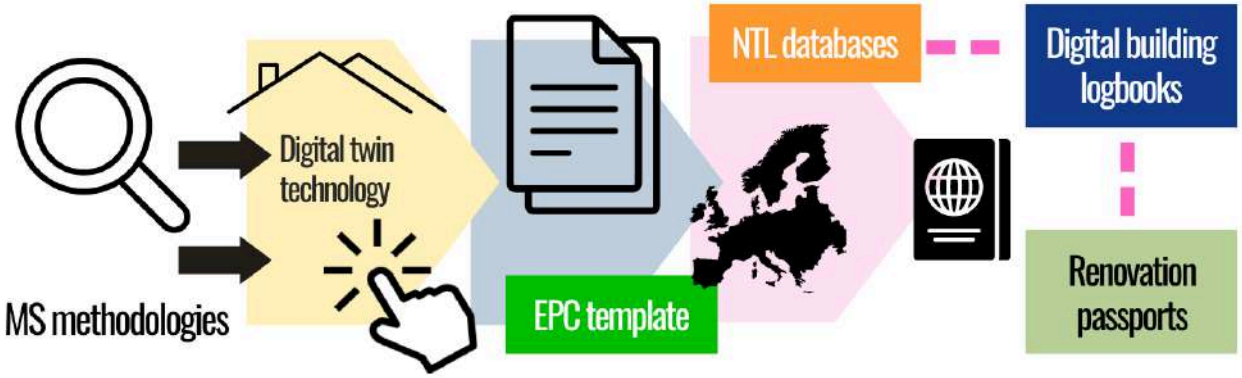
EU funded crossCert's report "Proposed harmonised verification framework for quality checking EPC outputs[30]" proposes the use of a framework encompassing the contrasts in methodologies to calculate EPCs, available software, recommendations, and EPC assessors and their qualifications. Notwithstanding, crossCert notes limitations and inconsistencies for the standardisation of methodologies to calculate EPCs, particularly in the measures to check quality and in the assessors requirements, which differ depending on the MS. For instance, in the case of Bulgaria, Croatia, and Malta, the calculation of energy savings is calculated manually by the assessor, while in other MS, the calculation is carried out by EPC software, hence reducing margin for error. Mentioned in crossCert's report, previous studies[31] comparing MS EPC methodologies revealed variations in upwards of 20 to 500 input values.



[28] Or a building unit.
[29] AFNOR. (2024). *DIN V 18599-4*. [Website]. Retrieved from https://www.boutique.afnor.org/en-gb/standard/din-v-185994/energy-efficiency-of-buildings-calculation-of-the-net-final-and-primary-ene/eu153968/180054
[30] crossCert. (2024). *Proposed harmonised verification framework for quality checking EPC outputs*. Retrieved from https://www.crosscert.eu/fileadmin/user_upload/crossCert_D3.6_Proposed_harmonised_verification_framework_for_quality_checking_EPC_v3__delivered_.pdf
[31] Loncour, X. & Roelens, W. (2015) *Quality control schemes make the EPCs more reliable*. Retrieved from: https://www.epbd-ca.eu/wp-content/uploads/2011/05/CA-EPBD-Reliable-EPCs-through-qualitycontrol.pdf.

The enabling role of technology to meet EPBD targets through Mortgage Portfolio Standards

Triggering the voluntary uptake of Mortgage Portfolio Standards by FIs requires the proper assessment of the EPCs of the buildings in their mortgage portfolios. Over the years, financial institutions (FIs) have increasingly used AI-powered, proxy-based, innovative solutions to resolve data gaps around EPCs of the properties in their mortgage portfolios[32]. Discussed in 2023 by EEFIG, 'digital twin' technology with a high level of detail allows for the accurate proxy calculation of buildings' indicators such as GHG emissions and energy demand. Using the practical experience of FIs, national methodologies should consider 'digital twins' and their providers in supporting the calculation of EPCs (in-line with the template to solve the issue of different data inputs), to speed up the process and lower the prospects for potential errors.



How to define the scale of the energy classes?

The recast EPBD defines class 'A' as ZEB and requires MS to reorganise their EPC classes using 'A' to 'G' labels, while ensuring the pertinent distribution of 'B' to 'F' classes will avoid small clusters of buildings. This reorganisation can be based on ZEB as a reference point and then allocate the different classes through 'primary energy factors' (mentioned in the EPC template). According to the 'Common general framework for the calculation of the energy performance of buildings' found in the EPBD recast, it is up to MS to define primary energy factors or weighting factors based on the European standard on the energy performance of buildings EN 17423[33] or a union primary energy factor for electricity that is established in the Energy Efficiency Directive (2023/1791).

Relevance of defining the scale of energy classes / Present and near future scenarios

Upon definition of the EPC classes, MS will be able to determine the EPCs of buildings within their borders through the use of digital twin technology, which (for example) could be validated by EU funded U-CERT[34], whose work focuses on delivering an energy performance assessment and certification scheme to value buildings. Financial institutions can then know with greater certainty the energy performance of the residential buildings they have mortgaged, and quickly identify the ones found within the "Worst-performing buildings" segment. As a next step, FIs would engage with that client base to offer finance solutions for the energy renovation of those properties.

Good EPCs are essential for FIs to comply with the EU Taxonomy, which relies on EPCs and underscores the importance of enhancing their comparability. Researched by EU funded D^2EPC[35], the optimal progression for EPCs is to become dynamic EPCs which would allow for the steady monitoring of buildings' energy consumption to adapt to regulatory requirements and technology breakthroughs. Found in the recast's template for EPCs, the smart readiness indicator[36] (SRI - *also taken into account by U-CERT) is at the core of dynamic EPCs and rates buildings' in terms of how to:

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[32] EEFIG. (2023). *Collecting and monitoring data on energy efficiency investments and financing across EU Member States and targeted economic sectors.* [Website]. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/f8d98e5e-fdd2-11ed-a05c-01aa75ed71a1/language-en/format-PDF/source-287360293

[33] Or any superseding document.

[34] U-CERT. (2024). *IN A NUTSHELL*. [Website]. Retrieved from https://u-certproject.eu/about/nutshell/

[35] D^2EPC. (2023). *Aspects of Next Generation EPC's Definition v3*. Retrieved from https://www.d2epc.eu/en/Project%20Results%20%20Documents/D1.8%20-%20Aspects%20of%20Next%20generation%20EPC%27s%20definition%20v3.pdf

[36] European Commission. (2024). *Smart readiness indicator*. [Website]. Retrieved from https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/smart-readiness-indicator_en

- Optimise energy efficiency and overall in-use performance
- Adapt their operation to the needs of the occupant
- Adapt to signals from the grid (for example energy flexibility)

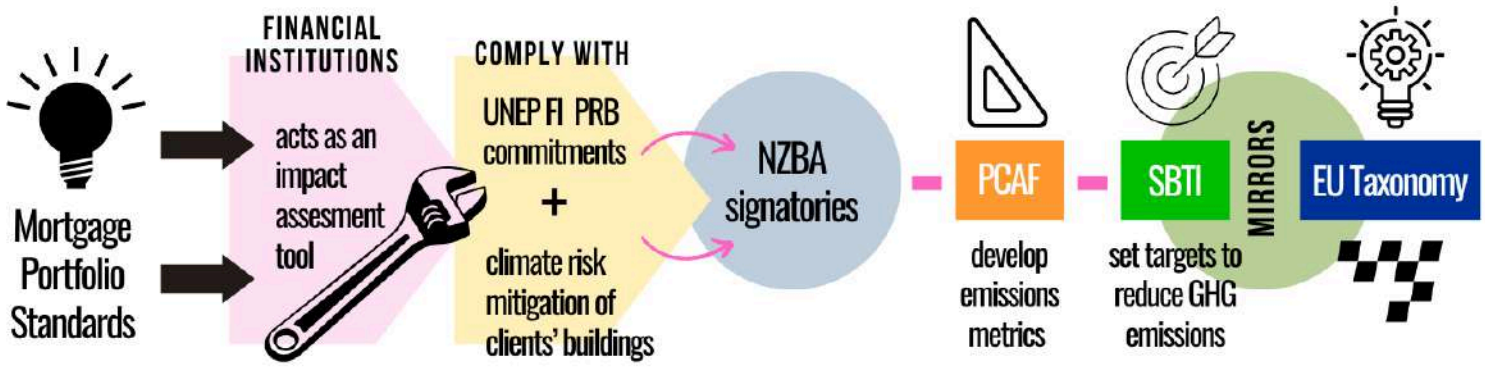
The monitoring of buildings' actual energy consumption will enable the development of motivational schemes, which will enforce the continuous improvement of buildings' energy performance.

Recommendation

Accurate and reliable buildings' energy performance data is the central element that can lever the power of a voluntary Mortgage Portfolio Standard. The EPBD recast provisions combined with the set of EU developed tools can enable a forward-looking delegated act that can be the driving force to bring together available EU technology providers to facilitate the access to key data to FIs, who will in turn produce financial products for their clients to renovate their homes alongside EU decarbonisation targets and the EU Taxonomy. The Commission, as part of the formal DA process, can prioritise the use of technology to determine EPCs across the EU, as it will speed up the process to identify worst-performing buildings and FIs' delivery of finance products.

EU Taxonomy, disclosures, and tools

The recast EPBD defines Mortgage Portfolio Standards as mechanisms that rely on the criteria set out in Article 3 of Regulation (EU) 2020/852 and refers to the EU Taxonomy[37]. According to the EU Taxonomy's technical screening criteria for new build[38], a green home's primary energy demand needs to be 10% lower than legal requirements, and for an acquisition, an EPC Class A is required or proof that the building is in the top 15% energy performance of the country's building stock. For EU Taxonomy aligned renovations, these must save at least 30% of the primary energy demand of the home, before the renovation. A Mortgage Portfolio Standard is, also, an impact analysis tool for banks to help them meet their UNEP FI Principles for Responsible Banking (PRB) commitments, and can assist in offering climate risk mitigation finance to their building owning clients. EPBD's Article 17 'Financial incentives, skills and market barriers' calls on Member States to adopt measures for the development and promotion of green mortgages and green loans for the renovation of buildings. Top European banks already subscribe to and use an array of current initiatives for reporting and decarbonisation purposes. This work connects to the goals of the EU Taxonomy regulation, and include the UNEP FI's Net Zero Banking Alliance[39] (NZBA), the Partnership for Carbon Accounting Financials (PCAF), and the Science Based Targets initiative (SBTI).



The Commission can build on the work of these initiatives within the EU financial sector, by the strong definition and promotion of the voluntary uptake of Mortgage Portfolio Standards to contribute to EU bank strategies to decarbonise their assets and to manage their ESG risks. There are already portfolio-level tools offered by the climate initiatives such as -NZBA- through which European banks can develop emissions metrics, for example, using the Partnership for Carbon Accounting Financials[40] (PCAF) to quantify financed emissions, and finally set targets through Science Based Targets initiative (SBTi). **SBTi and the EU Taxonomy both use concrete benchmarks for the evaluation of organisations and economic activities aligned with sustainable targets based on the Paris Agreement**[41]. As of late 2023, just 77 European financial institutions have committed to SBTi net-zero targets[42] to be achieved by 2030[43], and only 10 of them have approved targets. From there, selected banks are already working to improve the sustainability of their mortgage portfolios, and they include:

ING launched the Terra approach[44] to measure and steer the most-intensive parts of its mortgage portfolio towards net zero by 2050. This approach relies on PCAF and the Carbon Risk Real Estate Monitor[45] (CRREM) tool, covering over 90% of the CO2 emissions of the bank's retail mortgage book. ING offers clients a 'sustainability discount[46]' on mortgage rates if the renovation measures result in the property having an energy label 'A' or higher.

[37] Official Journal of the European Union. (2020). *Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Text with EEA relevance)*. [Website]. Retrieved from https://eur-lex.europa.eu/eli/reg/2020/852/oj
[38] European Commission (2024). *EU taxonomy for sustainable activities*. [Website]. Retrieved from https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en
[39] NZBA is the flagship climate initiative under UNEP FI's PRB.
[40] PCAF. (2023). *Enabling financial institutions to assess and disclose greenhouse gas emissions associated with financial activities*. [Website]. Retrieved from https://carbonaccountingfinancials.com/
[41] Wallhed, N. (2021). *The EU Taxonomy on Sustainable Finance A Major Stride Forward or a Nightmare in Practice?*. Retrieved from http://kth.diva-portal.org/smash/get/diva2:1576581/FULLTEXT01.pdf?fbclid=IwAR1t7olZrPTVM-lPL_qv9G1uG4uAiWFXszQNOpBenVE69nNvPZ Qff0iMZYw
[42] SBTi. (2023). *Companies taking action*. [Website]. Retrieved from https://sciencebasedtargets.org/companies-taking-action#dashboard
[43] SBTI. (2023). *SBTi CRITERIA AND RECOMMENDATIONS FOR NEAR-TERM TARGETS*. Retrieved from https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf
[44] ING. (2023). *2023 Climate Report*. Retrieved from https://www.ing.com/MediaEditPage/2023-Climate-Report-1.htm
[45] CRREM. (2024). *Homepage*. [Website]. Retrieved from https://www.crrem.eu/
[46] ING. (2024). *Sustainability discount on your mortgage rate*. [Website]. https://www.ing.nl/particulier/english/sustainable-living/sustainability-discount

BNP Paribas, along with four other European banks (ING, Standard Chartered, BBVA, and Société Générale), signed the Katowice commitment[47] in 2018 to align financing portfolios with Paris Agreement goals and develop open-source methodologies for climate alignment measurement. In 2023, the bank took part in a study to develop a machine learning model[48] to predict the Energy Performance Certificates of French buildings as part of its efforts to overcome data gaps and to better measure the climate performance of its mortgage portfolio.

Deutsche Bank also uses tools like PCAF to predict Energy Performance Certificates (EPCs) when encountering data gaps[49]. In addition, the bank is in favour of the introduction of financial instruments[50] such as the EU Renovation Loan to assist clients to access finance to renovate their homes.

Call to Action - Concerns about greenwashing

The 2023 report[51] by the Joint Committee of the European Supervisory Authorities[52] on risks and vulnerabilities in the EU financial system discusses the public scepticism on "greenwashing" in the context of climate pledges. This sentiment was echoed in the 2024 European Central Bank's report "Business as usual bank climate commitments, lending, and engagement[53]", whose findings indicate that banks adhered to the initiative are not divesting "are neither divesting nor engaging differently from banks without a climate commitment". Notwithstanding, the ECB's report argues that NZBA is still in an initial phase, therefore the trend identified could be reversed in the future. The promotion of the voluntary uptake of MPS can serve as a catalyst for financial institutions to decarbonise the buildings in their mortgage portfolios, meet disclosure requirements, and thus prevent incurring in "greenwashing" activities.

Recommendation - - - - - - - - - - -

At the end of 2023, **NZBA has 138 members of which 70 were based in Europe**[54]. Out of the top-30 European banks by assets 26 are NZBA signatories. The alliance has a real estate working group focused on the metrics, benchmarks, and data needed to further banks' decarbonisation efforts. In late 2022, the alliance reported that **the real estate sub-sector recorded one of the lowest coverages**. NZBA's signatory banks must establish: 2030 and 2050 intermediate net-zero targets, within 18 months after joining; and decarbonisation targets for all or a significant majority of specified carbon-intensive sectors, **including commercial and residential real estate**, within 36 months of joining. For instance, published in December 2023, NZBA's report "Climate Target Setting for Real Estate Sector Financing[55]" concludes that a set of improvements are needed for banks to transition to a net-zero economy, which can be addressed and instrumentalised by MPS:

- Better manage climate risk on their loan books
- Better meet investors and regulators' demands for higher quality and more comparable disclosures of climate strategy, targets, and progress towards targets
- Enhance relationships with customers and develop products to support them on their journey to net zero
- Deliver operational savings by contributing to standardisation of approaches across the industry
- Build their reputation with their customers

As part of the delegated act process, the European Commission can engage with NZBA to promote the uptake of voluntary mortgage portfolio standards for signatories to align their mortgage portfolios with EPBD targets -which match NZBA's- through both PCAF and SBTI. The implementation of Mortgage Portfolio Standards translates into compliance with the EU Taxonomy, so the European Commission has an opportunity to engage with NZBA and and other global banking decarbonisation initiatives with a European presence, through MPS, to lead on the global efforts to green buildings and to meet is ambition to position the EU Taxonomy as the world's leader[56] in setting sustainable finance standards.

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[47] The Katowice Commitment. (2018). *Leading banks team up in pledge to align lending portfolios with global climate goals*. Retrieved from https://group.bnpparibas/uploads/file/katowice_commitment_letter.pdf

[48] Ben Rejeb-Mzah, Imène and Bedioui, Melik and Larhchim, Amine and Ben Jemaa, Yassine, Machine learning to predict French residential buildings' energy performance (March 28, 2023). Available at SSRN: https://ssrn.com/abstract=4403187 or http://dx.doi.org/10.2139/ssrn.4403187

[49] Deutsche Bank. (2023). Residential Real Estate – Leading to Net Zero. Retrieved from https://www.db.com/files/documents/csr/sustainability/Residential-Real-Estate--Leading-to-Net-Zero.pdf?language_id=1

[50] Ibid.

[51] EIOPA. (2023). *Joint Committee Report on risks and vulnerabilities in the EU financial system - Spring 2023*. [Website]. Retrieved from https://www.eiopa.europa.eu/publications/joint-committee-report-risks-and-vulnerabilities-eu-financial-system-spring-2023_en

[52] Composed of EBA, EIOPA, and ESMA.

[53] ECB. (2024). *Business as usual bank climate commitments, lending, and engagement*. Retrieved from https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2921~603e225101.de.pdf?f3854e151126bea0371149d197b37353

[54] UNEP FI. (2023). *Our Members: Net-Zero Banking Alliance*. [Website]. Retrieved from https://www.unepfi.org/net-zero-banking/members/

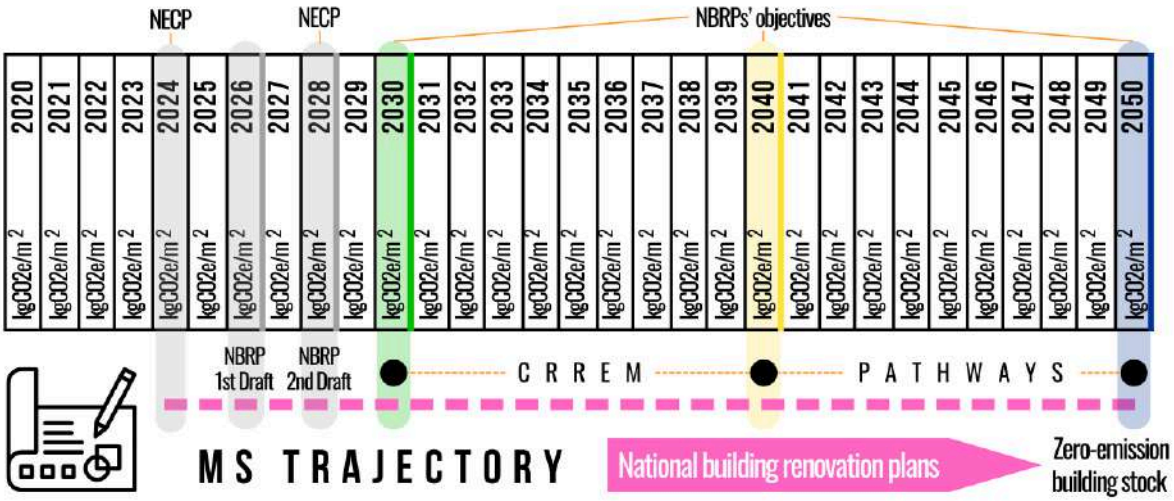
[55] UNEP FI. (2023). *Climate Target Setting for Real Estate Sector Financing*. [Website]. Retrieved from https://www.unepfi.org/industries/banking/climate-target-setting-for-real-estate-sector-financing/

[56] European Commission. (2024). *Sustainable Finance and EU Taxonomy: Commission takes further steps to channel money towards sustainable activities*. [Website]. Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1804

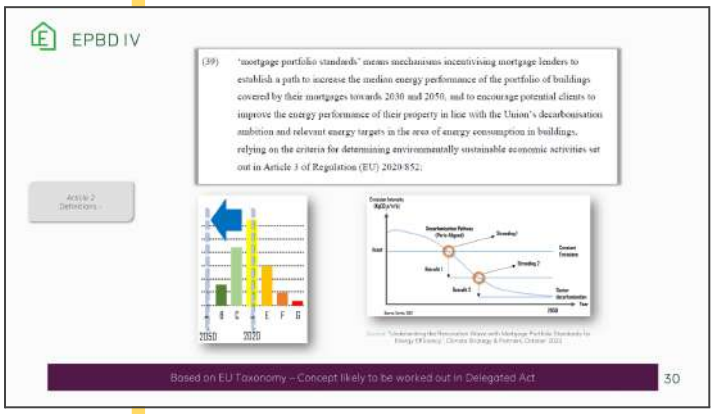
Decarbonisation Pathways and National Renovation Targets

EU funded and SBTI aligned[57], the CRREM[58] Risk Assessment Tool assists asset owners and investors identify potentially stranded assets within their real estate portfolios. Users can evaluate reduction targets against pathways aligned with the Paris agreement (2°C / 1.5°C) with specific default values for each Member State. The EPBD recast calls on MS to submit their national renovation plans (NBRPs) by 31 December 2026. MS must submit the second version of their NBRP as part of their revised integrated national energy and climate plan (NECP) by 2028. NBRPs need to put forward trajectories to renovate MS' building stock with 2030, 2040, and 2050 objectives (*see graph below).

User-defined decarbonisation settings (CRREM 2024)



Mentioned in the annexes of the 2020 EU Taxonomy report[59], the CRREM tool trajectories were proposed to assist the Sustainable Finance Platform in the development of carbon emissions of buildings: "*to shorten the process and avoid the duplication of efforts, these thresholds could be developed on the basis of the decarbonisation trajectories identified in the research project Carbon Risk Real Estate Monitor (CRREM), funded by Horizon 2020.*" Given the backing of the EU Commission and its capacity to define decarbonisation trajectories, MS can benefit from using the CRREM tool to define their trajectories and objectives under their NBRPs. Likewise, FIs that synchronise their PCAF and SBTi target setting with the use of the CREEM tool will be able to avoid future stranded assets within their mortgage portfolios.



Case study - Templates for mortgages to comply with the EU Taxonomy

Co-funded by the European Union, ENGAGE's templates seek to enable financial institutions to assess the sustainability of their mortgages according to the EU Taxonomy. Led by the European DataWarehouse, the ENGAGE Template Version 1.0 recognises the EU Taxonomy as the common denominator of a significant number of sustainable finance regulations, and takes into account Mortgage Portfolio Standards as one of the components of compliance with the EU Taxonomy. Furthermore, ENGAGE is aware of the developments of MPS within the EPBD delegated act and endorses the use of the CRREM tool.

[57] CREEM. (2023). *Updated CRREM-SBTi pathways are now available!*. [Website]. Retrieved from https://www.crrem.eu/crrem-update-2023/
[58] CREEM. (2024). *CRREM Risk Assessment Reference Guide - User manual for the CRREM Risk Assessment Tool.* Retrieved from V2https://www.crrem.eu/wp-content/uploads/2024/05/CRREM-Risk-Assessment-Reference-Guide-V2_22_05_2024-final.pdf
[59] CRREM. (2024). *CRREM in the final EU Taxonomy report*. [Website]. Retrieved from https://www.crrem.eu/crrem-in-the-final-eu-taxonomy-report/

The EPBD recast mandates NBRPs will replace MS long-term renovation strategies (LTRS). According to the European Commission[60], as of late 2023, just Cyprus, Greece, Luxembourg, and the Netherlands reflected the Energy Efficiency Directive recast, the revised Renewable Energy Directive, and the then forthcoming April 2024 EPBD in their Long-Term Buildings Renovation Strategies in a coherent way. Moreover, the Commission recommended MS to increase their levels of ambition in the next cycle of NECPs in terms of a more transparent overview and quantitative evaluation of policies and actions for funding, costs, and the impacts on energy and emission savings for their building stock. Specific recommendations that support the rationale for the components of Mortgage Portfolio Standards include:

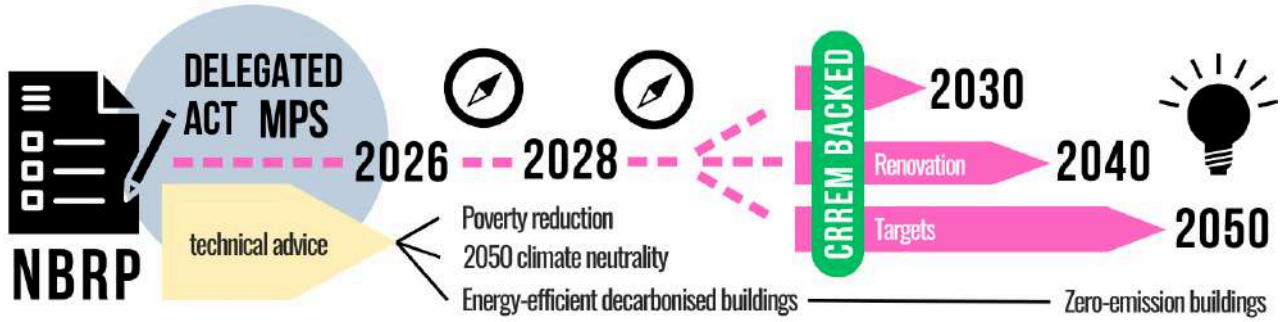
- Private finance to meet EU's climate and energy targets is needed and **this is largely absent from the plans. Only Estonia, Italy, Luxembourg, and Finland address this issue**.
- Only selected MS offer **information on the public vs. private, EU vs. national sources of finance**, and the plans need to better reflect this.
- MS could benefit from a **technical support instrument to support NECP's measures** and to mobilise the key sources of finance.

Recommendation

The EPBD recast suggests that National Building Renovation Plans include a description of the intended policies to support the implementation of national targets, coupled with progress indicators, to achieve:

- A reduction of the number of people suffering energy poverty (*see section 'The opportunity to synchronise the EPBD and the EED');
- The 2050 climate neutrality goal;
- Highly energy-efficient and decarbonised national buildings stock;
- The transformation of current buildings into zero-emission buildings by 2050.

These NBRPs must include 2030, 2040 and 2050 national renovation targets. As part of the delegated act process, the European Commission can encourage the voluntary uptake of Mortgage Portfolio Standards to serve as a technical support instrument to mobilise private finance as a resource for the forthcoming submission of NECPs for 2026 and 2028. EU mortgage lenders can play a proactive role in unlocking the trillions of home equity stored in the buildings owned by their clients, easily identifying the low-hanging fruit and the climate risks in their property backed loans, making banks instrumental in helping MS deliver the plans' decarbonisation targets defined in their 'CRREM-backed' pathways, and hence preventing the stranding of the buildings found in their mortgage portfolios.



As previously highlighted, Skendata's 'digital twin' technology database includes the entire building stock of Austria (3 million) and Germany (52 million). Both country's NBRPs can be drafted using the company's indicators for energy demand and GHG emissions, and EPCs in conjunction with the CRREM tool, therefore ensuring that the NBRPs pathways are 'CRREM-backed'.

[60] European Commission. (2023). *EU wide assessment of the draft updated National Energy and Climate Plans An important step towards the more ambitious 2030 energy and climate objectives under the European Green Deal and RePowerEU.* Retrieved from https://commission.europa.eu/system/files/2023-12/EU-wide_assessment_draft_updated_National_Energy_Climate_Plans_2023.pdf

Importance of quantifying the 'life-cycle global warming potential' of buildings

Not considering embodied carbon can hide a large portion of a building's lifecycle carbon footprint. "Embodied carbon" refers to the sum of GHG emissions released during the different life-cycle stages of a building: raw materials extraction, transportation, manufacturing, construction, maintenance, renovation, and end-of-life for a product or system. In Europe, 10% to 20%[61] of our buildings' CO_2 footprint comes in the form of embodied carbon. This share can reach 50%[62] in countries, like Norway, with already substantially decarbonised energy.

Defined in the EPBD recast as "*an indicator which quantifies the global warming potential contributions of a building along its full life cycle*", 'life-cycle global warming potential' or 'life-cycle GWP' was mentioned throughout the directive, especially in the following: a. Template for NBRP: mandatory and optional indicator; b. Template for EPCs: mandatory indicator when available; c. In the requirements for renovation passports; d. In the definition for digital building logbooks (DBL); and e. As a potential data point for the databases for the energy performance of buildings: "*Data may also be gathered and stored on both operational and embodied emissions and life-cycle GWP*."

Adapted from European standard EN 15978[63] 'Sustainability of construction works. Assessment of environmental performance of building', SBTi has developed 1.5°C-aligned emissions intensity pathways for in-use operational emissions in buildings and for upfront embodied emissions from newly constructed buildings. The EPBD recast states that for the calculation of life-cycle GWP of new buildings, national tools may be used should they meet the EU common Level(s) framework. Indicator 2. 'An intermediate level, quantitative assessment' of Level(s) was designed to: *'Calculate the life cycle GWP emissions of their project and select software tools and databases according to the standard EN 15978'*.

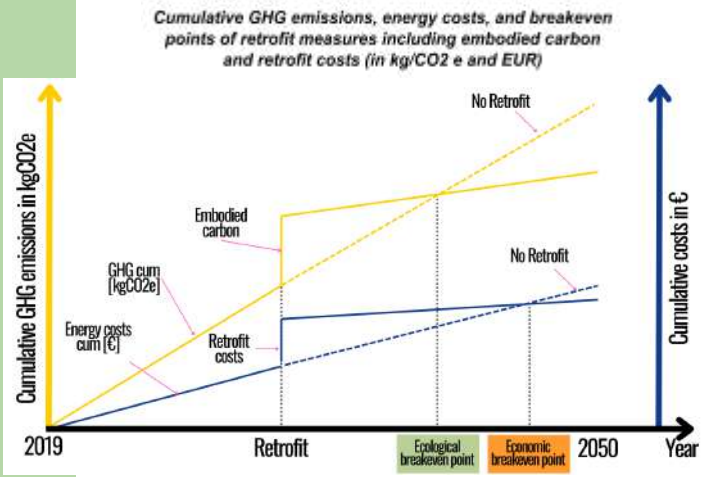
The life-cycle assessment of EU buildings is relevant to ensure the proper current assessment and forecast of buildings' energy consumption, and to ensure that they actively contribute to a circular economy. As stated in the EPBD recast, reducing buildings' whole-life-cycle GHG emissions needs resource efficiency and circularity. The term 'circularity' can also be found in the template for NBRP (mandatory and optional indicator) and as a requirement for renovation passports.

In its research[64], D^2EP recommends the development of financial indicators taking into account life-cycle costing[65] for energy efficiency elements. EPCs would then be used for the financial evaluation of measures for energy upgrades in buildings, and to capitalise on the EPC information gathered from energy units, allowing for strategic planning and enhancing decision-making based on a.Financial and energy indicators, b. Buildings' renovation time frame, c. The condition of building elements, and d. Buildings' comfort level.

The presence of life cycle GWP in the EPBD templates signals its future potential inclusion as part of updated energy performance certificates. The EPBD will be reviewed in 2028 -with direct mention of 'life-cycle GWP'-, and hence FIs need to be prepared. FIs assessing the life-cycle of the buildings they finance to build through SBTi (mirroring Level(s)) would add to Europe's circularity efforts.

[61] BPIE. (2021). *WHOLE-LIFE CARBON: CHALLENGES AND SOLUTIONS FOR HIGHLY EFFICIENT AND CLIMATE-NEUTRAL BUILDINGS*. Retrieved from https://www.bpie.eu/wp-content/uploads/2021/05/BPIE_WLC_Summary-report_final.pdf
[62] World Green Building Council. (2022) *EU Policy Whole Life Carbon Roadmap for buildings*. Retrieved from https://globalabc.org/resources/publications/eu-policy-whole-life-carbon-roadmap-buildings
[63] European Standards. (2024). *BS EN 15978:2011: Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method*. [Website]. https://www.en-standard.eu/bs-en-15978-2011-sustainability-of-construction-works-assessment-of-environmental-performance-of-buildings-calculation-method/
[64] D^2EPC. (2023). *Aspects of Next Generation EPC's Definition v3*. Retrieved from https://www.d2epc.eu/en/Project%20Results%20%20Documents/D1.8%20-%20Aspects%20of%20Next%20generation%20EPC%27s%20definition%20v3.pdf
[65] According to the EC, life-cycle costing (LCC) means considering all the costs that will be incurred during the lifetime of the product, work or service. Source: European Commission. (2024).*Life-cycle costing*. [Website]. Retrieved from https://green-business.ec.europa.eu/green-public-procurement/life-cycle-costing_en

The delegated act on the voluntary uptake of Mortgage Portfolio Standards can respond to financial institutions growing environmental and regulatory concerns who are increasingly recognising the importance of embodied carbon in their asset portfolios. For instance, the UN convened Net-Zero Asset Owner Alliance -sister body of the NZBA-, in its 2023 public consultation for 'Target Setting Protocol Version 4' calls on members to act upon under MPS related categories of 'Real Estate Residential Mortgages', 'Energy Efficiency', and 'Embodied Carbon'. In the case of embodied carbon, the Alliance states: "*Members should carry out a carbon life cycle analysis (LCA), according to the following methodological frame EN 15978 where available for new constructions and major renovations*." As in the case of the EU Taxonomy, the European Commission can through MPS encourage financial institutions to measure the life cycle GWP emissions of their mortgage portfolios using Level(s), hence normalising it within the EU, to then become the global leading framework to conduct assessments and report on buildings' sustainability performance throughout their full life cycle. Recommended steps[66] for the DA to include: 1. Identify and use Whole Life Carbon Assessments to see the environmental footprint dimension to materials used in projects; 2. Set overall targets based upon individual asset pilots and expanded to portfolio level, 3. Have a portfolio-level strategy to deliver the targets that are set over multiple years, and 4. Provide transparency and regular reporting to stakeholders. Additionally, the data collected on cycle GWP can be integrated into EPCs leading to a new generation of certificates that permit the energy management and determine the renovation works needed in buildings with a high degree of accuracy.



(CRREM. 2023)

As part of the DA process, the EC can convene PCAF, SBTi, and CRREM who acknowledge embodied carbon with different degrees. PCAF[67] will include 'Embodied carbon from real estate' as part of its exploratory work for 2024. SBTI[68] has developed 1.5°C-aligned embodied emissions pathways for the global buildings sector, yet the initiative acknowledges that due to data issues, the robustness and granularity of the pathway is limited. CRREM notes the challenges for benchmarking embodied carbon stem from 'limited availability of data', and that although guidelines for embodied carbon values have been developed, these are largely intended for new construction. Also, CRREM mentions the need to focus on 'Ecological Break Even Point', which is the trade-off between embodied carbon and operational savings.

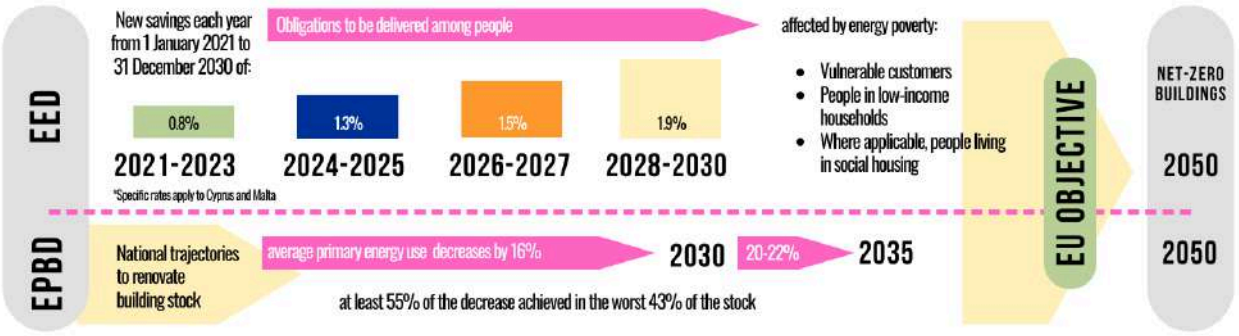
[66] Climate Strategy & Partners. & IIGCC. (2023). *MEASURING AND MANAGING WHOLE LIFE CARBON IN REAL ESTATE PORTFOLIOS: REFLECTIONS AND RECOMMENDATIONS FROM IIGCC ROUNDTABLES WITH INVESTORS February 2023*. Retrieved from https://www.climatestrategy.com/en/informe_25.php

[67] PCAF. (2024). *PCAF announces areas for standard development in 2024*. [Website]. Retrieved from https://carbonaccountingfinancials.com/en/newsitem/pcaf-announces-areas-for-standard-development-in-2024

[68] SBTI. (2023). *BUILDINGS SECTOR SCIENCE-BASED TARGET-SETTING GUIDANCE Version 0.2.1 - Draft for Pilot Testing*. Retrieved from https://sciencebasedtargets.org/resources/files/SBTi_Buildings_Guidance_Draft_for_Pilot_Testing.pdf

The opportunity to synchronise the EPBD and the EED

The Energy Efficiency Directive[69] (EED) recast is part of a broader policy framework of policies to address energy efficiency in European buildings that also includes the EPBD. In the context of the delegated act for the voluntary Mortgage Portfolio Standards, this section will discuss the EED elements that relate to MPS and the synergies between the EED and EPBD. The EED recast has a strong social dimension calling to address energy poverty in low-income households, and seeks to ensure MS contribution towards the EU 2030 climate and 2050 climate neutrality targets. As a result, MS are mandated to achieve cumulative end-use energy savings up to 2030 described in the graph below.



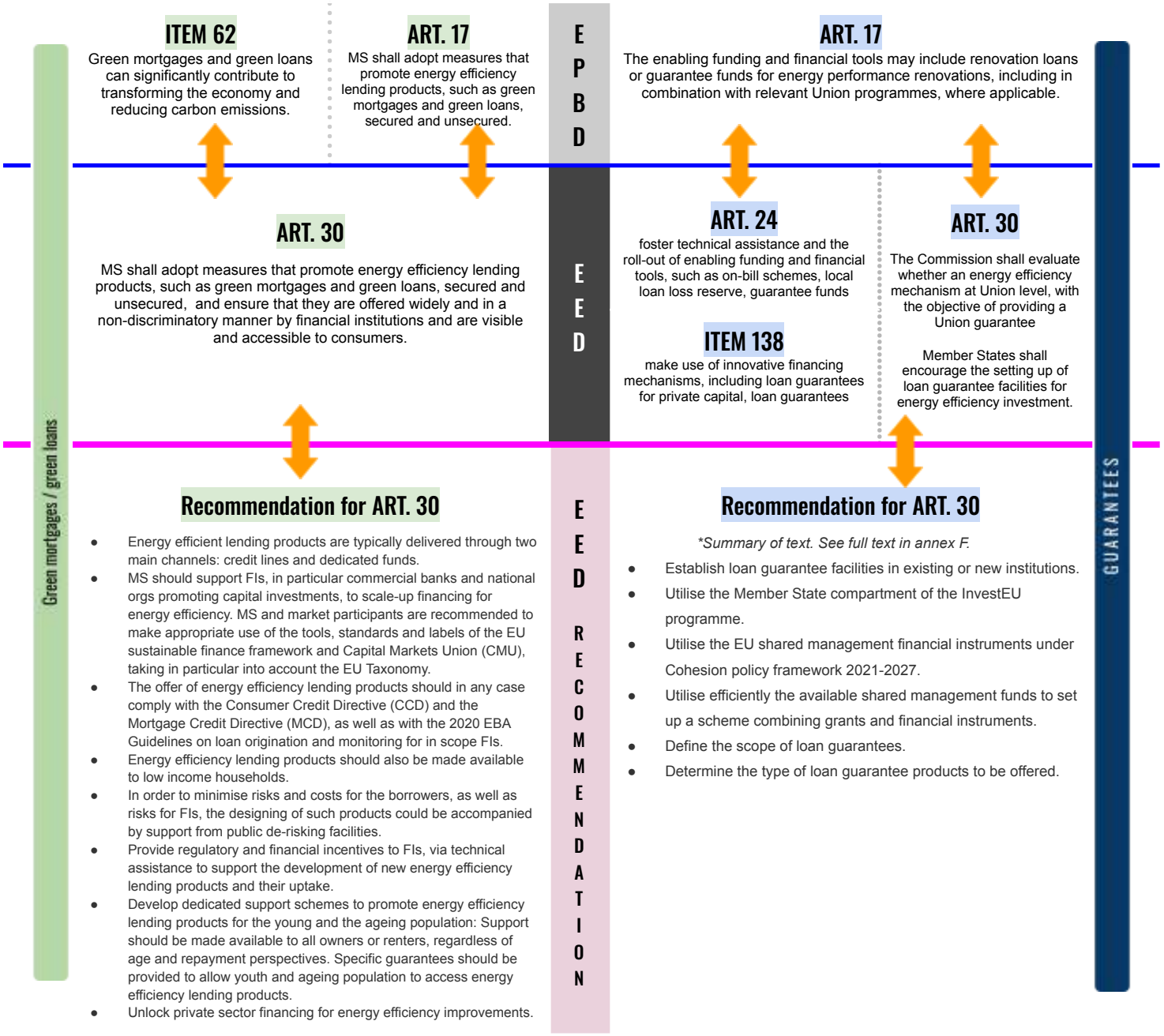
As per the graph, the implementation of both directives needs to be synchronised, and MPS can play a pivotal role. **Articles are described in the context of MPS and their related elements:*

Subject	EPBD	EED	MPS potential role
Energy Poverty	**Article 3**, requiring national building renovation plans to include definition of energy poverty, its measurement and related indicators, quantified reduction of energy poverty as result of measures. **Article 9**, renovation focused on the worst performing homes. **Article 17**, requires MS to target financial incentives, as a priority, on those affected by energy poverty, in accordance with **Article 24 of the EED**.	**Article 24,** facilitating access to affordable bank loans or dedicated credit lines. Calling on MS to establish an expert network to develop strategies to support local and national decision makers in implementing energy efficiency improvement measures, technical assistance and financial tools to alleviate energy poverty.	The DA expert group on MPS could take part in the EED expert network mentioned in article 24, to gain insights on the finance and energy measure needs, and also share previous experiences to address energy poverty. As stated in earlier sections of this document, the voluntary uptake of MPS by FIs can enable the identification of the worst energy performing buildings, and deploy finance solutions to renovate homes for population segments unable to access renovation finance. *See section below "A financial instrument backed by an EU guarantee is needed".
End-use energy savings	**Item 38** discusses end-use energy savings in the context of the 'energy efficiency first' principle and its relevance to when improving the energy performance of buildings under the Renovation Wave and 2030 and 2050 renovation targets.	**Article 4**, Member States shall collectively ensure a reduction of energy consumption of at least 11,7 % in 2030 compared to the projections of the 2020 EU Reference Scenario so that the Union's final energy consumption amounts to no more than 763 Mtoe. **Article 8**, Energy savings obligation (*targets described in the graph above). MS shall encourage obligated parties to carry out renovation of buildings, including social housing, replacement of appliances, financial support and incentives for energy efficiency improvement measures in accordance with national financing and support schemes, or energy audits.	While primary energy consumption measures total domestic energy demand (including energy sources), final energy consumption refers to what end users consume. The EED recast mandates MS to set indicative national energy efficiency contributions based on final energy consumption to meet, conjointly, the Union's binding final energy consumption objective. These contributions need to be incorporated into MS national energy and climate plans (NECPs). The EPBD recast calls on MS to submit their first draft National Building Renovation Plans (NBRPs) by 31 December 2026. MS need to submit the second draft of their NBRP alongside their revised NECPs by 2028. NECPs could encompass elements inherent to MPS which could be developed as part of MPS powered NBRPs such as trajectories to renovate MS' building stock with 2030, 2040, and 2050 objectives and Digital twin generated EPCs. In the event that national contributions do not meet the intended targets, the Commission will start a gap-filling mechanism in order to correct and increase those contributions below the corresponding amount. MPS related findings and metrics could be incorporated into the calculation.

[69] European Commission. (2023). *New Energy Efficiency Directive published.* [Website]. Retrieved from https://energy.ec.europa.eu/news/new-energy-efficiency-directive-published-2023-09-20_en

Green mortgages, loans, and guarantees

Meeting the EED's end-use energy savings targets and the EPBD's renovation targets needs to be carried out in parallel, and, in the context of Mortgage Portfolio Standards, with finance green mortgages / green loans and guarantees as a cornerstone. See table below also including EED recommendations for article 30[70]. **Full mentions in annex F.*



As shown in the above table, there are similarities in the provisions in both texts, particularly EED's article 30 and EPBD's article 17 calling for offering of green loans and green mortgages to promote energy efficiency lending, and their mentioning of the need for a 'Union guarantee' and 'renovation loans' and 'guarantee funds' combined with EU programmes respectively. This is reflected in the EED recommendations for article 30, which provides further details on the offering of green loans and guarantees which resemble the EU Renovation Loan discussed in the next subsection.

[70] European Commission. (2023). COMMISSION RECOMMENDATION of 12 December 2023 on transposing Article 30 on national energy efficiency funds, financing and technical support of the Directive (EU) 2023/1791 on energy efficiency ('EED recast'). Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:C_202301553#ntr13-C_202301553EN.000501-E0013

EPBD Mortgage Portfolio Standards definition	EED Article 30 National energy efficiency fund, financing and technical support	EED Recommendation for Article 30, paragraph 3 - first sentence 2.2.1. Scope and objectives of the requirement
Mechanisms incentivising mortgage lenders to establish a path to increase the median energy performance of the portfolio of buildings covered by their mortgages towards 2030 and 2050, and to encourage potential clients to improve the energy performance of their property in line with the Union's decarbonisation ambition and relevant energy targets in the area of energy consumption in buildings, relying on the criteria for determining environmentally sustainable economic activities set out in **Article 3 of Regulation (EU) 2020/852**	The Commission shall assess the effectiveness and efficiency of energy efficiency public funding support at Union and national level and the Member States' capacity to increase the uptake of private investments in energy efficiency, while also taking into account public financing needs expressed in the national energy and climate plans. The Commission shall evaluate whether an **energy efficiency mechanism at Union level**, with the objective of providing a **Union guarantee, technical assistance and associated grants** to enable the implementation of financial instruments, and financing and support schemes at national level, could support in a cost-effective way the achievement of the Union energy efficiency and climate targets, and, if appropriate, propose the establishment of such a mechanism. To that end, the Commission shall submit by 30 March 2024 a report to the European Parliament and to the Council, accompanied, where appropriate, by legislative proposals.	Member States should support financial institutions, in particular commercial banks and national organisations promoting capital investments, to **scale-up financing for energy efficiency**. In particular, credit institutions play a fundamental role in increasing the volume of energy efficiency lending**. Several commercial banks in Europe are offering green consumer credit and green mortgages and have strategies and targets to green selected lending portfolios. The retail banking system can also leverage on a well-developed and widespread organisational structure** to provide advisory and auxiliary services to support the requirements and opportunities associated with green loans, based on direct and robust relationships with building owners and enterprises.

The EED recast predates the EPBD recast by 6 months and article 30 asks the EU Commission to explore setting up an EU-wide mechanism -we argue like Mortgage Portfolio Standards- to deliver energy efficiency finance. At this time, the European Commission is in the process of elaborating a proposal to establish this mechanism. We note that the EED recommendation for article 30 acknowledges the work of European banks and their offering of green mortgages and their portfolio strategies and their widespread organisational structures which, as we have shown from the leaders, closely resemble Mortgage Portfolio Standards.

The DA process on MPS can also help articulate EED's article 30 components to make green loans and mortgages compliant with the CMU, the CCD, the MCD, EBA guidelines, and the EU Taxonomy. Complemented with loan guarantees, the mass renovation of EU buildings would help meet the EPBD decarbonisation targets and EED's energy poverty and end-use energy savings targets.

Segmentation of Energy poverty

In a report on the role of retail banks in renovation, CS segmented homeowner types and financial instruments needed to carry out the energy renovations of their homes[71]. In the case of **energy poor homes these represent around 16 million households and require up to €480 billion in social investments**:

- 8% of the EU's 200 million households cannot adequately heat their homes[72], or 16 million **energy poor homes**.
- If each energy poor home received a €30,000 upgrade investment as a 100% public grant, the total grant funding needed for this segment would be €480 billion.
- **If this "social renovation programme" were undertaken over 10 years, with 1.6 million renovations per year, the cost would be €48 billion per annum, or just over 1% of the €4 trillion annual social expenditure of the EU**[73].

[71] Climate Strategy & Partners. (2023). *Engaging Retail Lenders in Home Renovation: Turning Sustainable Finance Commitments into Household Energy Savings and Climate Resilience.* [Website]. Retrieved from https://www.climatestrategy.com/en/informe_27.php
[72] Eurostat. (2021). *8% of EU population unable to keep home adequately warm.* [Website]. Retrieved from https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20211105-1
[73] Eurostat. (2022). *Social protection statistics - social benefits.* [Website]. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Social_protection_statistics_-_social_benefits

A home renovation financial instrument backed by an EU guarantee is needed

The EU Renovation Loan[74] (ERL) can fairly unlock home equity and allow homeowners without significant financial means to cost-effectively access an energy efficiency upgrade and modernisation. ERLs are especially relevant to retired people and young families with tight budgets. Banks estimate that up to 20% of their mortgage customers are unable to increase the amounts that they borrow against their homes.

	ERL Components	Resemblance with EED recommendation	Found in
A	**A Zero-coupon structure (paying compound interest at maturity)**	Various financing solutions are offered including a standalone loan offer, **zero-interest** 'eco-loans'	Box 1. Hauts-de-France Pass Rénovation
		Selection of the best product to recommend based only on the **interest rate**, without considering other factors. It is important that the **interest rate** of an energy efficiency financial product is not higher than a regular financial product in the same institution for a comparable type of investment.	2.2.2. Choice of policy measures to fulfil the requirement
B	**An EU Green Guarantee**	The limited amount of public funding available shall focus on addressing barriers to investments, supporting investments by the most vulnerable groups, providing financial instruments and public **guarantees**, with the objective of accelerating the roll out of energy efficiency measures and to leverage and mobilise private investments.	1. INTRODUCTION
		Unlock private sector financing for energy efficiency improvements: Member States can actively support private financial institutions to extend suitable lending products, e.g. through de-risking tools like loan **guarantees** (Section 2.5), project development support and awareness / information campaigns.	2.2.2. Choice of policy measures to fulfil the requirement
		Provide de-risking: Member States may need to provide financial backing to pilot schemes (e.g., via loan **guarantees**), if they are perceived as risky by private lenders.	2.3.2. Choice of policy measures to fulfil the requirement
		Support aggregation and issuances of green bonds: Member States can also support the bundling and standardisation of energy efficiency projects to foster the issuances of green loans, green bonds or green securitisations, by providing for instance technical support and public **guarantees** to reduce or share risks for the project and/or borrower.	2.4.2. Choice of policy measures to fulfil the requirement
		*Summary ● Establish loan **guarantee** facilities in existing or new institutions. ● Utilise the Member State compartment of the InvestEU programme. ● Utilise the EU shared management financial instruments under Cohesion policy framework 2021-2027. ● Utilise efficiently the available shared management funds to set up a scheme combining grants and financial instruments. ● Define the scope of loan **guarantees**. ● Determine the type of loan **guarantee** products to be offered.	2.5.2. Choice of policy measures to fulfil the requirement Box 4. Bulgaria's Energy Efficiency and Renewable Sources Fund
		The loan **guarantee** facility provides both partial credit **guarantees** for individual projects, and portfolio **guarantees** for ESCOs and residential portfolios	2.5.1. Scope and objectives of the requirement
C	**A fair interest rate for all Europeans equal to the EU borrowing costs**	To support the uptake of energy efficiency measures, green consumer credits tend to have maturities that are longer than general purpose consumer credit, lower and/or fixed **interest rates**, and often no security requirements.	2.2.1. Scope and objectives of the requirement
		Selection of the best product to recommend based only on the **interest rate**, without considering other factors. It is important that the **interest rate** of an energy efficiency financial product is not higher than a regular financial product in the same institution for a comparable type of investment.	2.2.2. Choice of policy measures to fulfil the requirement
D	**A 30 year final maturity**	To support the uptake of energy efficiency measures, green consumer credits tend to have **maturities** that are longer than general purpose consumer credit, lower and/or fixed interest rates, and often no security requirements.	2.2.1. Scope and objectives of the requirement
		Affordability can be improved through pre-financing of the work, longer loan **maturities** that consider the lifetime of the installations,	2.2.2. Choice of policy measures to fulfil the requirement
		Given the lower transaction costs and reduced risks, on-bill financing schemes can offer attractive terms such as low interest rates and long **maturities** and be broadly accessible, provided robust risk analysis and mitigation measures are put in place.	2.3.1. Scope and objectives of the requirement
E	**Linked to an ECB liquidity facility (Targeted Long-Term Refinancing Operations - TLTRO) for retail issuers**	*Without direct reference of this component in the EED recommendation. See case study "Reasons for the ECB to implement a green TLTRO" on page 22 for further reference.	
F	**Designed to benefit low income Europeans, with a focus on the elderly and young couples**	Specific **guarantees** should be provided to allow **youth and the aging population** to access energy efficiency lending products.	2.2.2. Choice of policy measures to fulfil the requirement
		Include specific provisions to address low-income households: Low-income households may not be able to afford loan payments at market rates, so further financial support should be provided, such as **guarantees** or subsidised public loans.	2.2.2. Choice of policy measures to fulfil the requirement
		Develop dedicated support schemes to promote energy efficiency lending products for the young and the ageing population: Support should be made available to all owners or renters, regardless of age and repayment perspectives. Specific **guarantees** should be provided to allow youth and the aging population to access energy efficiency lending products.	2.2.2. Choice of policy measures to fulfil the requirement

[74] Climate Strategy & Partners. (2024). *The EU Renovation Loan: a new instrument to fund the EU Renovation Wave*. [Website]. Retrieved from https://www.climatestrategy.com/en/informe_23.php

With access to ERLs, households would immediately have access to lower energy costs and a more comfortable home, paying interest and capital repayments at sale, transfer, or after 30 years with an interest rate set at the EU's borrowing rate (lower than the current retail market). ERL originators can earn fair and transparent pre-agreed fees for successful distribution of ERLs to cover their administrative costs and the cost of ensuring that proceeds are invested in a qualifying renovation that delivers the minimum energy consumption reduction. Whilst there was no direct mention in the EPBD of an "EU Renovation Loan", article 17 endorses renovation loans and guarantee funds for energy performance renovations, in combination with relevant Union programmes. When surveyed about the viability of ERLs, retail banks have expressed[75] the need for an EU Guarantee which was defined as "a critical feature" of a new offering. Originators' perceived risks of distributing ERLs -such as increased indebtedness- can be addressed **through an EU Guarantee, along with increased potential to default - which should have reduced given energy savings.**

Case study - Reasons for the ECB to implement a green TLTRO

The SUERF Policy Brief Published earlier this year "Central banks' targeted refinancing operations and the climate transition" understands that aligning monetary policy with the EU low-carbon transition can be enabled via the introduction of a ECB green TLTRO: Reasons are: 1. Banks would be incentivised to lend to sustainable companies, aligning the economy with global sustainability goals, and hence mitigating financial risks. 2. The secondary mandate of the ECB is to support those policies of the EU and its MS.The alignment of monetary strategies with EU targets allows the ECB to contribute to EU-wide synergetic policy making while amplifying the impact of climate-positive initiatives. 3. TLTROs have a successful track record of reducing borrowing costs, and the costs of funding for banks.

Former Italian Prime Minister and former member of the European Parliament Enrico Letta, recently published a report[76] advocating for the creation of a specific facility -European Green Guarantee (EGG)- supporting banks in funding the climate transition. Developed by the European Commission and the European Investment Bank, the EGG would raise the financial resources to provide guarantees to assist banks in lending for green activities (such as home renovations). The European Fund for Strategic Investments (EFSI) and the EIB would award the guarantee upon assessing project proposals from retail banks and or national banks. It is expected that EGGs will multiply resources by a factor of twelve[77], and this would translate into 25 and 30 billion in guarantees supporting 300-350 billion in investments

Name	Time	Budget	Source of funding	Instruments	Capital mobilisation target (€ billions)
EFSI	2015-2020	33.5	• EU budget guarantee • EIB resources	• Credit enhancement (intermediate loans, subordinated loans, guarantees) Loans • Equity • Venture debt	500
InvestEU Fund	2021-2027	26.2	• EU budget guarantee	• Credit enhancement (intermediate loans, subordinated loans, guarantees) Loans • Equity • Venture debt	372

EU-level main investment initiatives offering guarantees (Breugel 2024[78])

EFSI successor InvestEU[79] provides three quarters of its guarantee support to the EIB Group and 25% to InvestEU implementing partners. A key difference with EFSI is InvestEU's larger pool of implementing partners. However, Experts have identified that the InvestEU implementing partners need to improve their

[75] Refers to the survey conducted for the writing of the CS report " *Engaging Retail Lenders in Home Renovation: Turning Sustainable Finance Commitments into Household Energy Savings and Climate Resilience*", which received 19 responses mainly from leading financial institutions.
[76] Letta. E. (2024). *Much more than a market*. Retrieved from https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf
[77] Mirroring the original EFSI.
[78] Breugel. (2024). *Accelerating strategic investment in the European Union beyond 2026*. Retrieved from https://www.bruegel.org/sites/default/files/2024-01/Report%2001%202024.pdf
[79] InvestEU. (2024). *InvestEU Programme*. [Website]. Retrieved from https://investeu.europa.eu/investeu-programme_en

transparency[80] by disclosing the amounts of InvestEU financing that meet the EU Taxonomy requirements, and their impact in terms of GHG emissions.

MPS related elements can help solve InvestEU's transparency issue

As part of its climate lending policy roadmap, the EIB is establishing an "European Initiative for Building Renovation[81]" to support among other things:

- Aggregation into **portfolios of building renovation projects,** tailored financial support including guarantees. This financial support can be offered through national or regional support programmes;
- New sources of finance by unlocking new markets in **energy efficiency mortgage-based lending** or securitisation.

The European Investment Fund (EIF) "Sustainability Guarantee[82]". Under the Sustainability Portfolio Guarantee Product, its eligibility criteria design took into account the EU Taxonomy. Section "Green and energy efficient buildings – residential", eligibility includes:

- Leading to an improvement in the national Energy Performance Certificate (EPC) level by at least one class, in any case not below B class level; OR
- Where savings in Primary Energy Demand are of at least 30% in comparison to the baseline performance before the renovation, where the reductions in net primary energy demand through renewable energy sources are not taken into account.

As part of the delegated act process on Mortgage Portfolio Standards, the expert group can draw upon the EIB and its leading partners in an effort to create a European Green Guarantee (EGG) that builds on the experiences from EFSI and the current work of InvestEU, and incorporates the eligibility criteria of EIF's Sustainability Portfolio Guarantee Product. Through the voluntary uptake of Mortgage Portfolio Standards, financial institutions will be able to access EPC data and meet taxonomy and disclosure requirements, which would enhance the transparency of projects and increase their chances of accessing an InvestEU guarantee through the forthcoming "European Initiative for Building Renovation".

European land and buildings store significant family wealth

As of 2023, EU27 residential buildings were worth around Euro 20 trillion[83], whilst EU27 residential mortgages represented around Euro 7 trillion[84]. Subtracting the EU's mortgage debt from the estimate of aggregate EU home value suggests that the total stored equity in the EU is around Euro 13 trillion: This is the amount of stored wealth against which up to 20% (or €2 trillion) needs to be borrowed by 2030 to renovate the most wasteful buildings to deliver energy savings.

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[80] Jacques Delors Centre. (2023). *Do more with more: How the EU can improve funding for the European Green Deal*. Retrieved from https://www.delorscentre.eu/fileadmin/2_Research/1_About_our_research/2_Research_centres/6_Jacques_Delors_Centre/Publications/20230525_Mack_Findeisen_EuropeanGreenDeal.pdf

[81] EIB. (2023). *EIB energy lending policy. Supporting the Energy Transformation: Version with updated technical annexes - May 2023*. [Website]. Retrieved from https://www.eib.org/en/publications/20230164-eib-energy-lending-policy

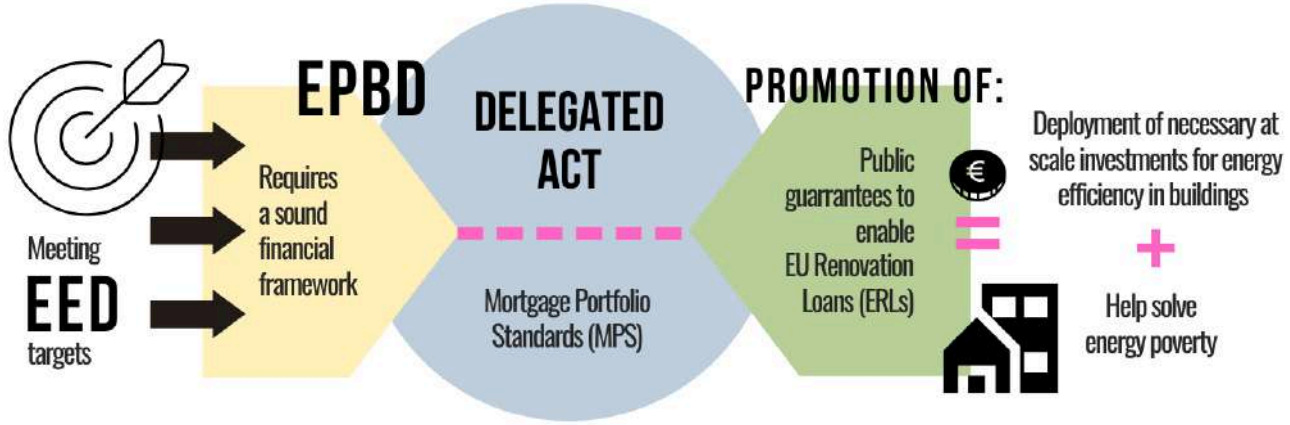
[82] EIF. (2023). *SUSTAINABILITY GUARANTEE: Use Case Document Version 1.2.* Retrieved from https://www.eif.org/InvestEU/guarantee_products/sustainability-use-case.pdf

[83] The European Real Estate Forum values the European (Includes the UK) residential real estate at €29.9 trillion. Subtracting Savills' £9 trillion value of UK homes from this overall European figure gives an estimate of the value of EU27 homes of around Euro 20 trillion. Sources:
European Real Estate Forum. (2023). *REAL ESTATE KEY FACTS*. [Website]. Retrieved from https://www.europeanrealestateforum.eu/key-facts/
Savills. (2023). *UK housing value hit a record high of £8.68 trillion in 2022 with gains favouring owner-occupiers rather than landlords.* [Website]. Retrieved from https://www.savills.com/insight-and-opinion/savills-news/340229/uk-housing-value-hit-a-record-high-of-%C2%A38.68-trillion-in-2022-with-gains-favouring-owner-occupiers-rather-than-landlords

[84] ECBC. (2023). *EMF HYPOSTAT 2023: UNITED IN DIVERSITY – MULTIDIMENSIONAL PATTERNS IN EUROPEAN HOUSING AND MORTGAGE MARKETS IN 2022.* [Website]. Retrieved from https://hypo.org/ecbc/press-release/emf-hypostat-2023-united-in-diversity-multidimensional-patterns-in-european-housing-and-mortgage-markets-in-2022/#:~:text=In%202022%2C%20the%20total%20volume,a%20new%20all%2Dtime%20high.

Recommendation

As illustrated in the diagram below, meeting the ambition of the EED will require a sound framework reflecting the progression of the EPBD, its DA on Mortgage Portfolio Standards (MPS), that can serve as the union-wide frame through which lenders can deploy investments for energy efficiency at scale. This structured march through mortgage portfolios will identify opportunities for banks to augment their existing offerings with EU supported Renovation Loans (ERLs). The exercise will enable the necessary investments for energy efficiency in buildings at scale, help solve Europe's energy poverty crisis, and decarbonise the EU's buildingstock.

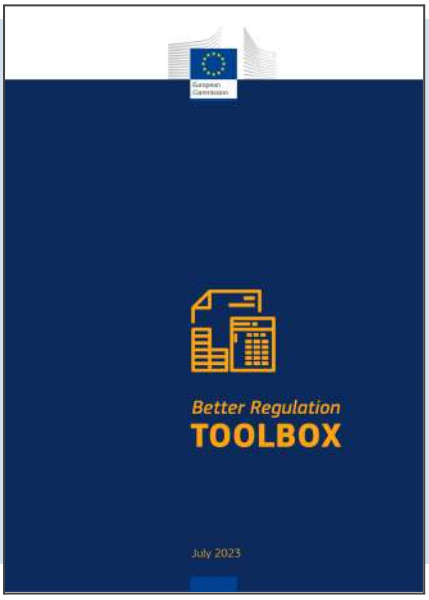


In the European Commission (EC)'s call for evidence for the initiative "Unlocking private investment in energy efficiency – guidance to Member States and market actors[85]" which closed in February 2024, there was strong support for (*See annex F): both MPS and the ERL in the responses from WWF[86], Renovate Europe/Euroace[87], and Climate Strategy[88], MPS from BPIE[89], and ERL from Eurima[90]. Launched simultaneously, the EC's call for evidence for initiative "Energy efficiency – assessing the level of EU & national funding[91]" harnessed support for both MPS and the ERL in the responses from Renovate Europe/Euroace[92], and Climate Strategy[93] (*See annex F).

[85] European Commission. (2024). *Unlocking private investment in energy efficiency – guidance to Member States and market actors*. [Website]. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13938-Unlocking-private-investment-in-energy-efficiency-guidance-to-Member-States-and-market-actors_en
[86] European Commission. (2024). *Unlocking private investment in energy efficiency – guidance to Member States and market actors: Feedback from: WWF EPO*. [Website]. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13938-Unlocking-private-investment-in-energy-efficiency-guidance-to-Member-States-and-market-actors/F3456384_en
[87] European Commission. (2024). *Unlocking private investment in energy efficiency – guidance to Member States and market actors: Feedback from: EuroACE - Energy Efficient Buildings*. [Website]. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13938-Unlocking-private-investment-in-energy-efficiency-guidance-to-Member-States-and-market-actors/F3456339_en
[88] European Commission. (2024). *Unlocking private investment in energy efficiency – guidance to Member States and market actors: Feedback from: Climate Strategy & Partners. [Website]. Retrieved from* https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13938-Unlocking-private-investment-in-energy-efficiency-guidance-to-Member-States-and-market-actors/F3456087_en
[89] European Commission. (2024). *Unlocking private investment in energy efficiency – guidance to Member States and market actors: Feedback from: BPIE - Buildings Performance Institute Europe*. [Website]. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13938-Unlocking-private-investment-in-energy-efficiency-guidance-to-Member-States-and-market-actors/F3455976_en
[90] European Commission. (2024). *Unlocking private investment in energy efficiency – guidance to Member States and market actors: Feedback from: European Insulation Manufacturers Association (EURIMA)*. [Website]. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13938-Unlocking-private-investment-in-energy-efficiency-guidance-to-Member-States-and-market-actors/F3456387_en
[91] European Commission. (2024). *Energy efficiency – assessing the level of EU & national funding*. [Website]. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13824-Energy-efficiency-assessing-the-level-of-EU-national-funding_en
[92] European Commission. (2024). *Energy efficiency – assessing the level of EU & national funding: Feedback from: EuroACE - Energy Efficient Buildings*. [Website]. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13824-Energy-efficiency-assessing-the-level-of-EU-national-funding/F3456341_en
[93] European Commission. (2024). *Energy efficiency – assessing the level of EU & national funding: Feedback from: EuroACE - Energy Efficient Buildings. [Website]. Retrieved from* https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13824-Energy-efficiency-assessing-the-level-of-EU-national-funding/F3456330_en

Impact assessment for a delegated act

Every year the EC adopts hundreds of delegated acts, and has the discretion to determine if carrying out an impact assessment (IA) is required[94] in the context of covering an "*outstanding decision at stake, related options and their impacts*". In essence, the IA is meant to offer an initial characterisation of the issue being addressed[95], set of steps to be taken, and dialogue with stakeholders. Upon submission, the Regulatory Scrutiny Board (RSB) will review the IA for its improvement or its approval. Governing all EU actions, the Better Regulation TOOLBOX clarifies the principles of 'proportionality' and 'subsidiarity':



Subsidiarity:

- *The Union should only act if, and in so far as, the objective of the action cannot be achieved sufficiently by the Member States (at national, regional and local levels).*

In areas in which the European Union does not have exclusive competence, the principle of subsidiarity defines the circumstances in which it is preferable for an action to be taken by the Union.

Proportionality:

- *The action of the EU must be limited in its content and form to what is necessary to achieve the objectives of the Treaties that it intends to implement.*

Respecting the principle of proportionality is about ensuring that the policy approach and its intensity match the identified problem and objectives.

In 2021, under the leadership of DG ENER (unit B3) the European Commission conducted an impact assessment on the EPBD 2010/31/EU[96], looking at these options:

Option 1 – No policy change (baseline scenario)

Option 2 - Non-regulatory measures Reinforced non-regulatory policy instruments and additional guidance and support measures, such as technical assistance, information campaigns, training, project financing etc. can lead to increased energy renovation rates.

Option 3 – Amend the EPBD to translate the actions proposed in the Renovation Wave and the increased ambition towards building decarbonisation into legislation

Upon review, the RSB expressed a negative opinion[97] on the IA's lack of solid evidence on policy measures, particularly on 'proportionality' and 'degree of EU harmonisation', placing it under option 2 for the renovation of the existing building stock, and under option 3 for its approach for the modernisation of new buildings. Due to the interconnection with the EPBD, we also discuss the IA conducted for the EED[98] by DG ENER (unit C3) in 2021, also under the three potions model. With no mention of the RSB, it revealed that 'proportionality' was fully respected, and advocated for a mechanism to increase EU targets for energy savings and increasing their 'binding effect' to be supplemented by building renovations among other measures. The table in the next page compares the mentions of 'proportionality' and 'subsidiarity' in the final EPBD and the EED and compares them with their respective IAs.

[94] European Commission. (2023). *Better Regulation TOOLBOX*. Retrieved from https://commission.europa.eu/document/download/9c8d2189-8abd-4f29-84e9-abc843cc68e0_en?filename=BR%20toolbox%20-%20Jul%202023%20-%20FINAL.pdfhttps://commission.europa.eu/document/download/9c8d2189-8abd-4f29-84e9-abc843cc68e0_en?filename=BR%20toolbox%20-%20Jul%202023%20-%20FINAL.pdf
[95] European Commission. (2017). *COMMISSION STAFF WORKING DOCUMENT: Better Regulation Guidelines*. Retrieved from https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/swd/2017/0350/COM_SWD(2017)0350_EN.pdf
[96] European Commission. (2021). *Energy efficiency – Revision of the Energy Performance of Buildings Directive*. [Website]. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12910-Energy-efficiency-Revision-of-the-Energy-Performance-of-Buildings-Directive_en
[97] European Commission. (2021). *Summary of the impact assessment report - SWD(2021)454*. Retrieved from https://ec.europa.eu/info/law/better-regulation/
[98] European Commission. (2021). *Summary of the impact assessment report - SWD(2021)624*. Retrieved from https://ec.europa.eu/info/law/better-regulation/

	EPBD	EED
'Proportionality' Final text	In accordance with the principle of **proportionality** as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.	In accordance with the principle of **proportionality** as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.
'Proportionality' IA	On **proportionality:** The measures proposed do not go beyond what is necessary for the buildings sector to make its adequate contribution to the EU's climate ambition for 2030 and 2050. The concerns expressed by the Regulatory Scrutiny Board have been addressed by modifying the legislative proposal.	The **proportionality** principle is fully respected. The measures proposed are the minimum needed to achieve the goals that are crucial to achieving the EU's climate ambition for 2030.
'Subsidiarity' Final Text	By 31 March 2025, the Commission shall, in support of the implementation of this Directive and taking due account of the principle of **subsidiarity**, present an analysis with particular regard to: A. the effectiveness of, the appropriateness of the level of, the actual amount used from, and the types of instrument used with regard to structural funds and Union framework programmes, including funding from the European Investment Bank, for improving the energy performance of buildings, especially in housing; B. the effectiveness of, the appropriateness of the level of, and the types of instrument and types of measure used with regard to funds from public finance institutions; C. the coordination of Union and national funding and other types of measure that can act as leverage for stimulating investments in the energy performance of buildings, and the adequacy of such funding for achieving Union objectives. On the basis of that analysis, the Commission shall submit a report to the European Parliament and to the Council on the **effectiveness and appropriateness of financing instruments towards the improvement of the energy performance of buildings, in particular the worst-performing ones**. Since the objectives of this Directive, namely improving the energy performance of buildings and reducing the greenhouse gas emissions from buildings, **cannot be sufficiently achieved by the Member States**, due to the complexity of the buildings sector and the inability of the national housing markets to adequately address the challenges of energy efficiency, **but can rather, by reason of the scale and the effects of the action, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union.**	It is important to consider, where relevant, all steps in the energy chain in the calculation of energy savings in order to increase the energy savings potential in the transmission and distribution of electricity. Studies and the consultation of stakeholders have revealed a significant potential. However, the physical and economic conditions are quite different among Member States, and often within several Member States, and there is a large number of system operators. Those circumstances point to a decentralised approach, pursuant to the **subsidiarity** principle. National Regulatory Authorities have the required knowledge, legal competences and the administrative capacity to promote the development of an energy efficient electricity grid. Entities such as the European Network of Transmission System Operators for Electricity (ENTSO-E) and the European Entity for Distribution System Operators can also provide useful contributions to, and should support their members in, the uptake of energy efficiency measures. Since the objectives of this Directive, namely to achieve the Union's energy efficiency target and to pave the way towards further energy efficiency improvements and towards climate neutrality, cannot be sufficiently achieved by the Member States **but can rather, by reason of the scale and effects of the action, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union.**
'Subsidiarity' AI	What is the value added of action at the EU level (**subsidiarity**)? Strengthening the **common framework** will ensure that the buildings sector across the EU reduces its GHG emissions at the necessary scale. If one or several Member States were not to act, this would imply overall higher GHG abatement costs for the EU as a whole. **Action at EU level** also offers a leverage in mobilising the sector around a common ambition and leads to higher **expected market outcomes**. It will drive investment into renovation, create jobs, stimulate innovation and increase the benefits of the internal market for construction products and appliances.	What is the value added of action at the EU level (**subsidiarity**)? The Treaty on the Functioning of the EU identifies an aim of EU energy policy as promoting energy efficiency and energy saving. The underlying problems causing a shortfall in energy savings are the same across the EU. **Action at the EU level** can enable and enhance efforts by Member States and ensure a more **coordinated and harmonised approach avoiding distortion of the single market.** It will help to create greater markets for materials and products that help improve energy efficiency. Experience indicates that having a **common EU framework** reduces costs, increases benefits from the internal market and allows national policy-makers to learn from each other. The EU measures effectively complement and catalyse national measures.

Subsidiarity and the pivotal role of technology and cooperation among EU parties

Again, we find similarities between both directives, where under the principle of 'proportionality' and 'subsidiarity' and based on the IAs the EU is envisioning itself as the guiding actor in their implementation. Identified under 'subsidiarity' in the EED final text, the European Network of Transmission System Operators for Electricity (ENTSO-E) and the European Entity for Distribution System Operators (EU DSO) are named as integral parts of advancing towards an energy efficient electricity grid. In late 2022, as part of the Digitalising the energy system – EU action plan[99], ENTSO-E and EU DSO signed a declaration of intent to create a digital twin[100] of the European electricity grid. The project entails the implementation of digital twin solutions and performance indicators of the grid to help meet Europe's energy goals[101].

For Mortgage Portfolio Standards, the above is very relevant because a digital twin energy system[102] can deliver a real-time simulation of the state of the grid and its performance. The smart readiness indicator (SRI) described in the earlier section "EPBD data provisions that relate to Mortgage Portfolio Standards" ought to be reflected in energy performance standards (EPCs) who would then become essential components of the Digital Twin virtual body. As stated in the EPBD recast, the SRI can be used to measure buildings capacity to adapt to the needs of occupants and the grid, thereupon improving their overall energy efficiency. In addition, through the 'digitalisation of the buildings' EU systems operators would improve their management of the grid and intelligent buildings can be seen as grid assets, as opposed to just energy sinks.

EC groups to engage as part of the DA process

In late 2022, as part of the Digitalising the energy system - EU action plan, the EC announced the creation of the Smart Energy Expert Group, (SEEG) to build on the work of the informal Smart Grids Task Force[103] (SGTF) expert group chaired by DG ENER. Co-chaired by DG ENER and DG CNECT, SEEG replaces the SGTF to continue research on electricity and gas grids and will incorporate research on the energy system's sustainable digital transformation. Within SEEG the EC is expected to set up the 'Data for Energy' (D4E) working group entrusted with the development of a 'common European data space for energy[104]' through a portfolio of high-level EU use cases for the exchange of energy data including smart and energy-efficient buildings. The D4E will work closely with the Expert Group on the European financial data space[105] -chaired by DG FISMA- which has already worked on cases on mortgage use, investment data and financial advisory, and energy, sustainability and climate data in the context of open finance[106]. At the time of print of this document, SEEG members have not been announced[107], yet the EC mandate calls for members to stem from: MS authorities tasked with energy or digital matters, ENTSO-E, EU DSO, the European Network of Transmission System Operators for Gas (ENTSOG), the Agency for the Cooperation of Energy Regulators (ACER), the Body of European Regulators for Electronic Communications (BEREC), and organisations who are actively working in the digitalisation of the energy space such as financial institutions.

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[99] European Commission. (2022). *Commission sets out actions to digitalise the energy sector to improve efficiency and renewables integration*. [Website]. Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6228

[100] European Commission. (2022). *Commission welcomes cooperation between ENTSO-E and EU DSO Entity on the digital electricity grid twin*. [Website]. Retrieved from https://energy.ec.europa.eu/news/commission-welcomes-cooperation-between-entso-e-and-eu-dso-entity-digital-electricity-grid-twin-2022-12-20_en

[101] DSO Entity. (2023). *TF DESAP AskMeAnything 10 November*. [PPT presentation]. Retrieved from https://eudsoentity.eu/publications/download/52

[102] Sifat, M., Choudhury, S. Das, S., Ahamed,H., Muyeen, S., Hasan, M., Ali, F., & et al. (2023). Towards electric digital twin grid: Technology and framework review, Energy and AI, Volume 11, 100213, ISSN 2666-5468, https://doi.org/10.1016/j.egyai.2022.100213

[103] European Commission. (2024). *Smart Grids Task Force (E02892)*. [Website]. Retrieved from https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&do=groupDetail.groupDetail&groupID=2892

[104] European Commission. (2022). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Digitalising the energy system - EU action plan*. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0552&qid=1666369684560

[105] European Commission. (2024). *Expert group on European financial data space (E03763)*. [Website]. Retrieved from https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3763

[106] Expert Group on European financial data space. (2022). *REPORT ON OPEN FINANCE*. Retrieved from https://finance.ec.europa.eu/document/download/226bcd0a-fff7-4fbd-9664-a84f50122101_en?filename=2022-10-24-report-on-open-finance_en.pdf

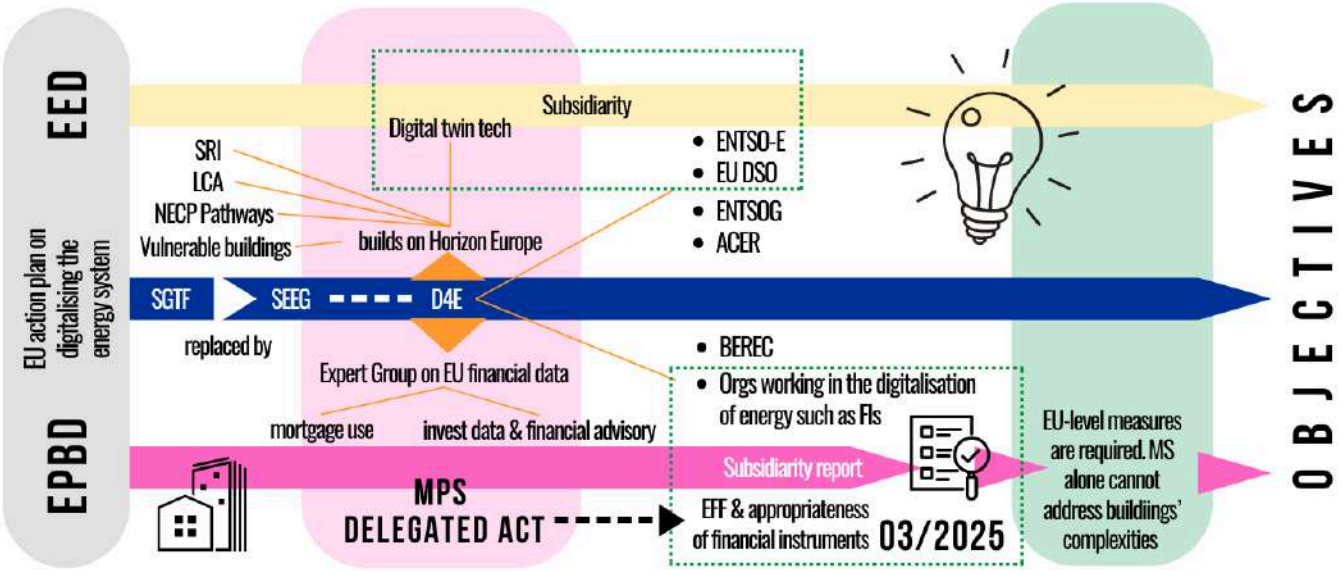
[107] European Commission. (2024). *Smart Energy Expert Group (E03926)*. [Website]. Retrieved from https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3926&fromCallsApplication=true

Building on Horizon Europe's progress

The Digital Europe Programme emphasises that the European Commission will guide the work of D4E taking into account the results of Horizon Europe projects whose 2023-2025 Work Programme[108] supports the digitalisation of the energy system via the uptake of digital technologies. In terms of the delegated act on Mortgage Portfolio Standards and the context of this section, *see annex H for Horizon Europe projects connected to energy efficiency in buildings.*

Recommendation

As outlined in the table on page 25 of this report, March of next year is critical for the European Commission, as it is expected (by EPBD) to submit a report to the European Parliament and to the Council -taking into account the principle of subsidiarity- on the effectiveness and appropriateness of financing instruments to improve buildings' energy performance. The Delegated Act on the voluntary uptake of Mortgage Portfolio Standards is an opportunity to respond to the IAs of the EPBD and the EED as MPS can act as a common framework for EU buildings to reduce their emissions, and to mobilise the sector to achieve 'higher expected market outcomes' for innovation, products, appliances, and job creation.



DG ENER and DG CNECT need to engage in their capacity of chairs of D4E with DG FISMA (chair of the Expert Group on Energy Financial Data) to single out the best available financial data, and the current and forthcoming Horizon Europe projects that can speed up the energy diagnose of buildings, namely digital twin technologies to then create a MPS-common framework that incorporates SRI, LCA, NECP pathways, and the identification of vulnerable buildings (*see annex H).

The anticipated March 2025 report by the European Commission has the potential to recommend a strong MPS common framework -built on Horizon Europe strong energy data-, capable of allocating with precision the proper financial resources to meet EU objectives. This report can also provide impetus to develop the EU Renovation Loan as a complement to MPS, allowing millions of Europeans to access energy efficiency finance to renovate their homes, making them 'smart-grid ready', ensuring the digitalisation of EU buildings. By developing the ERL, this 2025 report can also respond to the EED's Article 30 'National energy efficiency fund, financing and technical support' that calls for the EC to evaluate an energy efficiency mechanism backed by a Union guarantee.

[108] European Commission. (2024). *Horizon Europe Work Programme 2023-2025: Climate, Energy and Mobility*. Retrieved from https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-8-climate-energy-and-mobility_horizon-2023-2024_en.pdf

Conclusions and recommendations

2024 is a positive year for energy efficiency. The adoption of the recast EPBD and EED provides a new level of objectives, standards, templates, and definitions that brings clarity for governments, financial institutions, and technology providers on the next steps required to decarbonise European buildings.

Both Directives frame the current elements and terms that serve as a basis to adopt energy efficiency policies at the Member State and launch new instruments at the EU level. Additionally, they serve as the ideal platforms to tap into and coordinate the latest EU funded buildings' technology developments, to launch new coalitions (like the Energy Efficiency Finance Coalition), and unite the years of experience of the top EU financial institutions greening their mortgage portfolios, connect to international decarbonisation initiatives with EU sustainability taxonomies, and implement the advice of forward looking supervisory authorities.

The European Commission has a singular opportunity to make the delegated act on the voluntary uptake of Mortgage Portfolio Standards (MPS) 'future-oriented' by coordinating the elements above and by presenting it as an enabler of technical and financial avenues for FIs to decarbonise the properties they mortgage according to the EU Taxonomy and hence preventing their stranding.

The European Commission has an opportunity to make the delegated act on the voluntary uptake of Mortgage Portfolio Standards (MPS) 'future-oriented'.

2024 has also seen political turmoil with social discontent directed at high energy prices, energy poverty, and falling standards of living. Mortgage Portfolio Standards can serve as a union-wide mechanism to extend energy efficiency finance at scale and identify disadvantaged Europeans among retail bank networks. Complemented with the promotion of public guarantees to enable EU Renovation Loans (ERLs), MPS can help mitigate and manage the multiple negative social and energy effects of a dated building stock and create long sustainable jobs, and increase the habitability and value of properties, thus improving the lives of their occupants.

The trajectory of Mortgage Portfolio Standards, while voluntary, has been fruitful, sparking numerous expert discussions and study by parties seeking to modernise and broaden sustainable finance. The process of drafting a delegated act will crystallise these conversations and this briefing offers a set of available developments for the European Commission to take into consideration when formulating it, and to encourage its cooperation with the different actors that have harnessed key knowledge on buildings and energy efficiency finance over the years. This incredible knowledge is instrumental to help the EU to leapfrog in the decarbonisation of its residential buildings, offering Paris and EU Taxonomy-aligned tailored inclusive finance, and engage EU-made technologies and manpower that can evaluate buildings under different horizons, and shorten the expected timeframes to carry out renovation works (ahead of Directives' targets).

Equally as important, the 'forward looking' implementation of Mortgage Portfolio Standards can help reinforce the position of the EU, its Member States, and EU-based financial institutions as the global sustainability pacesetters, capturing the benefits from the introduction of legislation resembling EU led MPS in other jurisdictions.

EU buildings represent upwards of 40% of the energy consumed and for 36% of energy-related GHG emissions in the EU. While, three quarters are energy inefficient, and their decarbonisation is imperative. The delegated act on Mortgage Portfolio Standards can certainly assist the EU address this.

1.

EU funded technology can enable the quick and accurate diagnosis of the energy performance of buildings in all EU Member States. This would offer a clear plainfield to put into motion a strong Mortgage Portfolio Standards framework that is also supportive of other EPBD related items.

Under the EPBD recast, Member States are mandated to adjudicate residential buildings EPCs using a A-G energy scale, and to prioritise the "worst-performing" buildings ('G') for renovation. This is a complex task indeed, where a "virtual approach" approved by the EPBD which has already been carried out successfully by a number of providers can accelerate this process. As part of the Delegated Act process for Mortgage Portfolio Standards, through 'digital twin' technology and following the EPBD template data points, Member States could carry out the calculation of EPCs - using the metrics for ZEB buildings as the reference value- to determine their classes and prevent the formation of clusters. Thereupon, the defined EPC classes could be verified through EU funded projects (e.g. U-CERT). Having clarity on the EPCs of the mortgages in their portfolios, would allow banks to pinpoint the worst performing ones and offer renovation financial solutions, and in turn also comply with EU Taxonomy requirements.

The "virtual approach" to define EPC classes is also beneficial to national databases who under the EPBD recast have to display the energy performance of buildings and integrate this data in digital building logbooks (DBLs). Also, the recast calls for renovation passports (which can be accessed through DBLs) to access the information to renovate buildings into NZEB or ZEB.

As part of the Delegated Act process, MS could be encourage Member States to include the smart readiness indicator (SRI), found in the recast's template for EPCs as optional, which would allow EPCs to be dynamic, making buildings 'future proof' allowing them to adapt to occupants' needs, optimise energy efficiency, and adapt to grid signals.

2.

The Mortgage Portfolio Standards Delegated Act expert group must convene in-house EU experts already familiar with MPS and its related elements. This expert group can also include experts from the leading international decarbonisation initiatives.

An important number of EU banks already have in place a form of a Mortgage Portfolio Standard, and this suggests that they perceive MPS as a solution rather than a green finance obstacle. The Delegated Act process convening experts can build on the positive experiences where banks -in some instances unbeknownst- have taken important steps in greening their mortgage portfolios through MPS.

Over the years, the EU has amassed invaluable knowledge on energy efficiency finance and the renovation of buildings in the EU and in Member States via the Energy Efficiency Financial Institutions Group (EEFIG). As part of the delegated act, it will be indispensable to match and compare the different data points related to Mortgage Portfolio Standards based on their EPBD definition, against the ones used by banks, to subsequently organise them following EFFIG's findings and insights to be in line with the 2030 and 2050 objectives and the EU Taxonomy.

Full engagement with the decarbonisation and reporting initiatives (whose work mirrors the EU Taxonomy) working with banks, who could integrate the voluntary MPS framework is encouraged. This would result in banks easily identifying clients' homes to renovate, the offering of smart climate finance, preventing stranded assets, and meeting EU decarbonisation targets.

3.

The Delegated Act on Mortgage Portfolio Standards can arrange the set of elements and available technology needed for Member States to meet their EPBD 2030, 2040, and 2050 renovation objectives.

According to the EPBD recast, National Buildings Renovation Plans (NBRPs) need to include 2030, 2040 and 2050 national renovation targets. NBRPs second draft needs to be part of national energy and climate plans (NECPs) by Member States by 2028.

With specific default values for each MS, the EU funded CREEM risk assessment tool helps financial institutions evaluate reduction targets against Paris-aligned pathways. Therefore, the delegated act process can encourage Member States to include the promotion of the voluntary uptake of Mortgage Portfolio Standards to serve as a technical support instrument to mobilise 'CRREM-backed' private finance to meet NBRPs targets within the forthcoming submission of NECPs.

NBRPs that rely on 'digital twin' technology to calculate EPCs would ensure a more accurate climate pathway alignment of NECPs. This would ensure meeting their ambitious goals of transforming their buildingstock into zero-emissions by 2050 and surely reducing energy poverty.

4.

Financial institutions are increasingly aware of embodied carbon in their mortgage financing operations. The inclusion life cycle GWP in the EPBD recast signals the need for lenders to include embodied carbon in their emissions calculations.

'Life-cycle global warming potential' or 'life-cycle GWP' was mentioned in the EPBD recast under the templates for NBRPs and EPCs, renovation passports, and digital building logbooks. The Delegated Act for Mortgage Portfolio Standards can promote the inclusion of life cycle GWP emissions in banks' mortgage portfolio transactions using EU-developed Level(s). In parallel, the Delegated Act can explore the use of financial indicators for life-cycle costing for energy efficiency retrofit elements.

This critical data can then be integrated into a new generation of EPCs that would allow for the environmentally holistic management of buildings and energy renovation works.

In addition, the Delegated Act for Mortgage Portfolio Standards can acknowledge the discussions around and the work carried out by banks and leading decarbonisation and disclosure initiatives on embodied carbon -particularly EN 15978-, and engage with them to build on their findings (e.g. pathways and the 'Ecological Breakeven Point'). Together, they overcome data barriers and find common ground to continue the research to serve as the foundation for sound proposals when the EPBD is revised in 2028.

5.

The Delegated Act on Mortgage Portfolio Standards can help synchronise the EPBD and the EED. These recast Directives are intertwined and must maximise their 'future oriented' potential.

Article 30 of the EED and Article 17 of the EPBD both call for the adoption of measures promoting energy efficiency lending products such as green mortgages and green loans. Both articles also advocate the uptake of loan guarantees potentially backed by an EU guarantee. The Delegated Act for Mortgage Portfolio Standards is a convenient opportunity for the European Commission to articulate the objectives of the EED and the EPBD together and engage with retail lenders on these matters.

The European Commission expert group should gather -as part of the delegated act process- key stakeholders (EIB, EFSI, InvestEU, and EIF) who are already working on the building blocks to set up a European Green Guarantee (EGG). The voluntary uptake of MPS can act as a common framework where banks accessing reliable energy data of the buildings in their mortgage portfolios can enable the offer of EU Renovation Loans (ERLs). ERLs will enable their most needy clients to carry out the Paris and EU Taxonomy aligned mass-renovation of the EU building stock, to deliver both the decarbonisation outcomes of the EED and the EPBD, and ideally reduce potential loan defaults, increasing resilience.

The delegated act process can tap into the true capacity of EU developed technologies to provide climate solutions whose findings are sometimes ahead of current policies and proposals. MPS, complemented by the ERL, and supported by the latest technology can quickly improve the lives of millions of Europeans, abate energy poverty, and prepare EU buildings to function and adjust to unpredictable near future climate events, as well as disruptive economic and technological changes.

Annexes

Annex A

1	On its front page, the energy performance certificate shall display at least the following elements:
a	the energy performance class;
b	the calculated annual primary energy use in kWh/(m^2.y);
c	the calculated annual final energy use in kWh/(m^2.y);
d	renewable energy produced on-site in % of energy use;
e	operational greenhouse gas emissions ($kgCO_2$/(m^2.y)), and the value of the life-cycle GWP, if available.

	The energy performance certificate shall also display the following elements:
a	the calculated annual primary and final energy consumption in kWh or MWh;
b	renewable energy production in kWh or MWh; main energy carrier and type of renewable energy source;
c	the calculated energy needs in kWh/(m^2.y);
d	a yes/no indication whether the building has a capacity to react to external signals and adjust the energy consumption;
e	a yes/no indication whether the heat distribution system inside the building is capable to work at low or more efficient temperature levels, where applicable;
f	the contact information of the relevant one-stop shop for renovation advice

2	In addition, the energy performance certificate may include the following indicators:
a	energy use, peak load, size of generator or system, main energy carrier and main type of element for each of the uses: heating, cooling, domestic hot water, ventilation and in-built lighting;
b	the greenhouse gas emission class (if applicable);
c	information on carbon removals associated to the temporary storage of carbon in or on buildings;
d	a yes/no indication whether a renovation passport is available for the building;
e	the average U-value for the opaque elements of the building envelope;
f	the average U-value for the transparent elements of the building envelope;
g	type of most common transparent element (e.g. double-glazed window);
h	results of the analysis on overheating risk (if available);
i	the presence of fixed sensors that monitor the indoor environmental quality;
j	the presence of fixed controls that respond to the levels of indoor environmental quality;
k	number and type of recharging points for electric vehicles;
l	presence, type and size of energy storage systems;
m	expected remaining lifespan of the heating or air-conditioning systems and appliances, where applicable;
n	feasibility of adapting the heating system to operate at more efficient temperature settings;
o	feasibility of adapting the domestic hot-water system to operate at more efficient temperature settings;
p	feasibility of adapting the air-conditioning system to operate at more efficient temperature settings;
q	metered energy consumption;
r	whether there is a connection to a district heating and cooling network, and, if available, information about a potential connection to an efficient district heating and cooling system;
s	local primary energy factors and related carbon emission factors of the connected local district heating and cooling network;
t	operational fine particulate matter ($PM_{2,5}$) emissions.

3	The energy performance certificate may include the following links with other initiatives if these apply in the relevant Member State:
a	a yes/no indication whether a smart readiness assessment has been carried out for the building;
b	where available, the value of the smart readiness assessment;
c	a yes/no indication whether a Digital Building Logbook is available for the building.

*Persons with disabilities shall have equal access to the information in energy performance certificates.

Annex B

April 23rd event 'Engaging Retail Lenders in Home Renovations'
* Text co-written with the Renovate Europe Campaign

On 23 April, Renovate Europe and Climate Strategy & Partners with the support of media partner Foresight convened financial and buildings stakeholders and policy makers in the Brussels event "Engaging Retail Lenders in Home Renovations[109]" to discuss the potential of private financing for accelerating building renovations following the launch of the new European Energy Efficiency Financing Coalition on April 22nd. Speakers and panellists backgrounds resembled an EC expert group as it featured European and Member State officials, members of EEFIG, leading banks on sustainability, and global decarbonisation initiatives:

- Peter Sweatman, CEO of Climate Strategy & Partners
- Adrian Joyce, Secretary General of EuroACE and Director of the Renovate Europe Campaign
- Petr Hladík Minister of the Environment of the Czech Republic
- Carlos Sanchez Rivero, Team Leader, Energy Efficiency Finance (ENER.B, DG ENER)
- Madeline Schneider, Director of Operations of the Partnership for Carbon Accounting Financials (PCAF)
- Céline Carré, Head of Public Affairs at Saint-Gobain
- Murray Birt, Senior ESG Strategist, DWS
- Sean Carroll, Cities & Buildings Editor, Foresight
- Ali Erbilgiç, Policy Expert at the European Banking Authority Department of Economic and Risk Analysis
- Dominic Keyzer Global Sustainability Lead, ING
- Imène Ben Rejeb-Mzah, Head of Climate Analytics and Alignment (C2A) Data Analytics, BNP Paribas
- Tobias Horn, Head of Portfolio Management & Strategy, Deutsche Bank
- Vanesa Rodríguez Osuna, Secretariat, Net-Zero Banking Alliance (NZBA)

The event's key findings included:

- The Coalition's launch demonstrates the growing importance of energy efficiency at both EU and national levels. Under the Coalition, upcoming national hubs will facilitate discussions on energy efficiency initiatives.
- It is clear that public funding alone will not be able to meet investment needs and while we need to prioritise the use of the available public resources towards the vulnerable, increasing private funding is fundamental.

[109] Climate Strategy & Renovate Europe. (2024). *Engaging Retail Lenders in Home Renovations*. Retrieved from https://www.climatestrategy.es/press/RetailLenders23042024.pdf

- Over the past decade, there has been a significant shift in the investment landscape towards climate-focused initiatives. Banks and asset managers are committing to net-zero emissions, with trillions of euros in assets under management aligning with these goals.

- More and more financial institutions are using tools of initiatives such as the Partnership for Carbon Accounting Financials to measure their emissions, manage risks, address data gaps associated with their financial activities, and set climate targets and strategies to decarbonise their mortgage and commercial real estate portfolios.

- There is also ever-growing recognition of the capacity of artificial intelligence and machine learning to identify poorly energy performing buildings needing renovation.

- The Net Zero Banking Alliance (NZBA) is a group of banks (representing >40% of global banking assets) committed to align their lending and investment portfolios with 2050 net zero pathways. It recognises that banks can be integral in the decarbonisation of the built environment via improving the transparency of their real estate targets.

- Mortgage portfolios hold a significant share on EU bank balance sheets according to the European Banking Authority. Therefore, for banks, it is essential to manage and act upon climate-related risks found in their mortgage portfolios, for example for mortgages linked to low energy performance properties

- Mortgage portfolio standards can incentivise mortgage lenders to increase the energy performance of their building portfolios and ensure a level playing field.

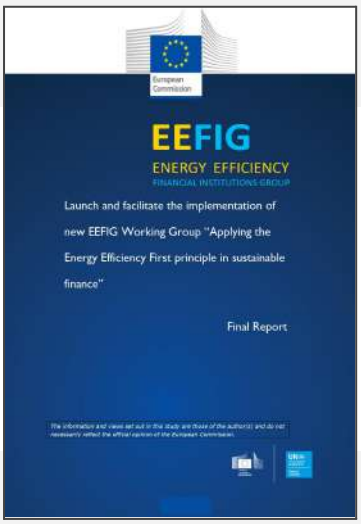
- Long-term guarantees backed by the EU could address homes with poor economics that want to renovate but lack savings or access to affordable financing products. This was echoed by Petr Hladík, Czech Republic's Minister of the Environment, through a video message. An EU Renovation Loan, for example, could be launched and supported by a European Green Guarantee to provide affordable financing for homeowners, ensuring their properties are safe, energy-efficient, and cost-effective in the long run.

- Meeting the ambitions of the Energy Efficiency and the Energy Performance of Buildings Directives could be achieved by promoting the voluntary uptake of mortgage portfolio standards by financial institutions and through their offering of EU Renovation Loans supported by an EU guarantee.

Annex C

Examples for EEFIG support for mortgage portfolio standards include:

- 2021's report "The evolution of financing practices for energy efficiency in buildings, SME's and in industry[110]", in sections "EEFIG's 2021 key recommendations for financial institutions" and "Conclusions and key enablers for market growth".

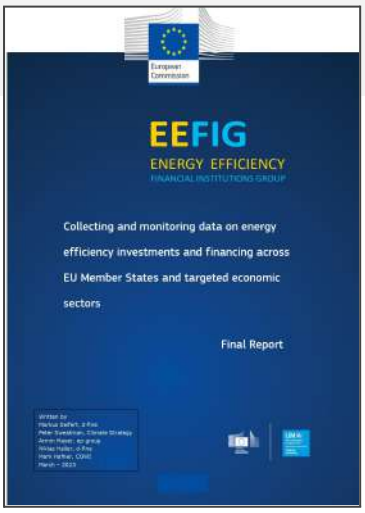


"Retail lenders should engage on energy performance for all registered mortgage lenders and implement mortgage portfolio standards that deliver improved portfolio collateral energy performance in line with national Paris-aligned decarbonisation pathways."

- December 4th 2021. Hosted by the EU Pavilion at COP26, EEFIG discussion "Upscale energy efficiency financing – identifying and overcoming the investment gap[111]". * Watch the full recording here.

- 2023's "Launch and facilitate the implementation of new EEFIG Working Group "Applying the Energy Efficiency First principle in sustainable finance"[112]" as examples of portfolio-level tools to measure energy performance.

"Mortgage Portfolio Standards (MPS) also received public endorsement from IIGCC (Institutional Investor Group on Climate Change with 300+ members representing EUR 37 trillion assets under management). ING already uses MPS (a leading EU retail bank with 57,000 employees serving 38 million customers in over 40 countries) as do ABN Amro and other mortgage lenders with Science Based Climate targets. MPS was included as a case study on page 38 of the IEA's annual update on global developments in energy efficiency "Energy Efficiency 2021" and as #5 recommendation to financial institutions on page 18 of their 5-year update of the landmark EEFIG report launched in Glasgow. "

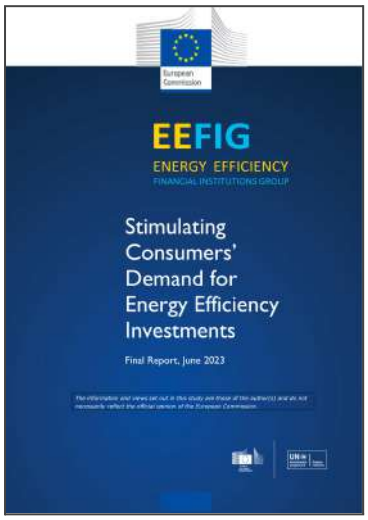


- **Data gaps** in the energy performance of the properties mortgaged -which has been voiced by multiple financial institutions and is described in the latest Climate Strategy report "Engaging Retail Lenders in Home Renovation: Turning Sustainable Finance Commitments into Household Energy Savings and Climate Resilience[113]"- the **2023 EEFIG report "Collecting and monitoring data on energy efficiency investments and financing across EU Member States and targeted economic sectors**[114]" details a host of AI-powered proxy-based, and innovative solutions to resolve these data gaps. This report also discusses **energy performance certificates.**

[110] EEFIG. (2021). *Report on the evolution of financing practices for energy efficiency in buildings, SME's and in industry* [Website]. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/a3032517-c761-11ec-b6f4-01aa75ed71a1/language-en/format-PDF/source-256242892
[111] EEFIG. (2021). *EEFIG Events: EUSEW and COP26*. [Website]. Retrieved from https://ec.europa.eu/newsroom/ener/items/731317/en
[112] EEFIG. (2023). *Launch and facilitate the implementation of new EEFIG Working Group "Applying the Energy Efficiency First principle in sustainable finance".* [Website]. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/20330c99-7df5-11ee-99ba-01aa75ed71a1/language-en/format-PDF/source-301535272
[113] Climate Strategy & Partners. (2023). *Engaging Retail Lenders in Home Renovation: Turning Sustainable Finance Commitments into Household Energy Savings and Climate Resilience*. [Website]. Retrieved from https://www.climatestrategy.com/en/informe_27.ph
[114] EEFIG. (2023). *Collecting and monitoring data on energy efficiency investments and financing across EU Member States and targeted economic sectors*. [Website]. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/f8d98e5e-fdd2-11ed-a05c-01aa75ed71a1/language-en/format-PDF/source-325423029

Minimum Energy Performance Standards (MEPS) were discussed in the 2021 report "**The evolution of financing practices for energy efficiency in buildings, SME's and in industry**[115]", touching upon MEPS and ways to align buildings and financial stakeholders, MEPS coupled with tax incentives or grants, and countries that have established mandatory MEPS. This report also discusses green mortgages and mortgage portfolio standards (*see previous page), and the need to standardise processes:

"Standardisation of processes can reduce the transaction cost of energy efficiency finance and is also necessary in order to grow securitisation of green mortgages and other energy efficiency assets. Standardisation can cover labelling schemes, project rating methodologies and risk assessment tools, standardised legal and financial structures of assets (loans, guarantees, energy performance contracts etc.). "



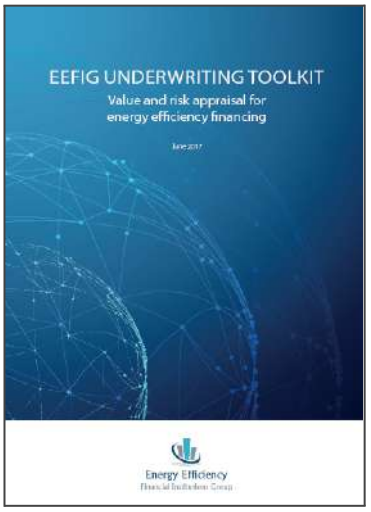
2023 report "**Stimulating consumers' demand for energy efficiency investments**[116]", identifies Intermediaries[117] as playing a key role in building knowledge with and assisting final consumer's needs to decide to take action to then help them undertake the action. Also, this report argues Member States should facilitate the proper framework conditions for consumers demand and uptake of solutions focused on energy efficiency:

"Facilitate blending of commercial financing for energy efficiency with public grants, guarantees and loans when this is necessary to incentivise consumer uptake of energy efficiency financing products or ensure that energy efficiency lending products for building renovations are offered widely and in a non-discriminatory manner."

Other EEFIG related work worth noting in the context of this document are the De-risking Energy Efficiency Platform (DEEP) database, the working group on the EU Taxonomy, and the National EEFIG processes which relate to the delegated and the coalition on energy efficiency.

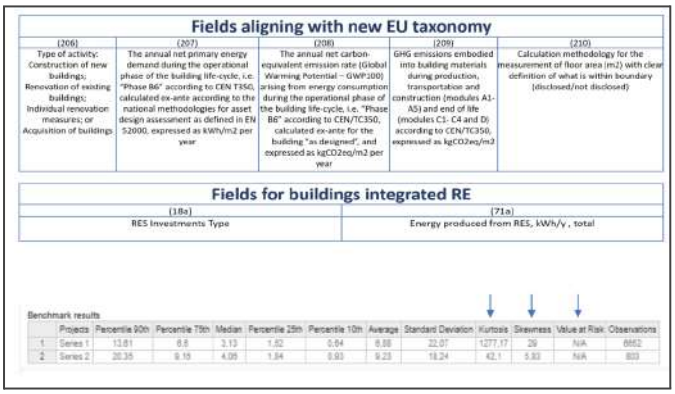
DEEP
DE-RISKING ENERGY EFFICIENCY PLATFORM

The DEEP database builds on the landmark 2015 EEFIG report "Energy Efficiency – the first fuel for the EU Economy: How to drive new finance for energy efficiency investments[118]", where EEFIG members and stakeholders alike expressed the need for a platform providing comparative information to benchmark investments in energy efficiency. Financiers, project developers, and investors can access DEEP for information to manage operational risk, and to make better informed investment decisions. As of 2021, DEEP contained core data indicators from more than 17,000 projects submitted largely from non-financial institution[119] partners such as industry and sector practitioners. This data was leveraged to develop the the EEFIG Underwriting Toolkit[120], which created a common "language" for financial experts to assess the value and risk of their investments.



[115] EEFIG. (2021). *Report on the evolution of financing practices for energy efficiency in buildings, SME's and in industry*. [Website]. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/a3032517-c761-11ec-b6f4-01aa75ed71a1/language-en/format-PDF/source-256242892
[116] EFFIG. (2023). *Working Group - Stimulate consumers' demand for energy efficiency investments*. [Website]. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/8180740b-7df6-11ee-99ba-01aa75ed71a1/language-en/format-PDF/source-325427170
[117] One-Stop-Shops, mortgage lenders, national, regional and local energy agencies.
[118] EEFIG. (2015). *Energy Efficiency – the first fuel for the EU Economy: How to drive new finance for energy efficiency investments*. [Website]. Retrieved from https://www.climatestrategy.com/en/informe_8.php
[119] Frequently, financial institutions do not take part in the technical or operational elements / issues related to energy efficiency investments.
[120] EEFIG. (2017). *EEFIG Underwriting Toolkit – Value and Risk Appraisal For Energy Efficiency Financing*. [Website]. Retrieved from https://www.unepfi.org/themes/climate-change/eefig-underwriting-toolkit-value-and-risk-appraisal-for-energy-efficiency-financing/

DEEP's 2.0 version offers data fields aligned with the EU taxonomy and for building integrated renewable energies.



Fields aligning with new EU taxonomy

(206)	(207)	(208)	(209)	(210)
Type of activity: Construction of new buildings; Renovation of existing buildings; Individual renovation measures; or Acquisition of buildings	The annual net primary energy demand during the operational phase of the building life-cycle, i.e. "Phase B6" according to CEN TS50, calculated ex-ante according to the national methodologies for asset design assessment as defined in EN 52000, expressed as kWh/m2 per year	The annual net carbon-equivalent emission rate (Global Warming Potential – GWP100) arising from energy consumption during the operational phase of the building life-cycle, i.e. "Phase B6" according to CEN/TC350, calculated ex-ante for the building "as designed", and expressed as kgCO2eq/m2 per year	GHG emissions embodied into building materials during production, transportation and construction (modules A1-A5) and end of life (modules C1- C4 and D) according to CEN/TC350, expressed as kgCO2eq/m2	Calculation methodology for the measurement of floor area (m2) with clear definition of what is within boundary (disclosed/not disclosed)

Fields for buildings integrated RE

(18a)	(71a)
RES Investments Type	Energy produced from RES, kWh/y , total

Benchmark results

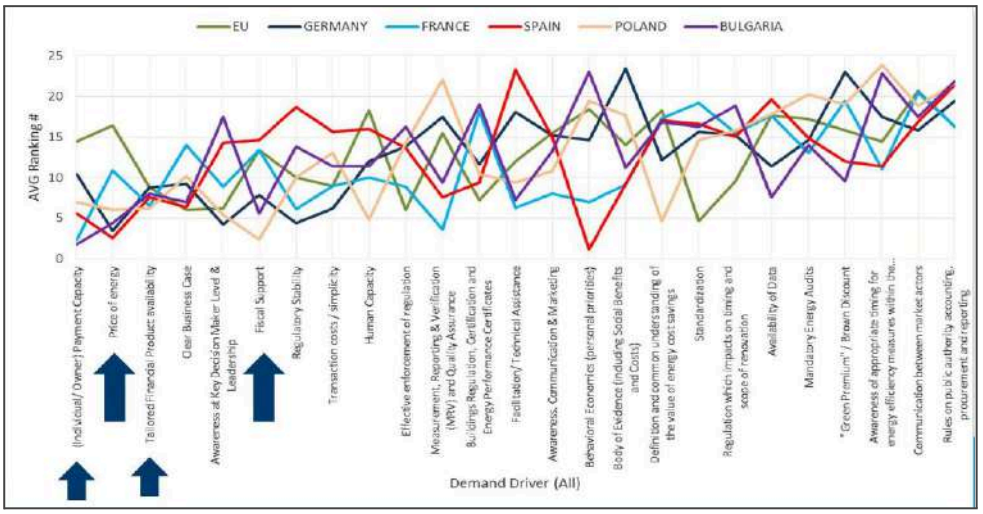
	Projects	Percentile 90th	Percentile 75th	Median	Percentile 25th	Percentile 10th	Average	Standard Deviation	Kurtosis	Skewness	Value at Risk	Observations
1	Series 1	13.81	6.8	3.13	1.82	0.64	6.88	22.07	1277.17	29	N/A	6662
2	Series 2	20.35	9.19	4.05	1.84	0.93	9.23	18.24	42.1	5.83	N/A	803

2020's report "Input on energy efficiency to the emerging EU sustainable finance taxonomy and tagging energy efficiency loans[121]", included a review of the different approaches to tagging energy efficiency loans and to indicate energy efficiency within sustainable/green taxonomies, as well as recommendations on the approaches to tag energy efficiency loans. Key trends around green tagging[122] mentioned in the report:

> *"There is a strong case for connecting green tagging with the links between sustainability factors and prudential regulation, as the inherent risks of non-green assets is not yet a leading driver for banks to implement green tagging."*

> *"Financial institutions want to continue to investigate the correlations between financial performance in mortgage portfolios and energy performance."*

Between July 2015 and June 2016, national EEFIG processes[123] were conducted in Germany, France, Spain, Poland and Bulgaria, providing a platform -through a structured process- to gather, present, assess and exchange relevant data with local engaged stakeholders for the alignment of the efforts to further investments in energy efficiency using EFFIG developed tools.



EEFIG processes revealed broad alignment, but important differences at the local level

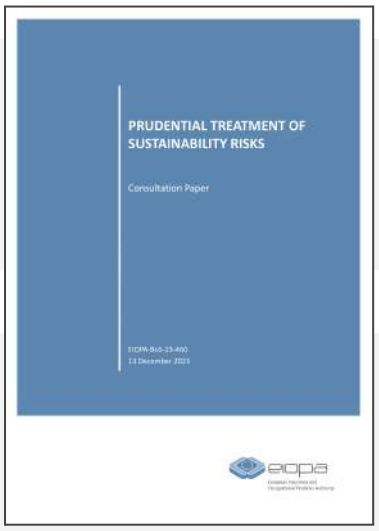
[121] EFFIG. (2023). *Launch and facilitate the implementation of a new EEFIG working group on "Input on energy efficiency to the emerging EU sustainable finance taxonomy and tagging energy efficiency loans".* [Website]. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/642d38d7-ead9-11eb-93a8-01aa75ed71a1/language-en/format-PDF/source-325443384

[122] Climate Strategy & Partners & UNEP FI. (2017). *Green Tagging: Mobilising Bank Finance for Energy Efficiency in Real Estate*. Report from the Bank Working Group 2017 https://www.climatestrategy.com/en/informe_3.php

[123] EEFIG. (2020). *CA-RES/CA EED/CA EPBD Joint Workshop, 30th - 31st January 2020, Barcelona.* [Presentation]. Retrieved from https://www.ca-res.eu/fileadmin/cares/PublicArea/Joint_workshop_presentations/Session_10_EEFIG_Overview_presentation.pdf

Annex D

EIOPA's 2024 priorities[124] include: a. the practical implementation of the common supervisory culture and the development of supervisory convergence tools; b. the risks to the internal market and the level playing field; and c. the supervision of emerging risks. In addition, EIOPA is tasked with identifying at least every three years Union-Wide Strategic Supervisory Priorities[125] (USSP) -relevant for national competent authorities (NCAs)-, reflecting future developments and trends. In relation to mortgage portfolio standards, EIOPA's "Consultation on the Prudential Treatment of Sustainability Risks[126] comments the EU taxonomy's future relevance to classify risk, the EPBD, as well as the disclosure and reporting requirements of Solvency II and its engagement with EFFIG among other institutions.



"Definition of Asset Portfolios in terms of Transition Risks: II) The Narrow Portfolio Allocation Approach":

*"The EU taxonomy on sustainable activities is not considered a feasible approach for the purpose of the analysis as it is not a risk-based taxonomy. In that regard, sustainable activities defined by the EU Taxonomy can also be subject to transition risk, e.g., related to technological changes (e.g., electric vs. hydrogen propulsion). Also, the EU taxonomy does not provide information on environmentally harmful activities, typically associated with higher levels of transition risk. However, EIOPA acknowledges that once the **EU taxonomy is developed** in a sufficiently granular and risk-based manner in the future, this would be an appropriate source to use for the classification of transition risk portfolios".*

"2.6. PROPERTY RISK: CONCLUSION AND POLICY IMPLICATIONS":

*"As the analysis is subject to various data limitations that could not have been overcome by means of the public consultation of EIOPA's discussion paper in 2022, EIOPA suggests a repetition of the analysis, particularly in context of the developments of the **Energy Performance of Buildings Directive (EPBD)**, which aims for a consistent assessment of the energy efficiency of buildings in the EU and for improving corresponding data availability. It can therefore be expected that more data suitable for a property risk analysis as regards energy efficiency will be available in future".*

"2.5.3.QUANTITATIVE ANALYSIS: Methodology: Data"

*"The disclosure and reporting requirements of Solvency II do not foresee undertakings to report the energy performance of their invested properties. Therefore, the analysis needs to be conducted by means of external data sources. However, the availability of sufficiently granular data covering a building's market value and its energy efficiency is very limited across the EEA. EIOPA conducted multiple exchanges with relevant stakeholders such as the European Mortgage Federation (EMF), the **Energy Efficiency Financial Institutions Group (EEFIG)**, the European Real Estate Association (EPRA) and the German Sustainable Building Council (DGNB). These exchanges have been very valuable regarding the discussion of valuation aspects in the real estate market and how a building's energy efficiency might influence a building's market value. However, it was not possible for EIOPA to retrieve data relevant for the analysis. Moreover, the public consultation of EIOPA's discussion paper also did not reveal further relevant data sources for the analysis in addition to the data sample discussed".*

Whilst in terms of property risk and energy efficiency, EIOPA's guiding consultation paper[127] does not recommend changing the prudential treatment of property risk in the context of energy efficiency, it suggests a future repetition of the analysis provided the availability of property-related data in context of buildings' market prices and the improvement of their energy performance. Notwithstanding, –As stated in our response to the consultation-, EIOPA can through engaging with the EC led group mentioned above as part of the 2024/2025 regulatory progression of the EPBD, and through synergies and the exchange of information with the bodies we detail in this document to access to buildings' energy data, and explore labelling MPS as a USSP to monitor risks and perform stress testing.

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[124] EIOPA. (2024). *EIOPA publishes its Supervisory Convergence Plan for 2024*. [Website]. Retrieved from https://www.eiopa.europa.eu/eiopa-publishes-its-supervisory-convergence-plan-2024-2023-12-21_en#:~:text=In%20line%20with%20EIOPA's%20mandate,over%20the%20course%20of%202024

[125] EIOPA. (2024). *Union-wide Strategic Supervisory Priorities*. [Website]. Retreived from https://www.eiopa.europa.eu/publications/union-wide-strategic-supervisory-priorities_en?source=searchhttps%3A//www.eiopa.europa.eu/document-library/other-documents/union-wide-strategic-supervisory-priorities_en%3Fsource%3Dsearch

[126] EIOPA. (2024). *Consultation on the Prudential Treatment of Sustainability Risks*. [Website]. Retrieved from https://www.eiopa.europa.eu/consultations/consultation-prudential-treatment-sustainability-risks_en#target-audience

[127] EIOPA. (2023). *PRUDENTIAL TREATMENT OF SUSTAINABILITY RISKS: Consultation Paper*. Retrieved from https://www.eiopa.europa.eu/document/download/540706b0-16a3-4990-8dbb-3280726fb1e8_en?filename=Consultation%20Paper%20on%20the%20Prudential%20Treatment%20of%20Sustainability%20Risks.pdf

Question 6 of the EBA consultation on guidelines on the management of ESG risk asks the following:

Do you have comments on the data processes that institutions should have in place with regard to ESG risks?

EBA consultation[128] (EBA/CP/2024/02) paragraph 23 refers to *"Institutions' internal procedures should provide for gathering information needed to assess the current and forward-looking ESG risk profile of counterparties, by aiming at collecting client and asset-level data. That data should, for large corporate counterparties as defined by Article 3(4) of Directive 2013/34/EU, include at least the following, where applicable".*

For environmental risks, the following are considered:

ii. "current and forecasted greenhouse gas (GHG) scope 1, 2 and 3 emissions in absolute and/or intensity such as per million-euro revenues or per units of production"

iii. material impacts on the environment, including climate change and biodiversity, and related mitigation or adaptation policies,

iv. dependency on fossil fuels, either in terms of economic factor inputs or revenue base,

v. energy and water demand and/or consumption, either in terms of economic factor inputs or revenue base,

vi. energy performance certificates and score in kWh/m² for real estate exposures,

vii. adherence to voluntary or mandatory climate and environmental reporting

Rank	Name	HQ	Total Assets (€bn)	NZBA member	PRB Signatory	UNEP FI Banking and EU Taxonomy Project Phase II WG member	TCFD supporter	User of PACTA	Emissions disclosed using PCAF accounting	SBTi targets	Selected Green mortgage / EE loan product (s)
1	HSBC	UK	2,680.72	Yes	No	No	Yes	Yes	Disclosed Feb. 2022	No	• Green mortgage • Energy Efficiency Loan
2	BNP Paribas	FR	2,666.38	Yes	Yes	Yes	Yes	Yes	Committed	Near term - Committed	• Mutuo Green
3	Crédit Agricole Group	FR	2,379.12	Yes	Yes	Yes	Yes	Yes	Committed	Near term - Committed	• energy savings loan
4	Banco Santander	ES	1,734.66	Yes	Yes	Yes	Yes	Yes	Disclosed Jul. 2022	No	• Hipoteca verde • Préstamo verde
5	Barclays	UK	1,706.57	Yes	Yes	No	Yes	Yes	Committed	No	• Greener Home Reward
6	UBS	CH	1,571.05	Yes	Yes	No	Yes	Yes	Committed	No	• Green Mortgage
7	Groupe BPCE	FR	1,531.13	Yes	Yes	Yes	No	Yes	No	No	• Green bonds
8	Societé Generalé	FR	1,486.82	Yes	Yes	Yes	Yes	Yes	No	No	• Positive impact covered bond
9	Deutsche Bank	DE	1,336.79	Yes	Yes	Yes	Yes	Yes	Disclosed March 2022	No	• Green mortgages and special purpose loans
10	Credit Mutuel Group	FR	1,106.10	Yes	Yes	No	Yes	Yes	Committed	No	• Prêt Avance Rénovation
11	Lloyds	UK	989.68	Yes	Yes	No	Yes	Yes	Disclosed April 2021	No	• Eco Home Reward • Energy-efficient home improvements
12	Intesa Sanpaolo	IT	975.68	Yes	Yes	Yes	Yes	Yes	No	Near term - Committed Net-zero - Committed	• Green - Mutuo Domus
13	ING	NL	967.82	Yes	Yes	Yes	Yes	Yes	Committed	Near term - Committed	• eco-mortgages
14	UniCredit	IT	857.77	Yes	Yes	Yes	Yes	Yes	No	No	• Green Mortgage Loan
15	NatWest	UK	811.80	Yes	Yes	No	Yes	Yes	Disclosed Feb 2022	Net-zero - Committed	• Green Mortgages
16	Standard Chartered	UK	767.20	Yes	Yes	Yes	Yes	Yes	Committed	Commitment removed	• Green Mortgage Plan
17	La Banque Postale	FR	745.64	Yes	Yes	No	Yes	No	Committed	Near term 1.5°C	• Prêt Avance Mutation (PAM) ou Prêt Avance Rénovation (PAR)
18	BBVA	ES	713.14	Yes	Yes	Yes	Yes	Yes	Committed	Near term - Committed	• Hipoteca Casa Eficiente
19	Rabobank	NL	628.51	Yes	Yes	No	Yes	Yes	Disclosed Feb 2022	No	• Groenhypotheek
20	DZ Bank	DE	627.04	No	Yes	No	Yes	Yes	No	No	• Green Bond
21	Nordea Bank	FI	594.84	Yes	Yes	Yes	Yes	Yes	Disclosed March 2022	No	• Green mortgages
22	Caixabank	ES	566.23	Yes	Yes	Yes	Yes	No	Disclosed Dic 2021	No	• MyHome
23	Sberbank of Russia	RS	530.23	No	Yes	No	No	No	No	No	• Green mortgage
24	Danske Bank	DK	505.90	Yes	Yes	No	Yes	Yes	Disclosed March 2023	Near term - Committed Net-zero - Committed	• Energy-efficiency home renovation loans • Green home loans
25	Commerzbank	DE	477.44	Yes	Yes	No	Yes	No	Committed	Near term 1.5°C	• Green Mortgage
26	ABN AMRO	NL	379.58	Yes	Yes	Yes	Yes	Yes	Disclosed March 2023	No	• Sustainable Living Mortgage
27	KBC Group	BE	355.87	No	Yes	No	Yes	Yes	Disclosed March 2021	Near term - Committed	• Mortgages for energy-efficient housing
28	Landesbank Baden-Württemberg	DE	324.17	No	Yes	No	Yes	Yes	No	No	• Green bonds • Residential development loan programmes
29	Erste Group	AT	323.86	Yes	Yes	No	Yes	Yes	Disclosed March 2022	No	• Sustainability bond issuance
30	Nationwide	UK	318.10	Yes	Yes	No	Yes	No	Disclosed Nov 2023	No	• 0% interest Green Additional Borrowing mortgage • Green Reward offer

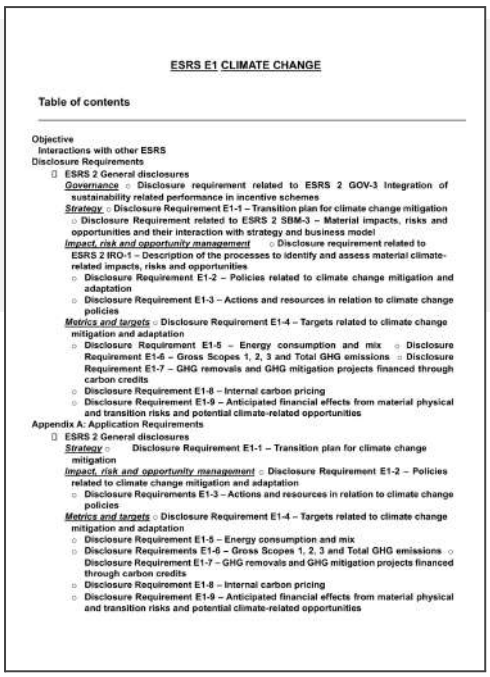
Europe's largest banks, their affiliation to climate initiatives and offering of green products

Sustainability leaders within financial institutions have identified their mortgage books as containing material climate risks and opportunities. These European banks with net-zero targets, clear transition plans and science-based emissions reductions trajectories are aware of the emerging evidence that shows mortgage arrears and defaults decrease as property energy performance improves[129]. Our publication "Engaging Retail Lenders in Home Renovation[130] " thoroughly reviews and analyses the public disclosures of Europe's 30 largest banks (by assets), mapping their net-zero and related initiatives these banks form a part of, and their overall alignment status in their mortgage operations (page 23 of the report, *sample image on this page), suggesting that twelve of these top-30 banks are already actively working on implementing a voluntary Mortgage Portfolio Standard, or equivalent (page 29 of the report).

Mentioned in the EBA consultation[131] (EBA/CP/2024/02), "Institutions should develop CRD-based prudential (transition) plans to address the risks arising from the transition and process of adjustment towards the regulatory objectives related to ESG factors of the jurisdictions they operate in." As the European Union has just adopted the Capital Requirements Directive[132] (CRD), where banks will have to draw up prudential transition plans following guidance from the EBA, CS agrees with the analysis of I4CE[133], and recommends[134] the EBA to put forward transition plan standards aligned with

[128] EBA. (2024). *Consultation paper: Draft Guidelines on the management of ESG risks*. Retrieved from https://www.eba.europa.eu/sites/default/files/2024-01/c94fd865-6990-4ba8-b74e-6d8ef73d8ea5/Consultation%20papaer%20on%20draft%20Guidelines%20on%20ESG%20risks%20management.pdf
[129] European Commission, Directorate-General for Energy, The quantitative relationship between energy efficiency improvements and lower probability of default of associated loans and increased value of the underlying assets – Final report on risk assessment, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2833/532126
[130] Climate Strategy. (2023). *Engaging Retail Lenders in Home Renovation: Turning Sustainable Finance Commitments into Household Energy Savings and Climate Resilience*. Retrieved from https://www.climatestrategy.com/en/informe_27.php
[131] EBA. (2024). *Consultation paper: Draft Guidelines on the management of ESG risks*. Retrieved from https://www.eba.europa.eu/sites/default/files/2024-01/c94fd865-6990-4ba8-b74e-6d8ef73d8ea5/Consultation%20papaer%20on%20draft%20Guidelines%20on%20ESG%20risks%20management.pdf
[132] European Commission. (2023). *Latest updates on the banking package*. [Website]. Retrieved from https://finance.ec.europa.eu/news/latest-updates-banking-package-2023-12-14_en
[133] I4CE. (2024). *Prudential transition plans: what's next after the adoption of the Capital Requirements Directive?*. Retrieved from https://www.i4ce.org/wp-content/uploads/2024/01/Prudential-transition-plans-whats-next-after-the-adoption-of-the-Capital-Requirements-Directive. pdf
[134] European Commission. (2024). *Unlocking private investment in energy efficiency – guidance to Member States and market actors: Feedback from: Climate Strategy & Partners. [Website]. Retrieved from*

the European directives on Corporate Sustainability Reporting[135] (CSRD) and on Due Diligences[136] (CSDDD). Both directives are applicable to European financial institutions. Subject to the CSRD, companies will have to report according to European Sustainability Reporting Standards (ESRS), developed by the EFRAG, previously known as the European Financial Reporting Advisory Group. Nevertheless, ESRS and the CSRD standards offer a broad definition[137] for a transition plan with a 2050 horizon, with relatively low penalties if not implemented.



ESRS E1 CLIMATE CHANGE

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A transition plan relates to the undertaking's efforts in climate change mitigation. When disclosing its transition plan, the undertaking is expected to provide a high-level explanation of how it will adjust its strategy and business model to ensure compatibility with the transition to a sustainable economy and with the limiting of global warming to 1.5°C in line with the Paris Agreement (or an updated international agreement on climate change) and the objective of achieving climate neutrality by 2050 with no or limited overshoot as established in Regulation (EU) 2021/1119 (European Climate Law), and where applicable, its exposure to coal, and oil and gas-related activities.

Whilst CSDDD makes transition plans mandatory, and makes infringing reporting obligations result in penalties and civil liability, the financial sector will be excluded provisionally[138]. CS recommends the EBA to engage with the European Commission to promote the voluntary uptake of MPS by financial institutions as it would enable them to implement CRD-based prudential plans to identify and act upon ESG risks. In addition, the voluntary uptake of MPS would prepare financial institutions ahead of the eventual CSDDD mandatory transition plans.

In its 2021 communication to advise the EU Commission "KPIs for transparency on institutions' environmentally sustainable activities, including a green asset ratio[139]", the EBA suggested that financial institutions can determine the level of alignment of each lending exposure using the EU Taxonomy thresholds on a case-by-case basis. For residential real estate loans, commercial real estate exposure, housing loans to municipalities, and repossessed real estate collateral, EBA underlying collateral/asset, based on the energy performance certificate label (EPC), in line with the screening criteria proposed in the EU Taxonomy. According to EBA's 2023 report on greenwashing monitoring and supervision[140], the forthcoming EU Taxonomy disclosures for credit institutions and investment firms on the sustainability of their activities will enhance transparency and entity-level sustainability disclosure requirements, particularly for Green Asset Ratio and Green Investment Ratio. EBA's 2021 research[141] shows that under 8% of bank balance sheets are aligned with the EU Taxonomy criteria, increasing to 23% when just considering those covered by the current EU Taxonomy thresholds.

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13938-Unlocking-private-investment-in-energy-efficiency-guidance-to-Member-States-and-market-actors/F3456087_en

[135] European Commission. (2024). *Corporate sustainability reporting*. [Website]. Retrieved from https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en

[136] European Commission. (2024). *Corporate sustainability due diligence*. [Website]. Retrieved from https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en#which-companies-will-the-new-eu-rules-apply-to

[137] EFRAG. (2023). *ESRS E1 CLIMATE CHANGE*. Retrieved from https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FESRS%2520E1%2520Delegated-act-2023-5303-annex-1_en.pdf

[138] Council of the EU. (2023). *Corporate sustainability due diligence: Council and Parliament strike deal to protect environment and human rights*. [Website]. Retrieved from https://www.consilium.europa.eu/en/press/press-releases/2023/12/14/corporate-sustainability-due-diligence-council-and-parliament-strike-deal-toprotect-environment-and-human-rights/

[139] EBA. (2021). *KPIs for transparency on institutions' environmentally sustainable activities, including a green asset ratio.* Retrieved from https://www.eba.europa.eu/publications-and-media/press-releases/eba-advises-commission-kpis-transparency-institutions

[140] EBA. (2023). *EBA PROGRESS REPORT ON GREENWASHING MONITORING AND SUPERVISION*. Retrieved from https://www.eba.europa.eu/sites/default/files/document_library/Publications/Reports/2023/1055934/EBA%20progress%20report%20on%20greewnwashing.pdf

[141] EBA.(2021). *Mapping climate risk: Main findings from the EU-wide pilot exercise*. Retrieved from https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1001589/Mapping%20Climate%20Risk%20-%20Main%20findings%20from%20the%20EU-wide%20pilot%20exercise%20on%20climate%20risk.pdf

Annex E

WWF's response (link).

Question 6: Do you have comments on the data processes that institutions should have in place with regard to ESG risks?

- **Anticipating risks:** WWF is generally aligned with the data processes proposed by EBA. Gathering ESG data is critical in anticipating risk early on, as demonstrated by the ECB's climate stress test from 2022 highlighting a potential insolvencies wave due to energy-inefficient homes. Lack of data may prevent banks from fully understanding the magnitude of their mortgage portfolio risk exposure, emphasizing the need for robust data collection. [1]
- **Filling data gaps:** We agree with the use of estimates and proxies, and third-party services for gaining access to ESG data, as this would allow a reduced burden for companies. However, in the medium term, EBA should ensure the phase-out of proxies to help fill the aforementioned data gap, so the framing in Paragraph 25 is relevant, but EBA should specify the exact timeline for doing so: we recommend 3 to 5 years maximum. We would like to particularly highlight the need to address energy efficiency data gaps, which have been hindering the monitoring of achieving EU targets. With over a quarter of EU households having mortgages, banks could significantly contribute to filling this data gap. [2] However, this channel is currently underused, with 65% of banks not collecting Energy Performance Certificates (EPCs), indicating a need for improvement. [3] EBA must ensure that energy efficiency information from clients is collected at relevant moments during the lending process (loan origination, loan refinancing and renegotiation, loan monitoring process) to bridge the existing data gap. This could be incorporated into the review of the Mortgage Credit Directive. Moreover, mortgage portfolio standards have been introduced in the Energy Performance of Buildings Directive recast. These standards will incentivize banks to collect data, analyse their portfolios, and enhance energy efficiency. They should be supported and advocated for greater mandatory adoption.

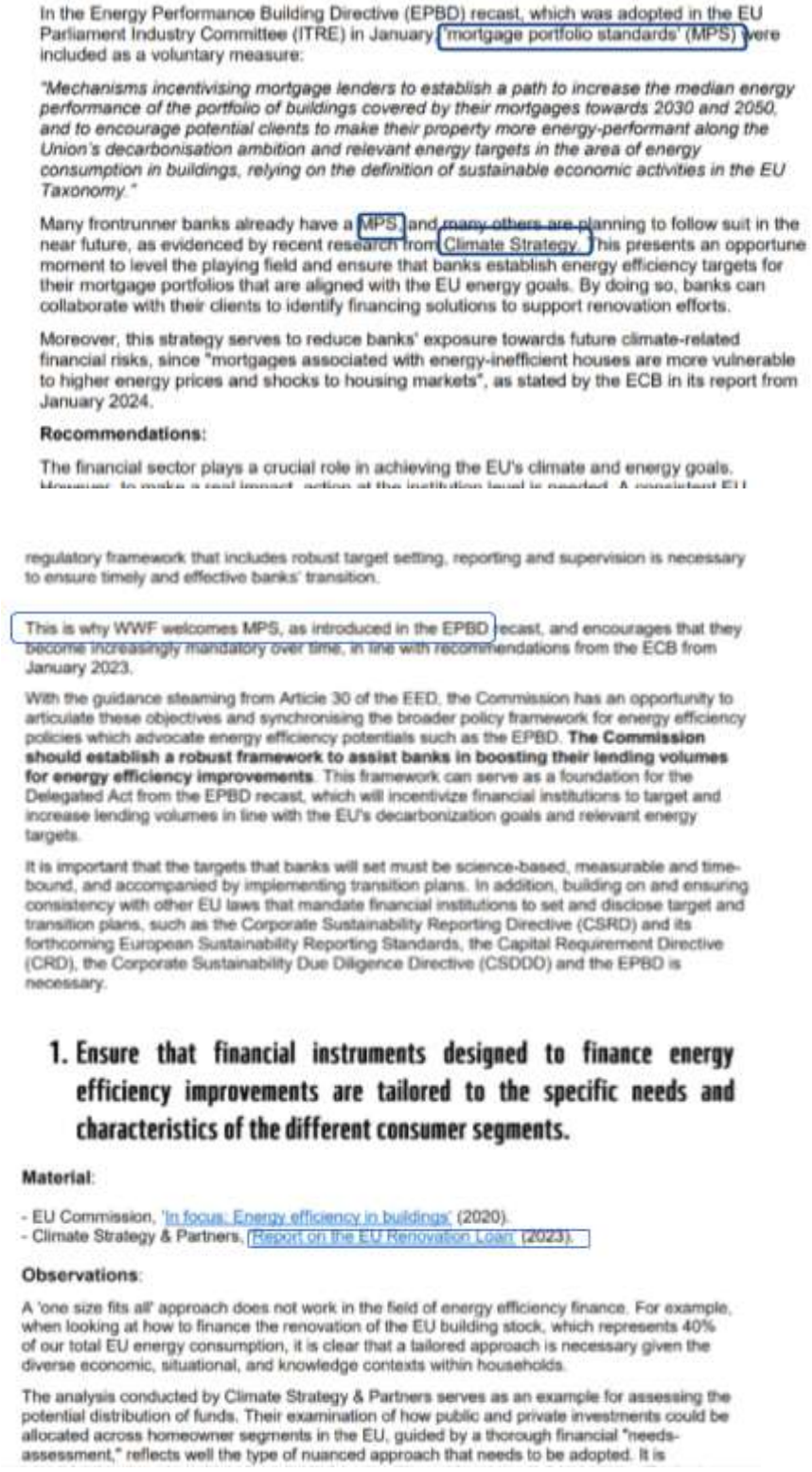
Annex F

Subject	EPBD	EED	EED Recommendation for Article 30
Green mortgages /green loans	**Article 17,** Member States shall facilitate the aggregation of projects to enable investor access as well as packaged solutions for potential clients. Member States shall adopt measures that promote energy efficiency lending products for building renovations, such as green mortgages and green loans, secured and unsecured, and ensure that they are offered widely and in a non-discriminatory manner by financial institutions and, are visible and accessible to consumers. Member States shall ensure that banks and other financial institutions and investors receive information on opportunities to participate in the financing of the improvement of the energy performance of buildings. **Item 62,** Green mortgages and green loans can significantly contribute to transforming the economy and reducing carbon emissions.	**Article 30,** National energy efficiency fund, financing and technical support Member States shall adopt measures that promote energy efficiency lending products, such as green mortgages and green loans, secured and unsecured, and ensure that they are offered widely and in a non-discriminatory manner by financial institutions and, are visible and accessible to consumers. Member States shall adopt measures to facilitate the implementation of on-bill and on-tax financing schemes, taking into account the Commission guidance provided in accordance with paragraph 10.	**2.2.1. Scope and objectives of the requirement** To support the uptake of energy efficiency measures, green consumer credits tend to have maturities that are longer than general purpose consumer credit, lower and/or fixed interest rates, and often no security requirements. Green consumer loans can be used to support energy efficiency measures by acquiring efficient energy equipment, technologies or appliances, as well as for targeted building renovation measures. Similarly, green mortgages encourage borrowers to improve the energy efficiency of their buildings and/or acquire energy efficient dwellings by offering more favourable terms than standard mortgages. Box 2 provides the example of the Romanian Green Homes and Green Mortgages Programme. Article 30(3) further states that Member States shall ensure that energy efficiency lending products are offered widely and in a non-discriminatory manner by financial institutions and be visible and accessible to consumers. To implement this requirement, the following measures should be taken into consideration: • To ensure a wide offer, it would be beneficial to support the development of a thriving national market for energy efficiency lending products and ensure that potential customers are able to access and choose between a significant and differentiated array of dedicated financial products. • To ensure a non-discriminatory offer compared to other financial products, Member States should ensure that financial institutions' retail businesses make use of their available offer of dedicated energy efficiency lending products (mortgages and consumer credits). Potential clients should be made aware of the existence of energy efficiency lending products and these type of products – expectedly with more favourable conditions – should always be offered to customers whenever they better suit their needs.
Guarantees	**Article 17,** To support the mobilisation of investments, Member States shall promote the effective development and use of enabling funding and financial tools, such as energy efficiency loans and mortgages for building renovation, energy performance contracting, pay-as-you-save financial schemes, fiscal incentives, for example reduced tax rates on renovation works and materials, on-tax schemes, on-bill schemes, guarantee funds, funds targeting deep renovations, funds targeting renovations with a significant minimum threshold of targeted energy savings and mortgage portfolio standards. They shall guide investments into an energy-efficient public building stock, in line with Eurostat guidance on the recording of energy performance contracts in government accounts.	**Item 138,** The financing facilities could in particular use contributions, resources and revenues from those resources to enable and encourage private capital investment, in particular drawing on institutional investors, while using criteria ensuring the achievement of both environmental and social objectives for the granting of funds; make use of innovative financing mechanisms, including loan guarantees for private capital, loan guarantees to foster energy performance contracting, grants, subsidised loans and dedicated credit lines, third-party financing systems, that reduce the risks of energy efficiency projects and allow for cost-effective renovations even among low- and medium-revenue households; be linked to programmes or agencies which will aggregate and assess the quality of energy saving projects, provide technical assistance, promote the energy services market and help to generate consumer demand for energy services. **Article 24,** (d) foster technical assistance and the roll-out of enabling funding and financial tools, such as on-bill schemes, local loanloss reserve, guarantee funds, funds targeting deep renovations and renovations	**2.5.2. Choice of policy measures to fulfil the requirement** Member States have different policy options to fulfil the requirement to establish loan guarantee facilities to encourage loans for energy efficiency investment: • Establish loan guarantee facilities in existing or new institutions: Loan guarantees for energy efficiency could be established within existing public financing institutions, such as public banks or existing national funds. Alternatively, loan guarantees could be a product offered by a new national energy efficiency fund (see Section 3). The institution will need to be sufficiently capitalised depending on the volume of investments in energy efficiency it aims to trigger. • Utilise the Member State compartment of the InvestEU programme: In establishing the loan guarantee facilities, Member States have the option to voluntarily contribute to the InvestEU Fund and set up a 'Member State compartment'. The Member State contribution will serve as an EU guarantee that will back loans, guarantees or equity investments that align with national priorities for energy efficiency. The EU budget guarantees provided by the InvestEU Fund will benefit from the EU's high credit rating, which could leverage significant investments and be channelled via

	The enabling funding and financial tools may include renovation loans or guarantee funds for energy performance renovations, including in combination with relevant Union programmes, where applicable.	with minimum energy gains; **Article 30,** Member States shall ensure that banks and other financial institutions receive information on opportunities to participate in the financing of energy efficiency improvement measures, including through the creation of public-private partnerships. Member States shall encourage the setting up of loan guarantee facilities for energy efficiency investment. Where Member States set up national energy efficiency funds, as referred to in paragraph 11 of this Article, they shall establish financing instruments, including public guarantees, to increase the uptake of private investments in energy efficiency and of the energy efficiency lending products and innovative schemes referred to in paragraph 3 of this Article. The Commission shall evaluate whether an energy efficiency mechanism at Union level, with the objective of providing a Union guarantee, technical assistance and associated grants to enable the implementation of financial instruments, and financing and support schemes at national level, could support in a cost-effective way the achievement of the Union energy efficiency and climate targets, and, if appropriate, propose the establishment of such a mechanism.	existing and known lending products implemented across the EU. ● Utilise the EU shared management financial instruments under Cohesion policy framework 2021-2027: In establishing the loan guarantee facilities, Member States have the option to make use of the EU shared management financial instruments (in the form of loans, guarantees or equity) under Cohesion policy framework 2021-2027 for energy efficiency. This option would allow Member States to benefit from the legal possibilities to combine financial instruments and grant support under Cohesion policy framework 2021-2027, and therefore to effectively increase scale and leverage of energy efficiency investments. ● Utilise efficiently the available shared management funds to set up a scheme combining grants and financial instruments. In the MFF 2021-2027 programming period, guarantee financial instruments and grants may be combined when they are both co-funded from EU shared management funds, such as the European Regional Development Fund. The combination of loan guarantees and grants can be effective in incentivising investment in new or riskier markets or business models. ● Define the scope of loan guarantees: Guarantees can offer credit enhancement for individual projects, such as refurbishment of district heating systems or renovation of multi-apartment buildings. Alternatively, guarantees can be offered on the loans for portfolios of projects, ESCOs, on-bill financing schemes or dedicated state-backed lending product for the renovation of worst performing buildings. ● Determine the type of loan guarantee products to be offered: The type(s) of loan guarantees provided should be determined by the type of energy efficiency investments that the Member States aim to support, in line with its strategy to deliver on its 2030 energy efficiency targets and its updated National Energy and Climate Plans, and the specific risks faced by the type of energy efficiency investments The provision of loan guarantees can be instrumental in achieving other requirements set out in Article 30, including the development and provision of energy efficiency lending products, such as green consumer credits and mortgages and on-bill financing schemes.

Annex G

WWF's response (link):



In the Energy Performance Building Directive (EPBD) recast, which was adopted in the EU Parliament Industry Committee (ITRE) in January, 'mortgage portfolio standards' (MPS) were included as a voluntary measure:

"Mechanisms incentivising mortgage lenders to establish a path to increase the median energy performance of the portfolio of buildings covered by their mortgages towards 2030 and 2050, and to encourage potential clients to make their property more energy-performant along the Union's decarbonisation ambition and relevant energy targets in the area of energy consumption in buildings, relying on the definition of sustainable economic activities in the EU Taxonomy."

Many frontrunner banks already have a MPS, and many others are planning to follow suit in the near future, as evidenced by recent research from Climate Strategy. This presents an opportune moment to level the playing field and ensure that banks establish energy efficiency targets for their mortgage portfolios that are aligned with the EU energy goals. By doing so, banks can collaborate with their clients to identify financing solutions to support renovation efforts.

Moreover, this strategy serves to reduce banks' exposure towards future climate-related financial risks, since "mortgages associated with energy-inefficient houses are more vulnerable to higher energy prices and shocks to housing markets", as stated by the ECB in its report from January 2024.

Recommendations:

The financial sector plays a crucial role in achieving the EU's climate and energy goals.

regulatory framework that includes robust target setting, reporting and supervision is necessary to ensure timely and effective banks' transition.

This is why WWF welcomes MPS, as introduced in the EPBD recast, and encourages that they become increasingly mandatory over time, in line with recommendations from the ECB from January 2023.

With the guidance steaming from Article 30 of the EED, the Commission has an opportunity to articulate these objectives and synchronising the broader policy framework for energy efficiency policies which advocate energy efficiency potentials such as the EPBD. **The Commission should establish a robust framework to assist banks in boosting their lending volumes for energy efficiency improvements**. This framework can serve as a foundation for the Delegated Act from the EPBD recast, which will incentivize financial institutions to target and increase lending volumes in line with the EU's decarbonization goals and relevant energy targets.

It is important that the targets that banks will set must be science-based, measurable and time-bound, and accompanied by implementing transition plans. In addition, building on and ensuring consistency with other EU laws that mandate financial institutions to set and disclose target and transition plans, such as the Corporate Sustainability Reporting Directive (CSRD) and its forthcoming European Sustainability Reporting Standards, the Capital Requirement Directive (CRD), the Corporate Sustainability Due Diligence Directive (CSDDD) and the EPBD is necessary.

1. Ensure that financial instruments designed to finance energy efficiency improvements are tailored to the specific needs and characteristics of the different consumer segments.

Material:

- EU Commission, 'In focus: Energy efficiency in buildings' (2020).
- Climate Strategy & Partners, Report on the EU Renovation Loan (2023).

Observations:

A 'one size fits all' approach does not work in the field of energy efficiency finance. For example, when looking at how to finance the renovation of the EU building stock, which represents 40% of our total EU energy consumption, it is clear that a tailored approach is necessary given the diverse economic, situational, and knowledge contexts within households.

The analysis conducted by Climate Strategy & Partners serves as an example for assessing the potential distribution of funds. Their examination of how public and private investments could be allocated across homeowner segments in the EU, guided by a thorough financial "needs-assessment," reflects well the type of nuanced approach that needs to be adopted. It is

Euroace's response (link):

New instruments to stimulate private investments

New financial instruments should be designed to support the transition of old, inefficient buildings. In the next decade, European targets focus on the renovation of worst-performing buildings all over Europe.

Improving the energy performance of financial institutions' portfolios through innovative tools

Under the current review of the EPBD, it is proposed to establish a voluntary framework according to which financial institutions can increase lending volumes for energy renovations and provide support to lenders.

Similar to this, the Mortgage Portfolio Standard (MPS) is a tool that can help banks align their portfolios with Taxonomy-compliant activities and fulfil their Green Asset Ratio, as well as manage the climate transition risks they face in their mortgage portfolio. It is a tool with considerable potential as it can funnel more capital into energy-efficient renovations and boost the energy renovation rate. It is a win-win situation for financial institutions since energy-efficient mortgages have lower financial risk[11].

EU Renovation Loan

European residential buildings are estimated to be worth €17 trillion and house 220 million homeowners. As there are around €7 trillion of mortgages in Europe, there is €10 trillion of home equity against which owners can borrow for the deep renovation and transformation most of these buildings require by 2050.[12]

The EU Renovation Loan could unlock these savings. It would take the shape of long-term (30 year) financing with a zero-coupon structure:

- Homeowners borrow the amount they require to transform their home through a deep renovation.
- They do not have to pay cash interest and it accrues until the property is sold or transferred (or the loan matures in 30 years).

EU Renovation Loans could be offered to underserved families and backed by an EU guarantee. Their interest would accrue at EU borrowing costs (plus a small spread) and be distributed through mortgage lenders alongside top-up or commercial mortgages.

BPIE's response (link):

Tap in the abundant good practices for the development of financing schemes. While many financing schemes and instruments emerge to address barriers for private investments, such as on-bill financing and repayment, tax deductions for renovations, energy performance contracting and others – each scheme has its challenges and solutions which should be addressed for their effective large scale uptake. E.g., the RenOnBill project identified barriers and solutions for the on-bill schemes. Solutions include: national guarantee funds to be set up addressing issues of loan protection and low attractiveness of commercial loans; mortgage portfolio standards to encourage financial institutions to direct a part of their lending activities into building renovation, *read more: https://www.bpie.eu/wp-content/uploads/2022/04/06653-RenOnBill-policy-roadmap_Final.pdf*.

Encourage Member States to implement financing schemes addressed to specific income groups. Vulnerable/ energy poor/ low income households often find it difficult to provide private finance and undertake renovations. An effective public support system can overcome this barrier if it is designed in the right way. Such an initiative would contribute to a socially just energy transition.

Eurima's response (link):

and reduce risk for investors. These guarantees can work alongside existing public subsidy schemes, providing an additional layer of security and making energy efficiency projects more attractive to private investors.

2. **Introduce a dedicated European Renovation Loan within the next Multiannual Financial Framework (MFF).** This loan would offer homeowners the option to defer interest and capital repayments until the sale, transfer, or after 30 years of home ownership. The loan would be offered at an interest rate set at the EU's borrowing rate, creating a highly affordable option. Importantly, this loan would be secured against the estimated €13 trillion of home equity in the EU[2]. This approach effectively unlocks the value of existing home equity, channelling it towards energy-saving upgrades and fostering local job creation.

[1] UCL Energy Institute (2011). The Kfw Experience in The Reduction of Energy Use and Co2 Emissions from Buildings (access here).
[2] Climate Strategy & Partners (2023). Engaging Retail Lenders in Home Renovation: Turning Sustainable Finance Commitments into Household Energy Savings and Climate Resilience (access here).

Euroace's response (link):

Unlocking private finance

New financial instruments should be designed to support the transition of old, inefficient buildings over the coming years. In the next decade, European targets focus on the renovation of worst-performing buildings all over Europe.

- Improving the energy performance of financial institutions' portfolios through innovative tools: Under the current review of the EPBD, it is proposed to establish a voluntary framework according to which financial institutions can increase lending volumes for energy renovations and provide support to lenders. Similar to this, the Mortgage Portfolio Standard (MPS) is a tool that can help banks align their portfolios with Taxonomy-compliant activities and fulfil their Green Asset Ratio, as well as manage the climate transition risks they face in their mortgage portfolio. It is a tool with considerable potential as it can funnel more capital into energy-efficient renovations and boost the energy renovation rate. It is a win-win situation for financial institutions since energy-efficient mortgages have lower financial risk[3].
- EU Renovation Loan: European residential buildings are estimated to be worth €17 trillion and house 220 million homeowners. As there are around €7 trillion of mortgages in Europe, there is €10 trillion of home equity against which owners can borrow for the deep renovation and transformation most of these buildings require by 2050.[4] The EU Renovation Loan could unlock these savings. It would take the shape of long-term (30 year) financing with a zero-coupon structure:
    - Homeowners borrow the amount they require to transform their home through a deep renovation.
    - They do not have to pay cash interest and it accrues until the property is sold or transferred (or the loan matures in 30 years).

[3] EEFIG. Final Report on Risk Assessment. 2022.
[4] Climate Strategy and Partners - The European Renovation Loan: An innovative financial instrument to Repower EU, 2022

EU Renovation Loans could be offered to underserved families and backed by an EU guarantee. Their interest would accrue at EU borrowing costs (plus a small spread) and be distributed through mortgage lenders alongside top-up or commercial mortgages.

ENDS

Annex H

Code	Name	Connection to MPS elements	Key parties involved
HORIZON-CL5-2023-D3-01-10	Supporting the development of a digital twin to improve management, operations and resilience of the EU Electricity System in support to REPowerEU	Create, develop and test a Digital Twin of the Electricity Grid that covers dynamic monitoring, (smart) grid planning, secure operation, forecasting and scenario analysis. *MPS connection explained in section discussing impact assessment of the EPBD and the EED.	ENTSO-E, DSO associations, main stakeholders such as T&D Europe, Eurelectric, SmartEn, etc
HORIZON-CL5-2023-D3-01-11	Demonstration of DC powered data centres, buildings, industries and ports	• Feasibility of Medium Voltage Direct Current (MVDC) distribution network to supply the DC powered commercial and residential buildings as well as to supply other DC loads and to collect the energy of DC sources. • Installation of intelligent DC system complete of all the related components (e.g., RES, DC bus, sockets, LED lighting, heat pumps, EV charging stations, sustainable storage systems, etc. The components can be either DC-based or AC-based and appropriately adapted to work within the DC grid. • Identification of the efficiency of a DC system compared to an AC system in the building sector and the corresponding cost savings. • Analysis and identification of the main barriers (technical and non-technical) for the development and deployment of MVDC and LVDC systems.	Demonstration, test and validation of at least two of the sub-topics developed in at least two pilots in different EU Member States/Associated Countries.
HORIZON-CL5-2023-D4-01-01	Innovative cost-efficient solutions for zero-emission buildings	• Increased number of solutions and approaches for construction of zero-emission buildings. • Enhanced productivity of construction compared to standard practice. • Reduced embodied emission and increased carbon storage, enhanced energy performance. • Improved comfort, Indoor Air Quality and Indoor Environmental Quality. • Increased awareness on zero-emission construction best practices. • Enhanced circularity of construction.	All relevant stakeholders (in particular businesses and authorities) to: • promote the zero-emission buildings innovative construction approaches demonstrated. • share guidance and recommendations on best practices for zero-emission construction. • provide feedback to policy makers at EU, national, and (where relevant) regional and local level regarding the deployment of innovative and cost efficient solutions for constructing zero-emission buildings.
HORIZON-CL5-2023-D4-01-02	Future-proofing historical buildings for the clean energy transition	• Deliver standardised renovation approaches and solutions for the deep renovation of historical buildings to improve their energy performance, smart readiness, indoor air quality, comfort, and climate resilience, while respecting their architectural and cultural specificities, materials and traditional construction techniques. • Target building types constructed prior to 1945 that have restrictions regarding changes of their envelope (walls, window, doors, and/or roof). (Buildings of nationally or internationally recognised significant cultural heritage built after this date may also be considered.). • Standardised renovation approaches and solutions that are directly replicable for other buildings of the same building type, which should represent a share of at least 1% of buildings in the specific country where they are located. • Solutions that reduce energy demand in a cost-effective way. • Explore both internal and external insulation solutions, and where possible incorporating adaptable interventions, plug and play technical building systems, and/or renewable energy services. • Employ both novel and traditional construction materials and techniques, exploring ways to combine, adapt and improve them. • Improve the comfort of occupants and lower the maintenance costs for building owners. • Where applicable, involve relevant conservation authorities. • Validation of the solutions in a relevant environment (real-life or close to real-life) that: Covers at least three different countries, with diverse climatic conditions. Results in clear and, where relevant, quantified and measurable indicators on the effectiveness and the potential for replication of the solutions.	The process of futureproofing these buildings for the clean energy transition faces additional challenges compared to newer buildings, as it has to take into account architectural restrictions, as well as the specificities of the materials used in their construction, which does not respond well to renovation techniques used in modern buildings.
HORIZON-CL5-2023-D4-01-03	Interoperable solutions for positive energy districts (PEDs), including a better integration of local renewables and local excess heat sources	• Develop solutions (products, tools, etc.) for planning and managing assets (e.g. buildings, energy systems, mobility systems, ICT) in positive energy districts. • Develop tools and methods for planning and designing PEDs, that support PED developers	To ensure interoperability and integration into the grid, projects should make use of operational end-to-end architectures, digital platforms and other data exchange infrastructure for the energy system being developed under ongoing

		and managers to optimise the mix of PED solutions depending on the local conditions. • Develop data exchange platforms (heat & electricity) and technologies to integrate buildings with energy markets (e.g. flexibility market) relying on available standards (e.g. SAREF), allowing buildings to contribute effectively to grid stabilisation at district / city level. • Develop methodologies and/or planning tools for the optimal integration of distributed renewable generation and excess heat at district (or building) level. • Develop innovative business models for integration of PEDs in the energy markets including technological, financial and regulatory aspects. • Deploy and test certification and standardisation frameworks for interoperable solutions in positive energy districts. • Demonstrate the proposed solutions in at least three PEDs to promote replication, upscaling and mainstreaming	Horizon 2020, Horizon Europe as well as under other EU programs such as the Digital Europe Program, when addressing communication and data exchange between inverters and other components, other appliances and the electricity network. The selected projects are expected to contribute to the BRIDGE initiative , actively participate to its activities and allocate up to 2% of their budgets to that end. Additional contributions to the 'Alliance for Internet of Things Innovation' (AIOTI) and other relevant activities (e.g. clusters of digital projects and coordinating actions) might be considered, when relevant.
HORIZON-CL5-2024-D4-02-03	BIM-based processes and digital twins for facilitating and optimising circular energy renovation (Built4People Partnership)	• Reduced buildings construction and renovation time and costs. Increased buildings material reuse and recycling. • Improvement of buildings performance (energy, sustainability including whole life-cycle carbon and the potential to store carbon in built works, comfort, health and well-being, and accessibility). • Enhanced, interoperable and accessible buildings information across the lifecycle. • Improvement of interoperability with existing Building Information Modelling (BIM) and Digital Twin solutions.	Built4People partners and the Built4People network of innovation clusters.
HORIZON-CL5-2024-D4-02-01	Industrialisation of sustainable and circular deep renovation workflows (Built4People Partnership)	• Streamlining resource-efficient nearly zero-energy performance renovation processes. • Renovations with reduction of at least 30 % waste, 25% cost, and 30% work time (to 1-2 days per dwelling/building unit), compared to current deep renovation processes. • Reduced energy performance gap between as-built and as-designed (difference between theoretical and measured performance), and higher construction quality. • Innovative, tailored business models for deep renovation, generating economies of scale and contributing to an increased rate of renovation. Improved comfort, Indoor Air Quality and Indoor Environmental Quality.	Built4People partners and the Built4People network of innovation clusters.
HORIZON-CL5-2024-D4-02-02	Robotics and other automated solutions for construction, renovation and maintenance in a sustainable built environment (Built4People Partnership)	• Reduction of construction and renovation time on-site (at least 40% reduction). • Reduction of errors in construction and renovation works. • Improved resource efficiency. • Reduction of construction and renovation costs. • Reduction of greenhouse gas emissions resulting from, and improved energy efficiency of the works on-site • Reduced environmental impact of construction works, including pollution, particulate matter and noise, in the immediate vicinity. Reduction of waste generated from the works on-site.	Built4People partners and the Built4People network of innovation clusters. The JRC may provide support in research activities related to robotics and other automated solutions for new construction and renovation of buildings.
HORIZON-CL5-2023-D4-02-01	Innovative uses of lifecycle data for the management of buildings and buildings portfolios (Built4People Partnership)	• Increase in the availability of key energy and environmental performance indicators from new or improved building management systems that go beyond energy management to life-cycle approach (e.g. environmental performance, circularity, comfort and well-being, indoor environmental quality, accessibility, safety, structural performance, resilience and climate risk vulnerability). • Improved tools for the planning and management of building assets and portfolios of buildings including energy management, environmental performance, renovation optimisation and investment planning. • Increased availability and access to lifecycle data of buildings and buildings portfolios and enhanced interoperability and synergies among data sharing platforms.	Built4People partners and the Built4People network of innovation clusters.
HORIZON-CL5-2023-D4-02-02	Solutions for the identification of vulnerable buildings and people-centric built environment, and for improving their resilience in disruptive events and altered conditions in a changing climate (Built4People Partnership)	• Increased awareness of approaches for the identification and categorisation of the vulnerability of existing and future buildings and infrastructures. Increased number of demonstrated innovative solutions to improve safety and resilience of the built environment, to extreme climatic events, and other natural disasters, as well as to altered conditions due to	Built4People partners and the Built4People network of innovation clusters, and SSH[142] experts.

[142] Sociology and economics, psychology and political science.

		climate change. ● Increased use of relevant data such as weather forecasts or catastrophe warnings by monitoring and management systems in the built environment (e.g. to launch automatic emergency protocols to warn and protect buildings users). ● Improved understanding of new business models allowing to optimise the costs of resilience, taking into account asset management and lifecycle approaches. Increased awareness of building occupants and other key stakeholders on the available solutions in case of extreme climatic events, and natural disasters.	
HORIZON-CL5-2023-D4-02-03	Demonstrate built-environment decarbonisation pathways through bottom-up technological, social and policy innovation for adaptive integrated sustainable renovation solutions (Built4People Partnership)	● Increased number of innovative solutions and packages for sustainable construction and renovation. ● Increased number of options for built-environment decarbonisation pathways towards zero-emission buildings considering the whole value chain at local or regional level. ● Increased engagement and participation of the whole value chain in local and regional innovation clusters. ● Reduced time from first demonstration to market of sustainable renovation solutions. Increased awareness and improved access at a local or regional level to information on construction products for reuse and circular businesses. ● Creation of new business opportunities with reduced risk for investment in the circular economy. Enhanced engagement amongst communities, businesses, local and regional governments, and the extended construction value chain, e.g. materials and equipment, manufacturers, construction companies.	Built4People partners and the Built4People network of innovation clusters, and SSH experts.
HORIZON-CL5-2023-D4-02-04	Fast-tracking and promoting built environment construction and renovation innovation with local value chains (Built4People Partnership)	● Expansion and strengthening of the Built4People network of Construction Innovation Clusters. Increased awareness and improved access at a local or regional level to research outcomes for sustainable built environment construction and renovation. ● Increased engagement and participation of the whole value chain in local and regional construction innovation clusters. Strengthened, long-lasting and multi-disciplinary networking and collaboration on locally rooted, bottom-up innovative holistic solutions for a sustainable built environment. ● Enhanced engagement amongst communities, businesses, local and regional governments, and the construction industries and associated supply chains. ● Establishment and reinforcement of European value chains in sustainable construction and renovation. ● Creation of new business opportunities with reduced risk for investment in innovative built environment construction and renovation. ● Reduced time from research to market of innovative sustainable construction and renovation solutions. Increased public and private co-financing of innovation in the field of innovative sustainable built environment.	Built4People partners and the Built4People network of innovation clusters, and SSH experts.
HORIZON-CL5-2023-D4-02-05	Supporting the creation of an accessible and inclusive built environment (Built4People Partnership)	● Improved accessibility of the built environment for persons with disabilities and older persons, following a ‘design for all’ approach. ● Improved comfort for larger shares of the population. ● Increased uptake of accessible and inclusive active mobility solutions (walking and cycling) in support of healthy and sustainable lifestyles, while catering solutions for persons with reduced mobility. Improved sense of inclusiveness and social cohesion in larger shares of the population. ● Availability of a common evaluation and certification framework for accessibility and inclusiveness of the built environment. ● Improved consideration of accessibility and inclusiveness in the transformation of the built environment towards sustainability, climate change mitigation and adaptation, in line with energy and climate ambitions. ● Reduced energy consumption and lifecycle GHG emissions of the facilities of the built environment.	Built4People partners and the Built4People network of innovation clusters, and SSH experts.
HORIZON-CL5-2024-D4-01-01	Low-disruptive renovation processes using integration of prefabricated solutions for energy-efficient buildings	● Reduction of on-site construction activities to 1-2 days per dwelling/building unit. ● Cost reduction of at least 25% compared to conventional renovation processes. ● Significant reduction of dust, noise and waste on the construction site compared to conventional renovation processes. ● Significant reduction in occupant disturbance	Not mentioned

		during the renovation. ● Improved levels of occupancy comfort (e.g. Indoor Air Quality and Indoor Environmental Quality) after renovation. ● Reduction of negative impacts of renovation on biodiversity, considering adaptability as well (e.g. to climate change, different use, evolving societal needs, etc.) and resilience of buildings to disruptive events.	
HORIZON-CL5-2024-D4-01-02	Smart grid-ready buildings	● Improved integration of buildings with energy carriers (e.g. electricity grid, district heating networks) and non-energy services (e.g. mobility). ● Improved buildings flexibility for grid and network management. ● Improved contribution of buildings to energy grid robustness with regard to dependencies to energy supplies. ● Increase in renewable energy production and storage at building level. ● Empowerment of end-users by having increased control over their buildings' energy services and contracts (consumption, production, storage, flexibility). ● Enhancement of the smart readiness of buildings as rated by the smart readiness indicator.	BRIDGE initiative, the 'Alliance for Internet of Things Innovation' (AIOTI) and other relevant activities (e.g. clusters of digital projects and coordinating actions) might be considered, when relevant.

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Acronyms

Agency for the Cooperation of Energy Regulators	ACER
Body of European Regulators for Electronic Communications	BEREC
Carbon Risk Real Estate Monitor	CRREM
Corporate Sustainability Reporting	CSRD
Corporate sustainability due diligence	CSDDD
Data for Energy	D4E
Delegated Act	DA
De-risking Energy Efficiency Platform	DEEP
Digital building logbook	DBL
European Energy Efficiency Financing Coalition	EEEFC
European Investment Bank	EIB
Energy Efficiency Directive	EED
Energy Efficiency Financial Institutions Group	EEFIG
Energy Performance of Buildings Directive	EPBD
Energy Performance Certificate	EPC
European Banking Authority	EBA
European Entity for Distribution System Operators	EU DSO
European Network of Transmission System Operators for Electricity	ENTSO-E
European Network of Transmission System Operators for Gas	ENTSOG
European fund for strategic investments	EFSI
European Green Guarantee	EGG
European Insurance and Occupational Pensions Authority	EIOPA
EU Renovation Loan	ERL
European Securities and Markets Authority	ESMA
European Supervisory Authorities	ESA
Financial institution	FI
Greenhouse gas emissions	GHG
Global-warming potential	GWP
Impact assessment	IA
International Energy Agency	IEA
Life cycle analysis	LCA
Long-term renovation strategy	LTRS
Minimum Energy Performance Standards	MEPS
Mortgage Portfolio Standards	MPS
National building renovation plan	NBRP
National energy and climate plans	NECP
Near zero energy building	NZEB
Net Zero Banking Alliance	NZBA
Carbon Accounting Financials	PCAF
Principles for Responsible Banking	PRB
Regulatory Scrutiny Board	RSB
Science Based Targets initiative	SBTI
Smart Energy Expert Group	SEEG
Smart readiness indicator	SRI
Sociedad de Tasación	ST
Targeted Long-Term Refinancing Operations	TLTRO
United Nations Environment Programme Finance Initiative	UNEP FI
Zero energy building	ZEB

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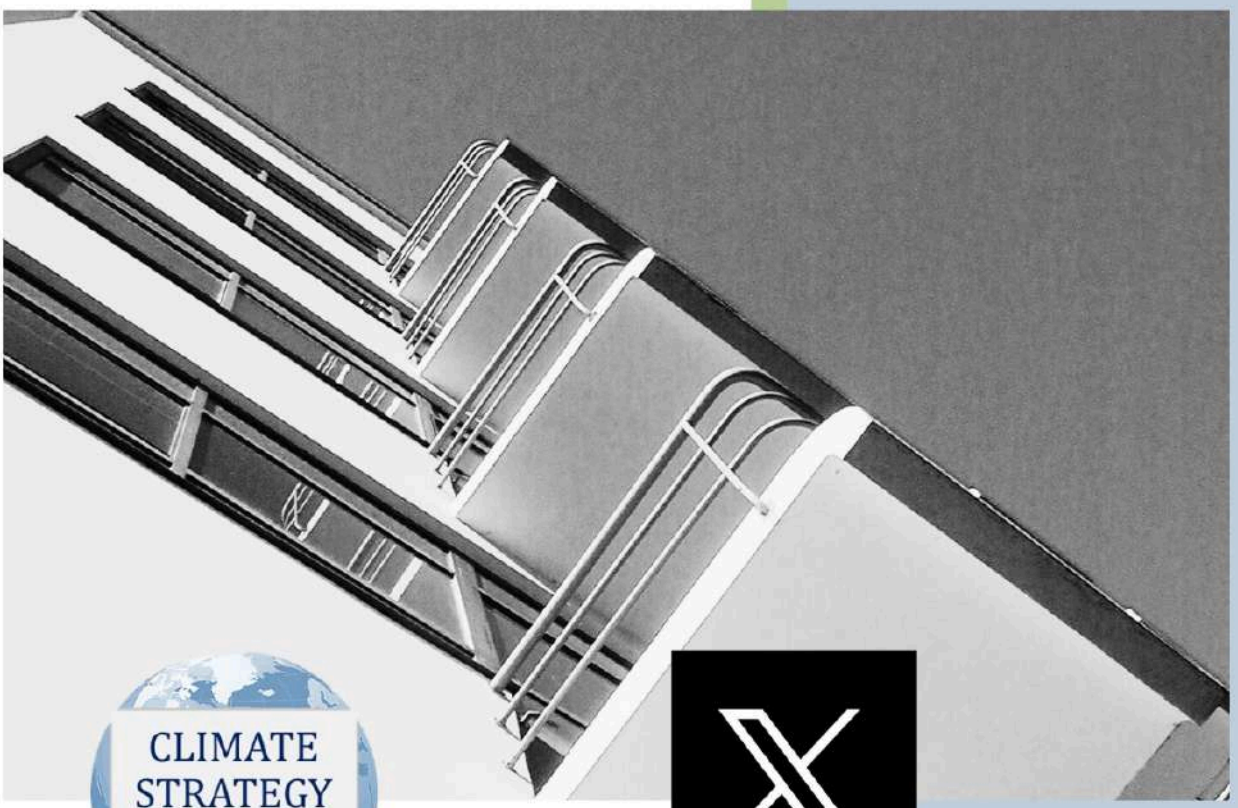

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