IPF

RESEARCH

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Pathways to Net Zero Carbon Emissions in International Real Estate Investment

SUMMARY REPORT

COMMISSIONED BY THE IPF RESEARCH PROGRAMME

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This Programme supports the IPF's wider goals of enhancing the understanding and efficiency of property as an investment. The initiative provides the UK property investment market with the ability to deliver substantial, objective and high-quality analysis on a structured basis. It encourages the whole industry to engage with other financial markets, the wider business community and government on a range of complementary issues.

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Pathways to Net Zero Carbon Emissions in International Real Estate Investment

Report

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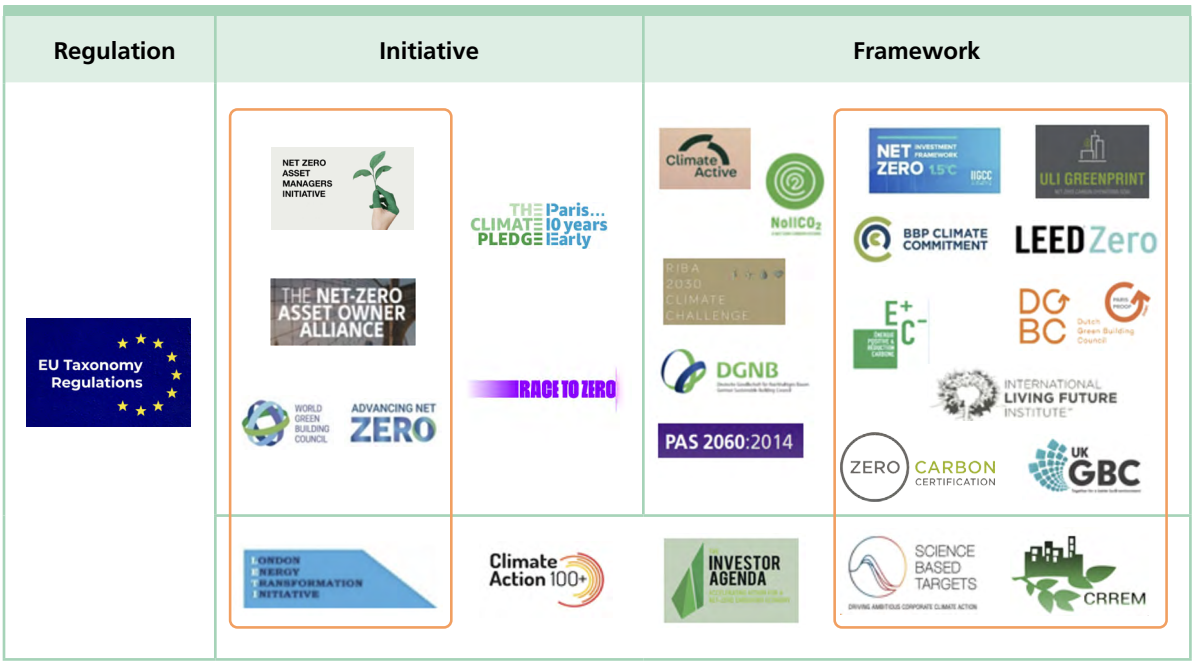
INTRODUCTION

The built environment is one of the largest contributors to global carbon emissions. Consequently, a growing number of schemes are emerging to guide the real estate industry to net zero carbon (NZC) emissions, each providing different interpretations of what net zero means and how to achieve it. This research identifies and examines the principal schemes in the market, their use in transitioning the global real estate sector to NZC, and the main challenges the industry faces. Recommendations for the market and individual organisations are then provided, based upon these findings.

Figure 1: Examined NZC Regulations, Initiatives & Frameworks



This summary paper:

- Provides an overview of a set of major net zero schemes relevant to the real estate investment industry (outlined in orange in Figure 1), and the issues surrounding their use and application in transitioning the global real estate sector to NZC emissions;
- Describes the identified challenges that the industry faces in delivering a true global net zero outcome and the potential for unintended consequences; and
- Summarises the findings of the study and the key takeaways for real estate investors, outlining a set of key principles that can form the basis of the transition to NZC in real estate.

DEFINING NET ZERO CARBON IN REAL ESTATE

In the context of real estate, the basic premise of NZC is that greenhouse gases (GHGs), emitted to the atmosphere by the activities of an entity (i.e. a building, fund or company), are balanced by the removal of an equivalent quantity of emissions over a given period of time. While a simple concept in principle, a lack of agreement on a uniform definition, due to the heterogenic nature of real estate, means that two entities' commitments to net zero can have very different meanings. Additionally, commitments to 'net zero' can be made at the building, fund, portfolio or company-level, and, in many cases, these commitments may only cover a limited proportion of the entity's GHG emissions. Stakeholder feedback[1] noted that this lack of consistency in approach was a source of confusion, even to the well-informed.

While such terms as 'Zero carbon', 'NZC', 'carbon neutral' and others may be used interchangeably to mean the same thing, their strict definitions are substantially different:

- **Carbon neutral.** Where a building's GHG emissions have been measured and countered with an equivalent quantity of GHG reductions or removals, which may be in the form of offsets. In this situation there is no obligation to deliver any emissions reduction or abatement.
- **NZC efficient.** Where a building has undergone steps to improve energy performance and remove any inefficiencies relating to energy use. A concern relating to future energy use is the reliance upon electricity and the limitations of its production from zero carbon sources.[2] Removing energy inefficiencies from a building (and thereby reducing the energy demand) will lessen the requirement for electricity and ensure that, by 2050, each economy is consuming only the level of electricity that is expected to be produced from zero carbon sources.
- **NZC ready.** Where a building has identified and eliminated any inefficiencies and has also replaced any fossil fuel-driven heating, hot water or catering services with low carbon equivalents. The building is 'ready' for the final step to NZC – the total decarbonisation of the electricity grid.
- **NZC.** A building that is NZC ready and based in a location with a fully decarbonised electricity grid. The burden of this definition therefore lies with policy makers and operators of national electricity grids. Some approaches to defining NZC advocate the use of the term 'net zero' at the 'NZC efficient' stage providing that the building has an action plan or trajectory in place to get there.[3]
- **Absolute zero.** This refers to the point at which all emissions have been eliminated from the building, with no offsetting. This includes the total elimination of embodied carbon emissions – those associated with the manufacture of construction materials and the construction process.

[1] In this report, commentary from industry experts ("Stakeholders"), gathered in interviews and workshops, is referred to as "Stakeholder feedback".

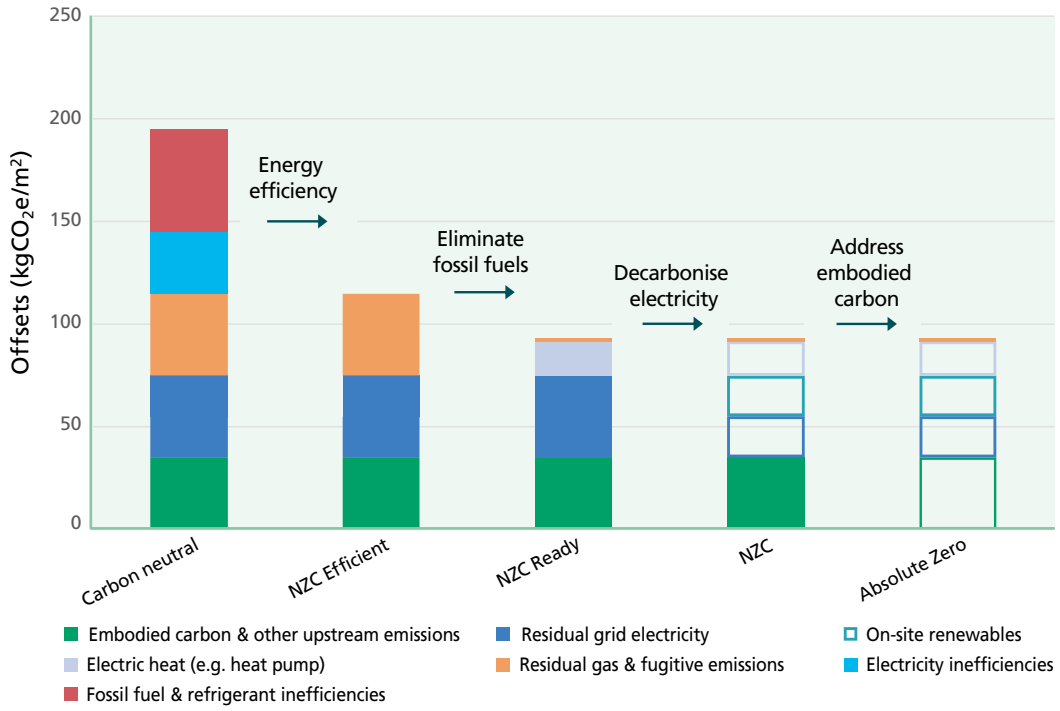
[2] It is widely accepted that future electricity demand will be significantly greater than it is today, as the reliance on fossil fuel energy lessens.

[3] https://www.ukgbc.org/wp-content/uploads/2021/03/Net-Zero-Carbon-levels-of-performance.pdf.

DEFINING NET ZERO CARBON IN REAL ESTATE

Figure 2 graphically illustrates the differences in definitions and highlights the quantities of offsets required under each. The coloured segments in this graphic refer to different sources of emissions while the transparent segments indicate that the building's energy intensity is unchanged but the associated carbon emissions have been eliminated on the supply side of the building's value chain.

Figure 2: Variances in Building-level 'Zero Carbon' Definitions



To differing extents, these definitions are all (bar 'absolute zero') dependent on the use of carbon offsets – actions taken by a business or entity to compensate for GHG emissions released into the atmosphere. Offsetting is a means of paying for another party to reduce or avoid emissions, or absorb atmospheric CO_2 to compensate for one's own emissions. Stakeholder feedback was that, in the transition to NZC, the use of offsets should be minimal and limited to the most hard-to-abate areas, such as embodied carbon within the construction process. Stakeholders expressed the view that where offsetting is used, it must be conducted to the highest levels of robustness and quality (permanent carbon removal) at a price that reflects the true societal cost of carbon.

EXISTING NET ZERO SCHEMES

Recognition, within the real estate industry, of the importance of addressing GHG emissions and achieving NZC has grown substantially since the signing of the Paris Agreement (2015). Concurrently, the number of schemes emerging with the aim of guiding the transition of the real estate industry (and other sectors) to NZC has greatly increased, at both the building and corporate level. This proliferation of interdependent net zero schemes has resulted in a confusing landscape for real estate investors, asset managers and occupiers, illustrated in Figure 3.[4]

The figure differentiates each scheme under four umbrella terms:

1. **Industrial bodies, initiatives and organisations** that fund or facilitate the development of NZC schemes;
2. **NZC initiatives** acting as vehicles for members/signatories to make collective commitments to reach NZC;
3. **NZC frameworks** that exist in the form of codified principles, rules and guidelines for translating headline commitments into tangible action; and
4. **NZC targets** (including standards and certification schemes) used to assess the NZC performance of individual assets, funds or portfolios at a quantitative level.

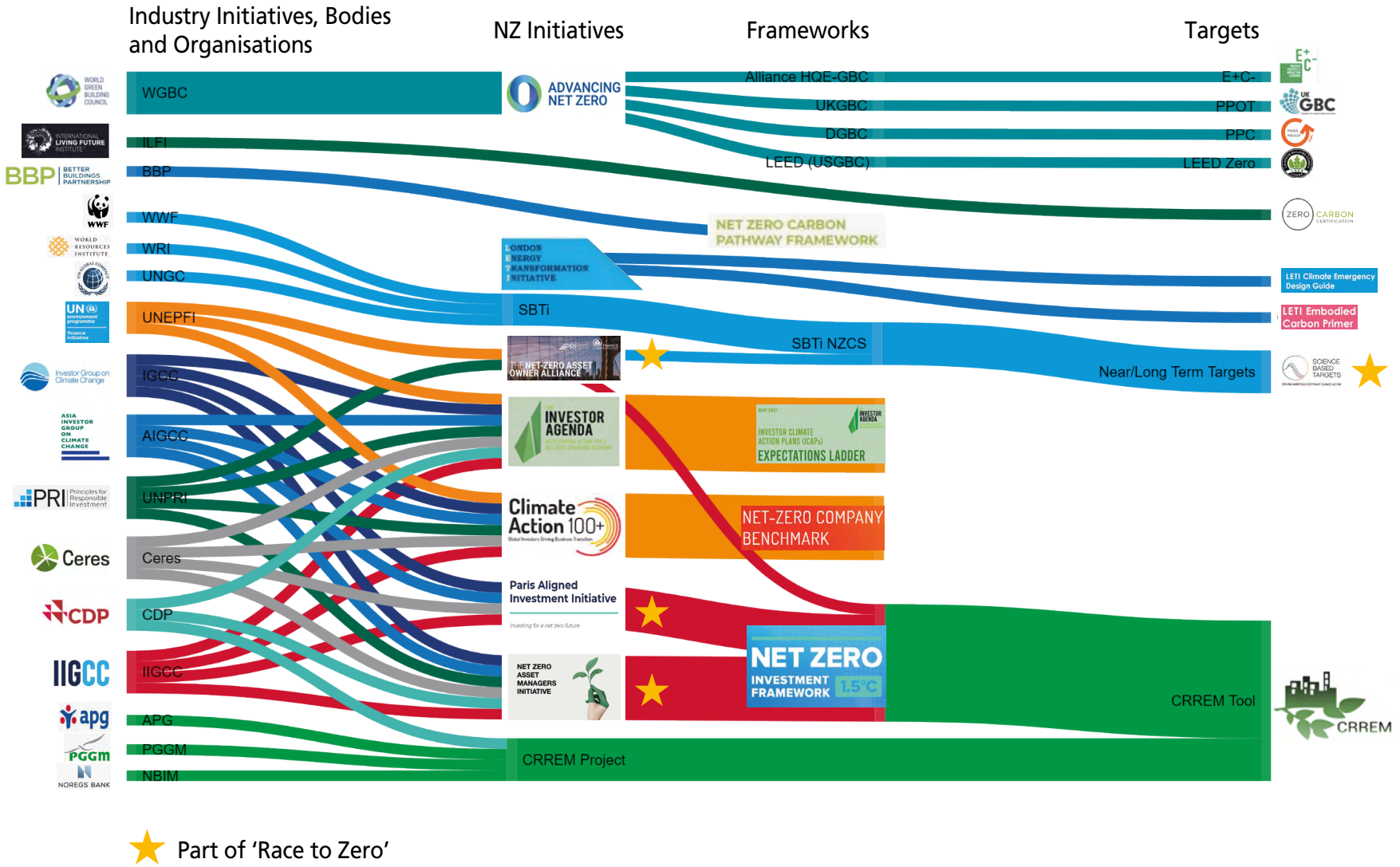
The myriad options available and lack of transparency in the scope of commitments facilitated by net zero schemes makes peer comparison difficult and potentially exacerbates the misalignment of NZC strategies. For example, some schemes only require high level commitments to net zero by a specific, often distant, date with no requirement for short-term action. Further, some schemes provide minimal guidance on how this will be achieved or how progress toward this target will be verified.

The main reason for the proliferation of net zero schemes are the diverging needs of different market actors, the diversity and uniqueness of each building and real estate portfolio, and the broad scope of ambitions with which organisations are seeking to align.[5] It is therefore possible for two real estate businesses to commit to very different strategies – both labelled as 'net zero' under any one of the schemes in Figure 3 – without the distinctions being clear.

[4] This is not an exhaustive list of net zero schemes available within the real estate industry. A focus is placed upon those that were frequently mentioned within Stakeholder feedback and those that go beyond a high-level commitment to achieve NZC (such as The Climate Pledge).

[5] This can be in terms of emissions targets, scope or organisational level of commitment (corporate or building-level).

Figure 3: Key NZC Schemes and Developers/Sponsors[6]



[6] All acronyms are included in the terminology section in the main report.

EXISTING NET ZERO SCHEMES

In addition to the schemes noted above, there are an increasing number of city policies and initiatives that are being introduced to drive the delivery of NZC buildings.[7] The amount of climate-related regulations is also growing.[8] While most market-driven schemes rely on the use of real, measured data (where it is available), many current regulatory mechanisms rely on the use of theoretical metrics (such as Energy Performance Certificates – EPCs), which do not necessarily relate to actual emissions performance.[9] This further complicates efforts to transition the real estate industry to NZC, as investors will have to balance compliance with policy and real emissions reductions.

Currently, high-level initiatives are insufficiently detailed to influence meaningful change, while detailed frameworks do not cover the broad range of different activities within the real estate sector. The market needs greater clarity and alignment on what constitutes 'net zero' and therefore requires a clear set of principles, upon which the transition to net zero in the real estate industry can be based. These are described in the findings and recommendations section of the report.

Comparison of Net Zero Schemes

The study examined 13 major net zero schemes used within the real estate industry[10] and compared the schemes using four determining factors: applicability, emissions scope, geographic relevance and asset type. This section provides an overview of the key takeaways from this comparison:

Applicability

- Six of the 13 schemes were considered applicable to occupiers, asset managers and investors, although none are commonly used by all three.
- Asset managers use the most diverse range of schemes to satisfy their requirements, combining different schemes to address NZC at the building, portfolio and corporate levels.
- Occupiers often set NZC commitments at the corporate level with little consideration of building level impacts, presenting a potential source of misalignment in net zero definitions.

Emissions scope

- Eight of the 13 schemes provide specific, quantifiable reduction targets for operational energy attributed to a building landlord, while only three directly address embodied carbon with equivalent 'hard' targets.
- Stakeholder feedback suggests that best practice is to focus on the building's whole life carbon[11] impact, however this is not currently being realised as only two of the 13 schemes consider whole life carbon, neither of them with 'hard' targets.
- It is likely that in the future, many schemes will require provision and verification of real data to ensure that stated emissions reductions are being achieved.

[7] The C40 Cities initiative is an active facilitator of city-level commitments - https://www.c40.org/other/net-zero-carbon-buildings-declaration.

[8] Such as the European Union's Sustainable Finance Disclosure Regulation and Taxonomy, and the Taskforce for Climate-related Financial Disclosures

[9] Non-domestic building EPC grades and actual energy consumption for the same building show no statistical relationship – https://www.betterbuildingspartnership.co.uk/real-estate-environmental-benchmark-2019-energy-snapshot.

[10] These are outlined in Figure 1, however the Net Zero Asset Managers Initiative was excluded due to its utilisation of the Net Zero Investment Framework and the Net Zero Asset Owner Alliance was excluded as its guidance reverts to that set out by the Science Based Targets initiative (SBTi). Additionally, the SBTi near-term targets and their Corporate Net Zero Standard have been analysed separately.

[11] The carbon emissions arising from the entire asset lifecycle.

EXISTING NET ZERO SCHEMES

Geographic relevance

- The extent of the challenge of achieving NZC is significantly influenced by electricity grid carbon intensity. Consequently, assets located in regions that rely heavily on fossil fuels for electricity generation will find it more difficult to reach NZC status.
- It is important for market actors to be aware of the net zero definitions and schemes of the national Green Building Councils in each invested country – as well as city, state and national regulation – to avoid any misalignment of definitions.

Asset type

- Most schemes (seven of the 13) provide only general targets with no asset type specificity. Of the schemes investigated, the Carbon Risk Real Estate Monitor (CREEM) project has the broadest consideration of specific targets by asset type.
- The diversity of energy use intensity in real estate arising from differences both in energy efficiency and intensity of use, even within specific building types, means that single energy use intensity targets by country and/or asset type may not be wholly appropriate.

Case Studies

The research compared 18 case study buildings – spanning six asset types and three geographic regions (Europe, North America and Asia) – against their applicable scheme targets. Based on a combination of real building data and various industry benchmarks, Figure 4 shows the whole building energy use intensity[12] of each case study building, with the height of each bar representing the typical baseline energy performance. Potential reductions in grid energy demand were identified for each case study, including energy efficiency measures, heat decarbonisation and on-site renewable energy installation. These reductions (combined in the green segment of the figure) are highly dependent on asset type. However, analysing the reduction potential of each building emphasised the significant energy and carbon savings that can be realised through immediate implementation of simple control and management measures. Figure 4 also shows how the energy intensity targets set by CRREM vary by location and asset type. While many of the 2030 targets are believed to be achievable, the 2050 targets are in most cases not achievable with current technologies even with more capital intensive and disruptive measures.

Figure 5 compares the 2030 carbon intensity targets, provided by a selection of net zero schemes, with the typical baseline performance of commercial office buildings in the Netherlands, USA and Australia. This figure shows the wide variation in requirements for carbon reductions by 2030 under different net zero schemes and further highlights the lack of market consensus on the necessary stringency of short-term/interim targets.

Further detail on the case study analysis is provided in the full report.

[12] Expressed in kWh delivered energy / m^2 Gross Internal Area.

EXISTING NET ZERO SCHEMES

Figure 4: Technical Potential of Case Studies (Energy Basis)

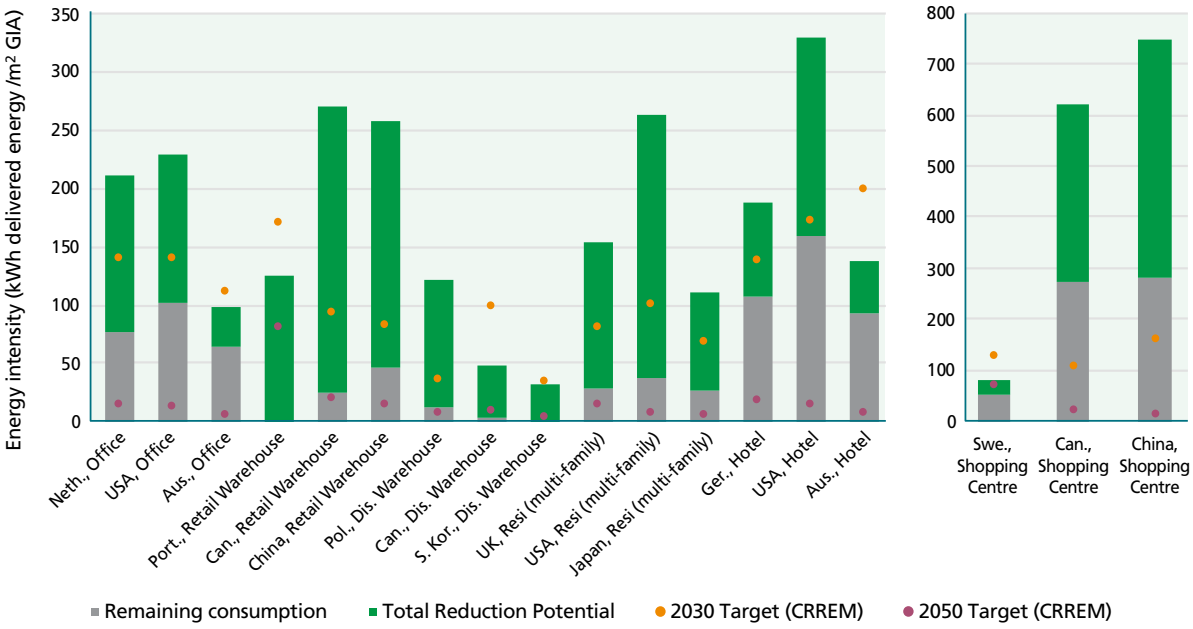
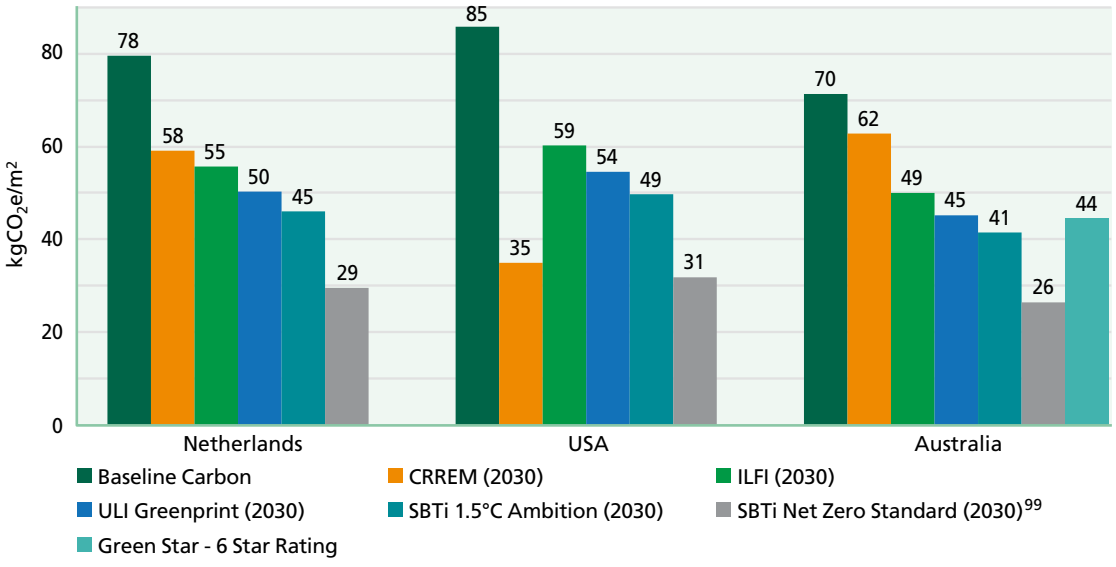


Figure 5: Regional Differences in Commercial Office Carbon Intensity Targets



CHALLENGES AND ACTIONS

The research identified six main challenges facing the real estate industry's transition to NZC. Table 1 sets out these challenges, alongside actions that can be taken by the market, and individual real estate investors, to help overcome them.

Table 1: Key Challenges and Actions

Challenge	Action from the Market	Action from Real Estate Investors
Inconsistent net zero definitions	• Highlight differences between net zero schemes • Define core principles of net zero as a basis of future certification schemes	• State clear, measurable zero/carbon neutral goals and commitments • Disclose verified performance metrics • Support adoption of consistent net zero principles
Misaligned approaches to net zero from landlords and occupiers	• Document examples of landlord-occupier collaboration on net zero projects and buildings • Delineate responsibility between 'base building' and occupier energy performance benchmarking	• Identify misalignment between schemes used by occupiers and investors • Engage in owner-occupier forums • Engage with managing agents to better collaborate with occupiers
Skills gap around net zero concepts and practices	• Work with relevant industry bodies and providers to develop specific training courses • Incorporate content on NZC within key professional qualifications	• Integrate training on net zero concepts into induction materials • Utilise external courses to upskill current workforce on sustainability concepts • Implement skill sharing strategies between sustainability experts with wider business
Limited evidence on costs of net zero retrofit	• Develop costed examples of asset level net zero transitions • Incorporate NZC into the valuation process	• Improve interdisciplinary collaboration to gain a rounded picture of transition costs • Advocate merits of net zero property to prospective occupiers and valuers
Lack of primary data for GHG footprinting	• Include a wider scope of emissions in commitments, derived from primary data • Mandate data sharing between landlords and occupiers	• Amend procurement specifications and green leases to include the sharing of energy and emissions data • Encourage greater landlord-occupier collaboration, incentivise data sharing and advocate the value of green clauses • Provide support to suppliers on carbon accounting and disclosure
Lack of government leadership	• Introduce performance-based policy frameworks for rating buildings at base building, tenant, and whole building levels • Introduce requirements to disclose embodied carbon of new developments and major refurbishments	• Provide pressure and support to governments through consultation responses and lobbying • Engage in industry forums designed to develop best practice to help steer policymakers

UNINTENDED CONSEQUENCES OF NET ZERO

There are likely to be unintended consequences in moving to NZC, as net zero goals come into conflict with other priorities and objectives. Stakeholder feedback highlighted five notable areas where unintended consequences might arise. These are outlined below, along with possible responses to mitigate the potential risks:

1. Embodied versus operational carbon[13] trade-off – redevelop or refurbish?

The journey to NZC emissions will involve the implementation of energy efficiency upgrades, on-site renewable energy systems and low carbon heating systems. While delivering a reduction in operational carbon, the embodied carbon associated with the manufacture and installation of these technologies can be significant. A focus on operational carbon may therefore result in sub-optimal investment decisions from a net zero perspective. Additionally, embodied carbon data is currently limited within the industry, further complicating the trade-off.

Possible mitigants:

- Greater pressure placed on suppliers and construction companies by real estate developers to undertake whole life carbon assessments of the materials and equipment being installed, initiating a shift toward low carbon materials and processes.
- Employment of lifecycle assessment[14] tools during the design stage to compare the embodied carbon impacts of design choices.
- Implementation of internal carbon pricing – at a level reflecting the true societal costs of carbon – to provide an internal price signal and drive net zero optimal build specification choices.

2. 'Asset stranding' – disposal or retrofit?

A term coined by the CRREM project to assess carbon risk, an asset may become 'stranded' if action is not taken to decarbonise it in line with predicted requirements and timelines. The incipient devaluation of assets that pose a greater carbon risk may lead to widescale disposal of risky asset classes. This reallocation of carbon liability could divert investment away from low carbon retrofits and result in a higher carbon outcome as assets are demolished and rebuilt.

Possible mitigants:

- Improvement in the understanding of the capital costs of delivering net zero performance for existing buildings, through NZC audits and exemplar projects.
- Incorporation of NZC assessments into acquisition due diligence, and balancing of risks against opportunities associated with the cost of a NZC transition.
- Acceptance of a lower rate of return on capital used to transition to NZC, to protect future returns.
- Application of an internal carbon price in decision making around disposals, refurbishments and developments.

[13] Carbon emissions associated with the operational stage of the asset lifecycle – mostly attributed to emissions from energy use in buildings.

[14] A methodology used to calculate the whole life carbon of a product.

UNINTENDED CONSEQUENCES OF NET ZERO

3. Single net zero certification – is diversity needed?

Stakeholder feedback suggests concern that a single approach to NZC certification will put the industry at risk of 'putting its eggs into one basket', particularly if the scheme is later found to be ineffective.

Possible mitigants:

- Convergence on a robust and lasting set of net zero definitions and principles that can underpin and standardise a diverse range of net zero schemes in the market.

4. Individual building focus – will this miss out on a more holistic approach?

Considering a NZC transition strategy for buildings independently of wider municipal or regional systems may cause asset managers to miss collaboration opportunities with wider stakeholders seeking to deliver NZC at the city or district level.

Possible mitigants:

- Engagement, by asset owners and managers, with city and district governments to identify opportunities for holistic approaches.

5. Reliance on electrification – can the supply side deliver?

Replacement of fossil fuel-driven heating systems with electrified solutions, such as heat pumps, will be necessary to enable the full decarbonisation of the built environment. This large increase in electricity demand (on top of that from the widespread electrification of transport) will require significant investment in generation and distribution network reinforcement, which may present additional risks.

Possible mitigants:

- Disclosure of operational energy performance to allow governments to base infrastructure investment on more accurate data.
- Identification, by governments, of the potential impacts of wholesale electrification of heating, hot water and catering to understand the measures and investments that will be necessary to address generation capacity, network reinforcement and heat demand profile changes.

FINDINGS AND RECOMMENDATIONS

This project identified five key messages relating to the transition of real estate investment to NZC:

1. Demand for NZC property is increasing, as a growing number of governments, investors and occupiers make public commitments to NZC.
2. Misaligned definitions of NZC (and how to reach it) creates a source of confusion in the market. This is due to the myriad of market-driven and regulatory schemes being used for public commitments.
3. Convergence on a common definition of NZC from asset owners, managers and occupiers is required to provide a robust framing of net zero. This will support the alignment between net zero schemes and the appropriate allocation of capital for carbon reduction.
4. Several challenges exist for the industry to overcome, including a skills gap around net zero concepts and practices, limited evidence of the costs of net zero retrofit and a lack of primary data to quantify the carbon impact of some aspects of real estate investment.
5. Further challenges are posed by the potential unintended consequences of the NZC transition, including high embodied carbon impacts from retrofits and redevelopment, and the social and economic impacts of asset 'stranding' due to perceived climate risk.

A set of principles has been developed from the research, to underpin the meaning of net zero in real estate and recommendations for the market to integrate them into best practice.

Market participants do not need to wait for this integration, rather they can act immediately to support the transition of the industry to NZC. A set of recommendations are also outlined for real estate investors to implement the net zero principles throughout their own investment, development and operational practices.

Key Principles of Net Zero Carbon in Real Estate

1. **Immediate action.** Requirements for signatories of NZC schemes to take short-term actions to reduce their carbon footprint will make commitments more robust and give a greater level of accountability.
2. **Energy efficiency first.** A robust and well-managed approach to delivering net zero by 2050 means matching building energy demand with a realistic expectation of each nation's renewable energy capacity.
3. **No fossil fuel use on site.** The transition of all buildings to electrified heating, hot water and catering options is critical. Designing-in these features to all new buildings now will avoid the continuation of fossil fuel-driven infrastructure and provide the opportunity for the market to address the skills gap in heat pump installation.
4. **Use of whole building scope.** Considering net zero from a whole building perspective will give greater insight into transition requirements, even if the performance of landlord - and occupier-controlled energy uses is better benchmarked separately.
5. **Landlord and occupier collaboration.** Greater landlord-occupier collaboration to overcome technical, commercial, and cultural barriers will be an essential component of success. The sharing of information and alignment of strategies between landlords and occupiers are key enablers, which will extend to the choice of net zero schemes. Agents such as valuers and building managers acting for each party will also need to participate in and reinforce this collaboration.

FINDINGS AND RECOMMENDATIONS

6. **Whole life carbon accounting.** Carbon accounting within the built environment should require the consideration of whole life carbon impacts as well as operational emissions (which are most commonly accounted for currently). This will encourage real estate developers and asset owners to incorporate carbon into decision-making processes throughout the asset lifecycle.
7. **Differentiate property- and corporate-level net zero claims.** Robust NZC standards or definitions are required at the property level for the market to effectively price in premiums or discounts. Corporate NZC schemes address overall transition strategies and cover a broader scope of emissions; the more carbon sources that are included, the more robust the commitment. The difference between these two levels of net zero claims should be transparent to all stakeholders.
8. **Minimal use of offsets in any net zero status.** Limiting offsetting to the most hard-to-abate areas, accounting for a minority of baseline emissions, encourages a focus on emissions reduction. Where offsetting is used, it should be conducted to the highest levels of robustness and quality (i.e. permanent carbon removal), at a price that reflects the true societal cost of carbon.
9. **Standards with consequences.** Building level net zero certifications and corporate net zero standards should have a mechanism to rescind certifications if positive progress towards the target is not evidenced, or estimated data is not superseded with real data in a given timeframe.

Recommendations for the Real Estate Investment Market

1. **Certify NZC.** While some net zero certifications already exist, the real estate investment industry has the ability to drive the integration of the net zero principles outlined into all building certification schemes. This will bring clarity to the market around key terms, make it harder for ambiguous net zero claims to be made and facilitate the 'pricing in' of net zero performance.
2. **Measure, don't guess.** Basing property level net zero reporting on measured data, not estimations, will make for more credible and meaningful targets. This will require an industry-wide push for greater landlord-occupier data sharing and collaboration, including development of best practice guidance.
3. **Develop passports for buildings.** Building Passports covering theoretical and measured performance, as well as planned actions towards NZC, should be standardised across the industry and used for both policy compliance and market transactions.
4. **Commit to net zero at the corporate level too.** A corporate NZC standard will also be necessary (the SBTi Corporate Net Zero Standard is the current front-runner) to cover the full scope of emissions associated with real estate investment. The industry should work with existing frameworks to ensure that they meet the needs of the sector.
5. **Encourage government leadership.** Government leadership is necessary to introduce performance-based policy frameworks for rating the energy and carbon performance of commercial and industrial buildings, and disclosing embodied carbon emissions associated with new developments. This will drive consistency in the market. Annual ratings and mandatory disclosure of data are a pre-cursor to a net zero market transformation.

FINDINGS AND RECOMMENDATIONS

Recommendations for Real Estate Investors

While the above driving forces are required at an industry level to transition to NZC, it is imperative that real estate investors and asset managers act without delay to apply the findings of this research to their investment and management strategies. The following key actions have therefore been identified for these stakeholders at both building (categorised by each of the five main stages of an asset lifecycle) and corporate levels:

Asset level

Acquisition

- Integrate net zero assessments into due diligence activities.
- Integrate net zero principles into investment strategies.
- Push vendors to supply operational energy data and NZC pathways where available.

Development

- Ensure embodied carbon and whole life carbon impacts are measured, reduced and any residual is offset through carbon removal.
- Apply an internal carbon price on embodied carbon to drive decision making.
- 'Design in' renewable energy technologies and fossil fuel-free heating and hot water today.

Operation

- Identify 'Paris-aligned'[15] energy demand reduction targets for each asset.
- Pursue immediate, short-term payback measures to reduce energy demand by better control and management.
- Drive suppliers to disclose and reduce their emissions by setting 'Paris-aligned' targets.
- Support upskilling of the property operation and maintenance supply chain and acknowledge this through better rewards and earned prestige.

Refurbishment

- Invest in fabric and plant improvements in anticipation of asset value premiums.
- Invest in pilot retrofits to understand the commercial and technical challenges of net zero retrofit.
- Apply an internal carbon price on embodied carbon to drive decision making.
- Electrify or decarbonise heating and hot water supplies as soon as possible and incorporate building integrated renewable energy.

Disposal

- Provide buyers with operational energy data and NZC pathway information including planned/known measures.

[15] A term used to signify a strategy that aligns with the Paris Agreement (2015) for reducing carbon emissions by the end of the century.

FINDINGS AND RECOMMENDATIONS

Corporate Level

- Broaden GHG footprint to include all applicable emissions sources.
- Set a corporate net zero target as well as asset/portfolio level targets.
- Set 'Paris-aligned' short-term targets: these require a halving of emissions every decade.
- Use these targets as milestones in a published net zero pathway.
- Prioritise reduction and minimise offsetting in any net zero commitment.

Conclusion

The built environment is one of the largest contributors to global carbon emissions, yet there is a significant lack of alignment within the current real estate industry as to the definition of NZC and how the market can effectively transition to net zero. There is little regulatory leadership and minimal evidence of carbon consideration within the valuation process. This situation can be improved through the adoption of a set of key principles but there is no single scheme that currently includes all elements recommended by this research. Establishing these across the global industry, will enable the certification of building performance, against a consistent set of NZC metrics, harmonising the market and allowing for the pricing-in of carbon within building valuations. While action is needed at the industry level, market participants can set and implement their own net zero strategies immediately, using the recommendations within this report.

The full report gives a more detailed breakdown of the findings of this research and how the above recommendations have been produced. Contributors to the research are also acknowledged within the full report.

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