



View from Private Markets:

The coming real estate renovation wave – and what it means for investors

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Private Markets

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The decarbonisation of the real estate sector is a challenge society must address to achieve a net-zero economy.

- Real estate accounts for 39% of global greenhouse gas emissions. Beyond property owners and governments, lenders have a vital role to play in funding the carbon transition.
- Demolitions and new construction are highly carbon intensive processes. We cannot build our way to net zero. Retrofits and refurbishments must be an important part of the solution.
- Federated Hermes real estate pathway to net zero focuses on energy efficiency gains and energy usage reductions.



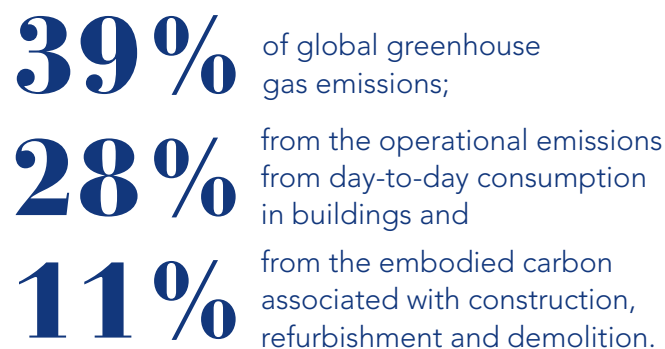
The decarbonisation of real estate is one of the many vital challenges that society must address if we are to achieve a net-zero economy. Yet, real estate and climate change mitigation make for seemingly uneasy bedfellows: real estate accounts for 39% of global greenhouse gas emissions; 28% from the operational emissions from day-to-day consumption in buildings and 11% from the embodied carbon associated with construction, refurbishment and demolition¹; however, this important contribution to global greenhouse gas emissions offers great opportunities to advance the fight against climate change through significant structural adjustments.

The responsibility for making those improvements rests with a multitude of stakeholders: beyond real estate assets' owners and governments, real estate lenders also have an important role to play through their participation in funding the carbon transition.

Great opportunities exist to advance the fight against climate change through significant structural adjustments.

This short paper sets out to provide an introductory insight into the decarbonisation challenges and opportunities faced by the real estate industry and presents a high-level overview of Federated Hermes' approach to tackling these, specifically through financing the carbon transition in commercial real estate.

Real estate accounts for



Longevity goes a long way to reducing embodied carbon

The longevity of a real estate asset is contingent on two main factors: its ongoing utility to occupiers and the ability of its building materials to withstand the ravages of time. The utility to occupiers determines tenants' willingness to pay rent, which in turn drives property value. The durability of the building materials on the other hand, determines the level of capital expenditure required to keep the building operational, and as a result also affects property value.

That said, these two factors do not always work in unison. A building with strong appeal to tenants may not always be durable. Conversely, the most durable building may not always be designed in a manner that appeals to tenants. The case of modern office buildings illustrates this point well.

Traditional masonry and lime mortar constructions can last significantly longer than modern constructions but have fallen out of favour in commercial applications in the modern era.

The flexibility provided by modern office buildings (steel and glass constructions with large open floors) comes at an environmental cost. Steel and glass are nowhere near as durable as traditional stone or brick buildings. Traditional masonry and lime mortar constructions can last significantly longer than modern constructions but have fallen out of favour in commercial applications in the modern era.

¹ World Green Building Council 2019

Brick office buildings are therefore routinely replaced with modern steel frame buildings, not because the latter require unaffordable repairs, but rather because the layout of their spaces no longer suits the requirements of modern occupiers.

Brick office buildings are therefore routinely replaced with modern steel frame buildings, not because the latter require unaffordable repairs, but rather because the layout of their spaces no longer suits the requirements of modern occupiers. Furthermore, though not widely acknowledged to be perishable, these new glass and steel buildings do possess the clear advantage of being built to higher standards of operational energy efficiency.

Embodied Carbon and the retrofitting of existing building stock

Best-in-class new buildings can be incredibly efficient to run, and one could be forgiven for thinking therefore that the solution lies in building lots of new properties to the highest standards. However, both demolitions and new construction are highly carbon intensive processes and account for a significant portion of the real estate industry's carbon footprint. Building our way towards net zero by constructing brand-new operationally Net Zero Carbon buildings is therefore not a feasible solution to the climate change mitigation. Instead, the retrofitting and refurbishment of existing building stock must become an important component of the solution.

The scale of the dilemma is illustrated by data from the European Union which estimates that 85% of the EU's building stock was built before 2001². Given that energy efficiency has only recently started to become a driver of higher rents across Europe; it is fair to assume that the construction of most of the existing European building stock would not have incorporated energy efficiency as a major design feature. Furthermore, if a sizable proportion of this stock was built to late 20th century standard construction specifications, it is also likely that these buildings may soon reach the end of their useful economic life.

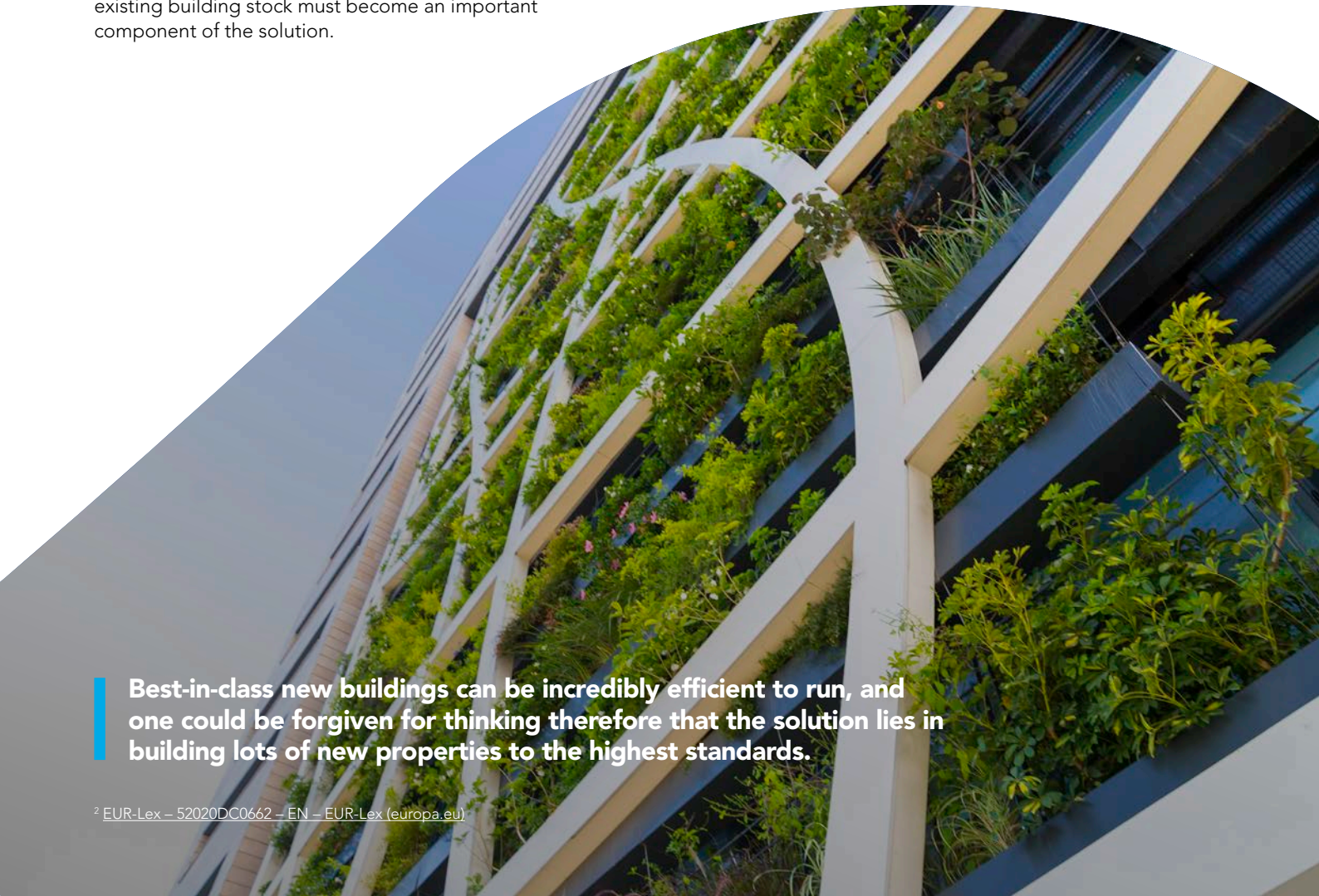
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Therefore, as the energy efficiency of buildings becomes an increasingly important feature for tenants, and as long as the main structure is assessed to be solid, the existing building stock should provide plenty of opportunities for improvements to meet the environmental standards of the future. Significant capital expenditure will be required to ensure the long-term durability of such buildings; and lenders (both banks and institutional investors) have a role to play in providing some of this capital.

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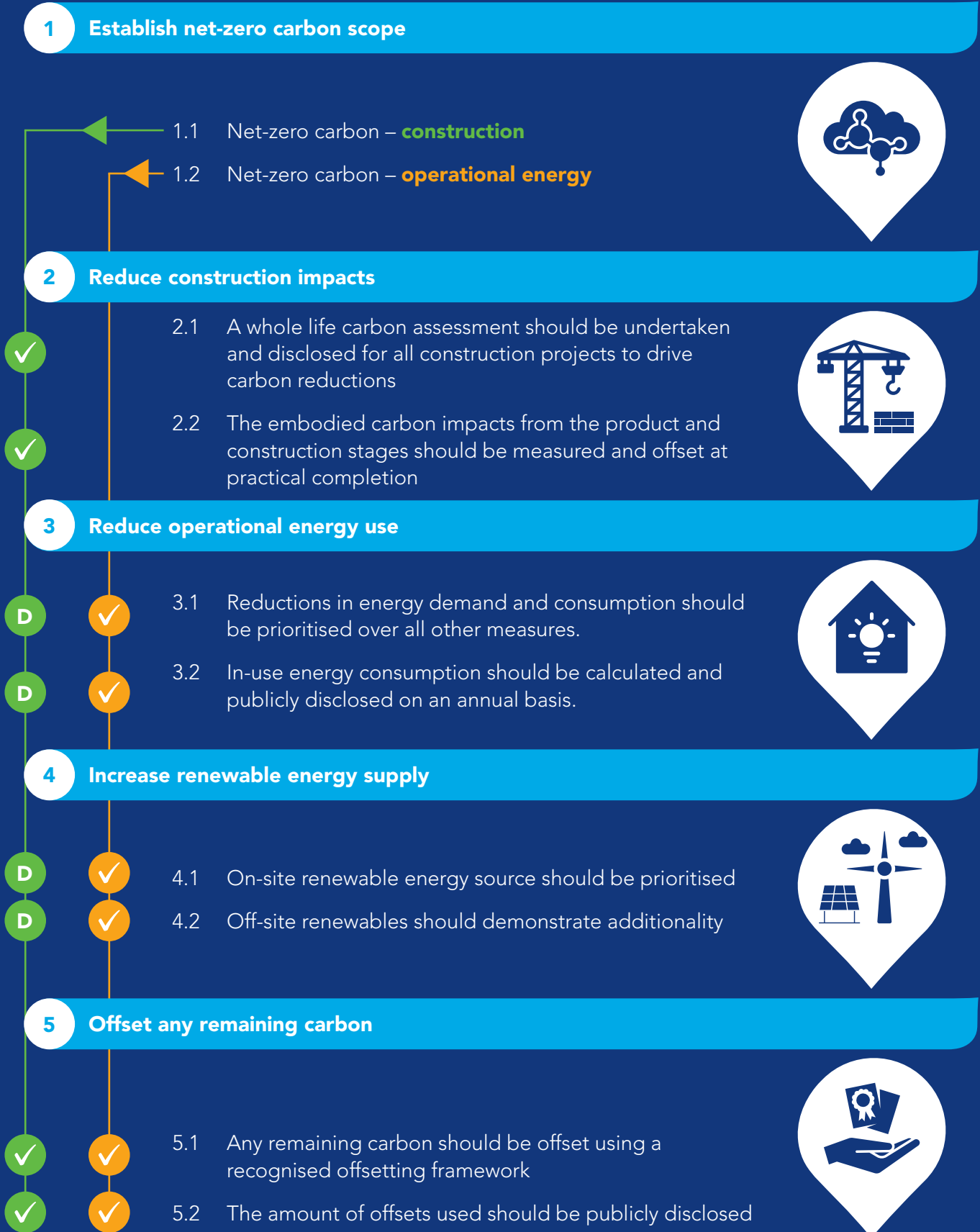
² EUR-Lex – 52020DC0662 – EN – EUR-Lex (europa.eu)



Federated Hermes' Real Estate pathway

The Federated Hermes real estate pathway to net zero focuses on the achievement of energy efficiency gains and energy usage reductions before the complete switch to renewable energy sources (see Box A below).

Box A: Steps to achieving a net-zero carbon building:



We believe that both energy efficiency gains and demand reduction are crucial elements of the net zero pathway. While the share of renewable energy has more than doubled over the past 15 years, we, as a population, still remain highly dependent on fossil fuels³.

With the supply of renewable energy struggling to keep up with persistently increasing demand, it is essential that energy efficiency be improved. We believe that a failure to make the necessary investments to do so increases the risk of real estate assets becoming stranded.

With 'greener' buildings increasingly attracting higher rents and lower vacancy rates, real estate assets that do not meet energy efficiency standards will cease to be commercially viable and will therefore risk becoming obsolete, stranded assets. This risk has significantly increased over the last few years with the toughening of environmental regulations across Europe. The risk of obsolescence is particularly obvious for building stock where a failure to meet basic environmental standards will render the properties illegal to let. Additionally, even without the regulatory risk, the long-term value preservation of these less efficient buildings is likely to be difficult.

As an active lender within the European commercial real estate sector, we welcome tighter regulations on environmental standards. We believe that the requisite higher capital expenditure in the medium term in order to adhere to these standards, will safeguard long-term investment returns.

Long- and short-term trends now favour a more thoughtful approach to energy in buildings; whether it is in order to be net zero in the long-term, to raise rents to ever more climate-conscious tenants in the medium-term or still in the short-term, as a result of concern over gas prices that are the unfortunate playball of geopolitical tensions.

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The current regulatory landscape

The EU Climate Target Plan for 2030 includes a strategy to trigger a 'renovation wave' across Europe that it hopes, will double the annual energy renovation rate of residential and non-residential buildings by 2030. Attaining this rate will help the EU achieve region-wide climate neutrality by 2050⁴. Additionally, clear targets such as these can benefit the industry significantly as it seeks to shed the burden of a high carbon footprint.

EU-wide Minimum Energy Performance Standards (MEPS) are also being set for 2030 using metrics such as Energy Performance Certificates (EPCs) to measure and monitor buildings' energy efficiency. Historically used across Europe to score properties on a scale of A-G, EPCs are being used as a proxy measurement of the suitability of buildings to weather the carbon transition in the regulation of various European countries.

We estimate that in Amsterdam alone around

650,000

square metres of office space could be subject to this enforcement by the end of next year, equivalent to around

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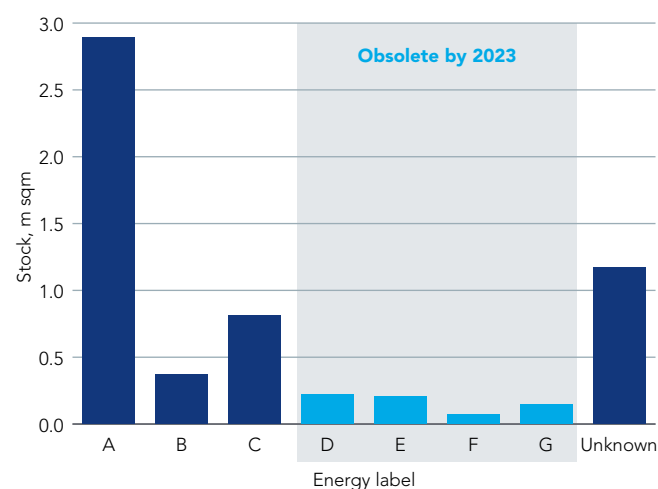
of the stock.

The Netherlands for example, have implemented regulation that will make it illegal from 2023 to let offices with an EPC grade of C or less. Savills estimates that in Amsterdam alone, around 650,000 square metres of office space could be subject to this enforcement by the end of 2023, an equivalent of around 10% of the available stock. Moreover, the regulation prescribes for office buildings rated B or C to become redundant from 2030⁵.

Domestic banks have since changed their lending criteria following the initial introduction of the regulation in 2018, and this, in turn, has had a significant impact on the Dutch real estate landscape.

Figure 1 below which shows the grades of available stock in Amsterdam offices, indicates that only a small portion of the current availability remains within the lower EPC grades. That said, available stock is likely, on average, to be newer than the total stock. We therefore expect that the total stock picture will include a higher proportion of lower-rated buildings.

Figure 1: Energy Performance Certificates (EPCs) in Amsterdam



Source: Savills

³ Eurostat Statistics Explained

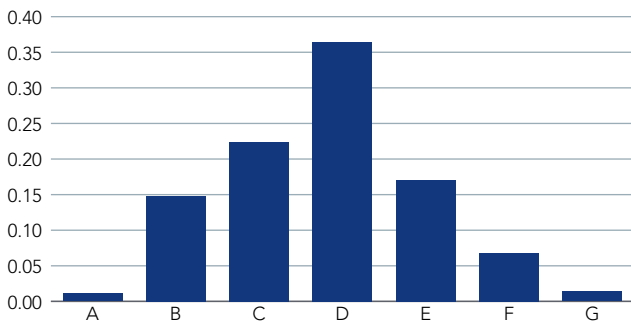
⁴ Renovation Wave Communication (europa.eu)

⁵ Exemptions include monuments and small office buildings.

⁶ To B or not to B, CBRE

In the UK too, EPCs are also being used to set minimal standards for commercial real estate by 2023. Regulation in the UK requires all lettable buildings to achieve an EPC rating of B or above by 2030. A recent study by CBRE estimates that only 31% of the stock of buildings in England and Wales will be at this level by 2030⁶. Significantly more effort will therefore be required to get properties to the required standard. Our analysis of EPCs in the City of London, the UK's largest office business district, indicates that only 16% of building stock is currently graded A or B (see Figure 2).

Figure 2: EPC grades in the City of London by floor area (2021)



Source: Federated Hermes Limited

It is worth highlighting here, however, that EPC ratings do not consider the activities within the buildings. As such, they have been shown to exhibit a low correlation to the buildings' actual energy usage intensity and may therefore not be an ideal measure of energy efficiency.

It can also be argued that since EPCs only look at the likely energy requirement for the use of the building, the current regulatory focus on them ignores embodied carbon, and could therefore inadvertently incentivise demolition and rebuilding to a high standard, which, in some cases, may actually be detrimental to overall carbon emissions, certainly in the short-to-medium term. Proposals are underway to overhaul this system for one that instead gives properties a grade based on energy usage. Nonetheless, EPCs do measure the make-up of buildings and the potential energy efficiency improvements to be made.

Therefore, as flawed as they may be, EPCs are mandatory across Europe in order for most buildings to be let or sold and are therefore widely available. Although currently no minimum requirements exist in many jurisdictions, tighter rules are being contemplated, particularly after the successful roll out of tougher regulations in the Netherlands.

At Federated Hermes, we take a holistic approach and incorporate in our assessment of a building's suitability to meet net-zero target, a number of additional criteria, as shown within box B below.

Box B: Criteria used by Federated Hermes to indicate a building's suitability to meet net-zero targets

Our real estate investment boundary includes assets at different stages of their lifecycle. The key considerations for net-zero alignment are:



Source: Federated Hermes real estate pathway to net zero

As real estate lenders, we are dedicated to funding the transition and to doing so by going above and beyond regulatory requirements. We use a variety of criteria and proxies to evaluate which buildings are most suited to the energy transition. As part of that assessment, we look to establish whether sufficient energy efficiency measures or plans have been put in place in order to meet today or near future's energy usage targets.

We analyse the existing energy efficiency of all the buildings that back our loans, in line with the criteria set out within Box B. We also incorporate the Carbon Risk Real Estate Monitor (CRREM) targets into our loan agreements, compelling sponsors, to use best endeavours to improve energy usage intensity (EUI) in line with the designated CRREM targets throughout the term of the loan⁷.

We believe alignment with the CRREM targets is essential in order to tackle the supply/demand issues with renewable energy.

Retrofits and refurbishments as part of the solution

As fundamentally prudent lenders whose investment approach is intentionally and consistently defensive, we believe that not all loans that contribute to this refurbishment or retrofit wave need take on full refurbishment risk. Whilst full refurbishments are generally performed on vacant properties and as such, exhibit a risk profile that may not always suit the appetite of conservative investors; many maintenance activities can be undertaken on properties with tenants in situ – i.e. while the property is generating ongoing income. Examples of such activities include the placement of solar panels, the renewal of plant and machinery for best-in-class systems and works on floors that naturally become vacant from time to time.

As lenders, we seek to work with sponsors that we believe demonstrate an understanding of value preservation through the pro-active and dynamic management of a building's energy efficiency transition. This is consistent with our long-term underwriting approach and with our objective of building portfolios that are backed by resilient, income producing assets.



Responsible Real Estate Lending

The analysis above provides an introductory insight into the scale and complexity of the type of investments required to bring the European building stock up to the standard required to facilitate the net-zero energy transition.

While many new buildings, particularly offices, are being built to very high energy efficiency standards, this is only a small part of the solution. A wave of energy efficiency retrofits and refurbishments along with the accompanying significant capital to fund them, is also required in addition this effort, if we are to meet the net-zero objectives that we have set ourselves as a society.

The impact of greenhouse gas emissions does not discriminate between the polluter and the rest of society. Everybody is affected by high levels of carbon dioxide in the atmosphere, and therefore everybody shares in the responsibility to reduce emissions. Shifting the burden onto others, by merely divesting or only allocating to green buildings will not solve the issues.

At Federated Hermes, we believe that responsible real estate lending must incorporate a pro-active approach to dealing with properties that are at risk of falling behind required or acceptable standards. Therefore, rather than only underwriting loans that are backed by 'green' buildings, we also work with borrowers - that demonstrate the requisite expertise and commitment – and help them to keep their buildings on track to meeting ever tightening regulations. As a result, we also in the process help them ensure that their properties continue to appeal to an ever more discriminating tenant demographic.



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⁷ <https://www.crrem.eu/about-crrem/#:~:text=CRREM%20aims%20at%20developing%20a,the%20analysis%20of%20regulatory%20requirements.>

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