

EXECUTIVE SUMMARY

# PCAF Guidance on financing the European building transition to net zero



Financing towards  
net-zero buildings

 a PCAF project

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# Executive Summary

## Need for a net-zero building transition

The transition to a net-zero economy by 2050 and achievement of the Paris Agreement requires the transformation of all sectors. At the same time, the urgency for net-zero emissions and fossil fuel independence is greater than ever. In Europe, the building sector needs particular attention as it contributes to approximately 36% of greenhouse gas (GHG) emissions. Additionally, nearly the entire building stock is considered energy inefficient, with an average building renovation rate of less than 1% each year across countries in the European Union (EU).<sup>1</sup>

## Key role of the financial industry

Significant investments are required to transform the European building sector towards net zero. Building renovation is one of the sectors with the most significant investment gap in the EU. It has been estimated that 275 billion euros of additional investment in building renovation is needed each year to achieve the 55% GHG reduction target of the EU Renovation Wave by 2030 compared to 1990 levels.<sup>2</sup> In order to finance this transformation, the financial industry requires clear guidance on how to set priorities to decarbonize their mortgage and commercial real estate (CRE) portfolios rapidly. While more and more financial institutions commit to net zero and join relevant initiatives, few have defined specific actions to achieve the targets. Upcoming binding regulations such as by the European Banking Authority (EBA)<sup>3</sup> on disclosing financed emissions by 2024 demonstrate the need for action.

## Required guidance on how to decarbonize building portfolios

The purpose of this report is to provide guidance to financial institutions on how to approach the net-zero journey and decarbonize their building portfolios using a stepwise approach, from any starting position. This guidance is intended for any financial institution, particularly for banks and investors with known use of proceeds in mortgage and CRE portfolios.

## Joint vision on net-zero buildings

Financial institutions expressed the need for a joint vision of how a net-zero building is defined, specifically, what the corresponding requirements are and how to get there. This is considered a crucial prerequisite to starting the net-zero journey and financing the European building transition. This guidance provides an aligned net-zero building definition which seeks to reduce the energy use through energy efficiency measures and supply the reduced energy use through 100% renewable energy, preferably on-site. At the same time, a net-zero building does not generate any on-site GHG emissions from fossil fuels and reduces embodied carbon to a significant extent. Corresponding requirements support financial institutions in identifying and financing corresponding buildings. Based on the definition, an overarching pathway towards net-zero buildings guides financial institutions to steer their strategies and actions.

<sup>1</sup> Buildings Performance Institute Europe (BPIE) (2017); European Commission (EC) (2020a)

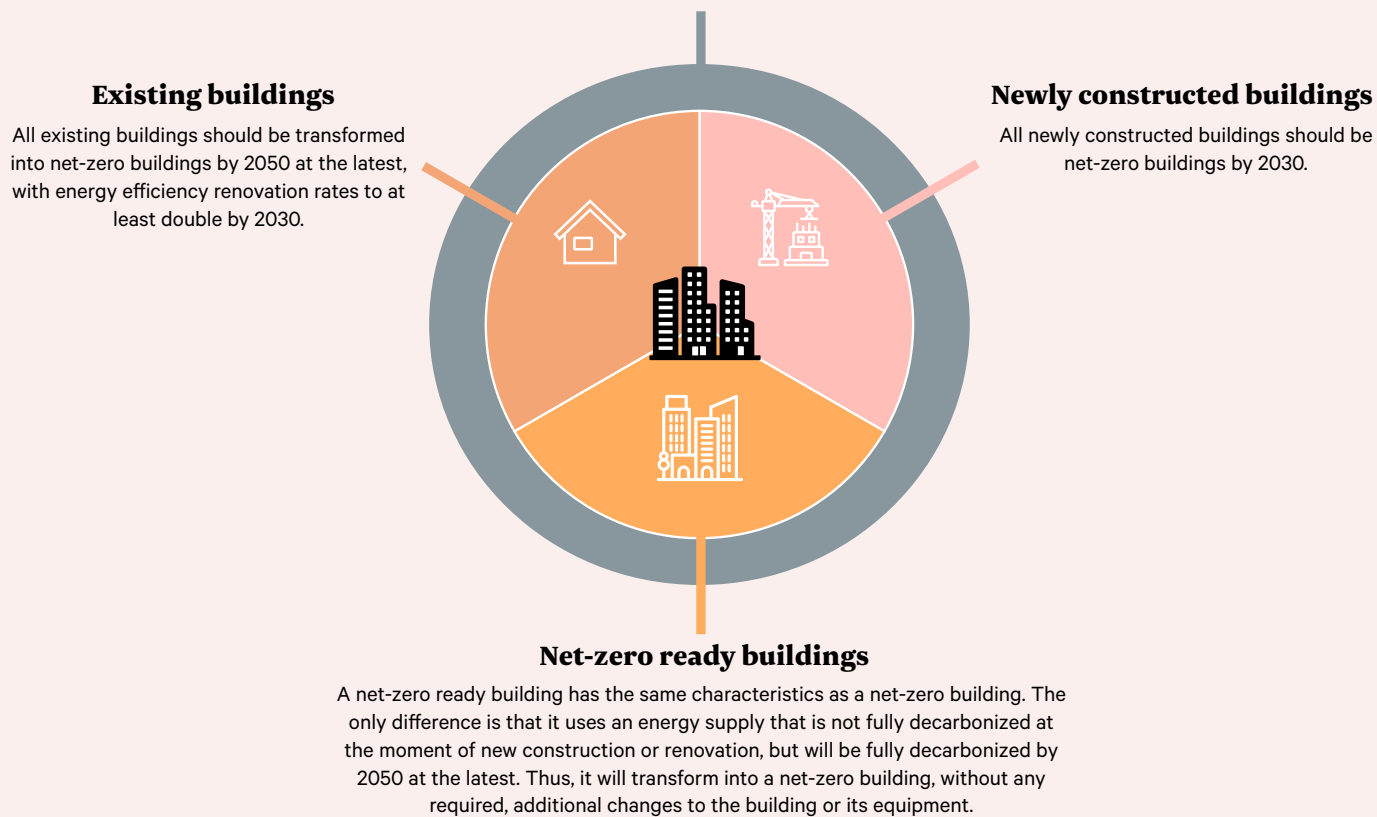
<sup>2</sup> European Commission (EC) (2020c)

<sup>3</sup> In the EBA's binding standards on Pillar 3 disclosures on Environmental, Social and Governance (ESG) risks, PCAF is referenced for providing the methodologies to measure and disclose financed emissions.

Figure 1: Aligned net-zero building definition and its components

## Net-zero buildings

A new or renovated net-zero building is highly energy efficient, does not cause any on-site GHG emissions from fossil fuels and reduces embodied carbon to a significant extent. It uses renewable energy, preferably generated on-site, if technically feasible, and/or off-site to fully cover its remaining, very low energy use.

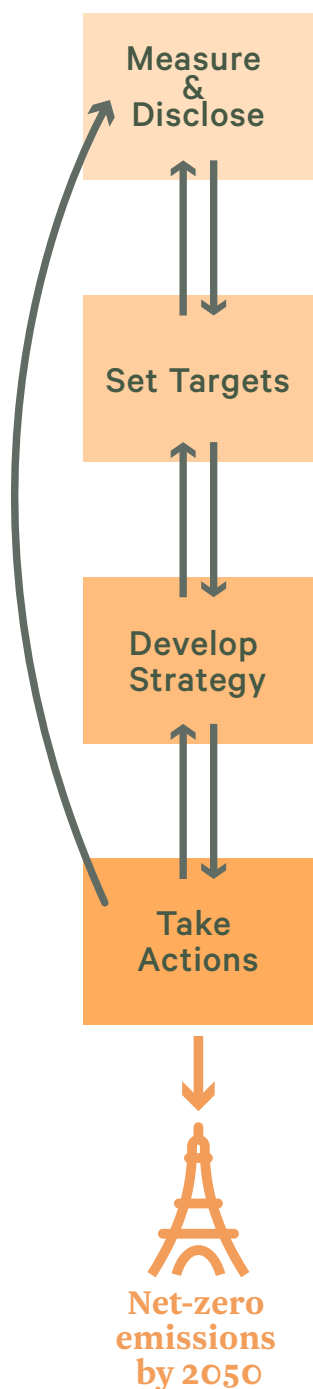


### The net-zero journey

The net-zero journey includes four key steps, i) measuring and disclosing of GHG emissions, ii) establishing climate targets, iii) developing a strategy for implementation and iv) taking action. This guidance presents a stepwise approach along these four steps for financial institutions to decarbonize

their mortgage and CRE portfolios. This approach finds its foundation in the experiences of financial institutions that already started their net-zero journey. It is important to note that it is intended as an iterative process with feedback, lessons learned and good practices continuously feeding into this loop.

Figure 2: Stepwise approach to net zero



## Key steps of the net-zero journey

**Measure and disclose:** Measurement of GHG emissions is the first step in starting the net-zero journey. This data forms the basis on which financial institutions can meet disclosure rules, identify the highest emitters in the portfolio, set climate targets, and prepare further actions. The PCAF European building emission factor database serves as a key tool for financial institutions to overcome data gaps and thus, to measure and track the financed emissions of their building portfolios. This publicly available database offers a specified set of emission and energy factors for mortgages and CRE for all countries in the EU, as well as Norway, Switzerland and the United Kingdom.

**Set targets:** After portfolio emissions have been measured and disclosed, the next step in the net-zero journey – target setting – involves the development of climate targets and establishment of a corresponding portfolio decarbonization pathway. This exercise can be done with the help of the Sectoral Decarbonization Approach (SDA) by the Science Based Targets initiative (SBTi). The decarbonization pathway of an illustrative CRE portfolio in this guidance highlights the immediate need for considerable efforts before 2030 to reach the ultimate net-zero emissions objective by 2050.

**Develop strategy:** Following target setting and pathway development, financial institutions need to create an implementation strategy how to decarbonize their mortgage and CRE portfolio in line with the identified pathway. Based on the characteristics of the building portfolio, corresponding decarbonization plans with appropriate emission reduction measures can be determined. A menu of emission reduction measures based on proven technologies is provided in this report, which financial institutions can apply according to their financed building types and conditions. Illustrative cases depict possible modular combinations of the emission reduction measures depending on the building characteristics.

**Take action:** The last step of the net-zero journey is about making the building transition actionable, particularly through the development and deployment of net-zero transition products and services. A set of suitable financial products and services is presented, possessing considerable climate impact, compatibility with a net-zero pathway and upscaling potential. Depending on financed building types, financial institutions are able to select and implement the applicable financial products and services to decarbonize their building portfolio.

## Urgent need for immediate action

2030 marks a critical intermediate target to achieve a net-zero building stock by 2050. Strong decarbonization efforts need to happen before 2030 to stay in line with the Paris climate goals, especially due to the static nature of the building sector. The later decarbonization measures are initiated, the

more drastic they need to be, resulting in higher costs and stranded assets.<sup>4</sup> Moreover, as the regulatory environment changes, it may become harder to sell poorly performing assets. Consequently, effort levels and speed of activities to decarbonize building portfolios need to increase immediately.

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