



NZIF 2.0

Net Zero Investment
Framework 2.0

June 2024





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About Paris Aligned Investment Initiative

IIGCC

IIGCC Europe

The Institutional Investors Group on Climate Change (IIGCC) brings the investment community together to work towards a net zero and climate resilient future. We create change the world needs by unlocking investor action on climate change. IIGCC has more than 400 members, mainly pension funds and asset managers, across 27 countries, with over €65 trillion in assets under management.

Our work supports investors in generating returns for clients and beneficiaries, which in turn provides financial wellbeing for future generations. We work with our members to address climate risk and ensure they are well positioned to make the most of investment opportunities offered by climate mitigation and adaptation efforts. www.iigcc.org.



Asia Investor Group on Climate Change Asia

The Asia Investor Group on Climate Change (AIGCC) creates awareness and encourages action among Asia's asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing. AIGCC provides capacity building for investors to share best practice and to collaborate on climate-aligned investment, risk management, engagement and policy. With a strong international profile and significant network, AIGCC represents the Asian investor perspective in the evolving global discussions on climate change and the transition to a greener economy. AIGCC represents 70+ members covering 11 markets representing over \$35 trillion in member global assets under management. www.aigcc.net

The Paris Aligned Investment Initiative (PAII) is delivered by four investor networks (AIGCC, Ceres, IGCC and IIGCC), supporting individual investors globally to implement the Net Zero Investment Framework 2.0 (NZIF 2.0). It was established in May 2019 as an investor-led forum, to support investors to align their individual portfolios and investment activities with the goals of the Paris Agreement.



Ceres North America

Ceres is a nonprofit advocacy organisation working to accelerate the transition to a cleaner, more just, and sustainable world. United under a shared vision, our powerful networks of investors and companies are proving sustainability is the bottom line-changing markets and sectors from the inside out. www.ceres.org



Investor Group on Climate Change Australasia

The Investor Group on Climate Change (IGCC) is a leading network for Australian and New Zealand investors to respond to the risks and opportunities of climate change. Our members have more than \$35 trillion in global assets under management, and almost \$5 trillion in local AUM. Our members include our countries' largest superannuation and retail funds, specialist investors and advisory groups, and their beneficiaries include more than 14.8 million Australians, and millions more New Zealanders. www.igcc.org.au

Acknowledgements

The Paris Aligned Investment Initiative would like to thank its Steering Group and the numerous other investors and wider stakeholders that have provided guidance, support and leadership in the development of the Framework.

The origin of NZIF

NZIF development began in 2020–2021 when 110 IIGCC members, representing USD 33 trillion in AUM, co-developed the original framework (known as NZIF 1.0) via investor-led working groups.

This approach has continued, steered by NZIF's five guiding principles for developing the framework (see below). New content within NZIF 2.0 was developed by working groups constituted by asset managers and owners, as well as other stakeholders such as data providers and investment consultants. The PAII Executive Committee, consisting of the leaders of its four investor networks, and its Steering Group continue to oversee its development.

NZIF is a 'living document' reflecting the dynamic and evolving landscape in which investment decisions are made and will integrate evolving best practice in future updates.

Guiding principles for developing the framework

The PAII follows five key principles to guide its work, and to assess methodologies and test conclusions.

3

Practicality

Feasible for investors to implement, build on existing work, and be compatible with existing processes.

1

Impact

Primary objective is to maximise efforts to achieve emissions reductions in the real economy, through the unilateral and independent decisions of individual members to drive the process within the context of fiduciary duties owed to clients and beneficiaries.

4

Accessibility

Definitions, methodologies and strategies should be clear and easily applied.

2

Rigour

Alignment based on sound evidence and data, and consistent with best available climate science.

5

Accountability

The framework should allow clients and stakeholders to assess portfolio/fund alignment.



Evolution of NZIF 2.0

The Net Zero Investment Framework is the most widely used guide by investors to set targets and produce related net zero strategies and transition plans. It is a guide and not a protocol. Investors make their own unilateral decisions regarding the ways and means with which they will set and reach net zero targets; based upon the context of their own strategies, agendas, starting points, fiduciary duties, client mandates, and regulatory considerations.

Since NZIF's release in April 2021, new components have been developed for asset classes not initially covered, and supplementary guidance has been released as the investor networks gain more experience through implementation.

This "NZIF 2.0" document supersedes the original version and is an evolution, based upon three years of implementation experience. The text has undergone revisions, new figures have been created, and recommended action points and disclosures have been updated in line with current industry best practice, recognising that this work is iterative in nature and is responsive to the evolving landscape in which investors find themselves.

What's new in NZIF 2.0

Asset class and thematic guidance

Most of the noticeable changes are to asset class guidance, specifically an update to the Sovereign Bond guidance which has evolved with the advent of improving analysis tools and stewardship practices. There are also further updates and clarifications to our Real Estate guidance.

In addition, we have included extracts from asset class components released during the last three years:

2023

Infrastructure

2023

Private Equity

2024

Private Debt

NZIF 2.0 does not retire these documents as they contain further implementation guidance to support understanding and adoption. There is also reporting guidance for Hedge Funds and Derivatives, along with the inclusion of more detailed metrics on Climate Solutions for Listed Equity and Corporate Fixed Income.

Within NZIF 2.0, target setting and implementation guidance across every asset class adopts the same conceptual base.¹ This facilitates adoption across multiple teams and aggregation across asset classes.

Objectives and Targets

The 'Portfolio Decarbonisation Reference Target' has been repositioned as the 'Portfolio Decarbonisation Reference Objective'. This is to better support its original purpose which is orientated towards:

- Translating net zero goals into quantified objectives to support portfolio management.
- Monitoring and understanding changes in portfolio emissions.
- Monitoring the effectiveness of net zero strategies relative to portfolio emissions.

It is not intended to be used for portfolio optimisation, investment decision making, or as a target setting tool to reduce financed emissions through year-on-year reductions. A portfolio decarbonised through actions that do not reduce real economy emissions is likely to still be exposed to systemic financial risks. It is also not necessarily 'Paris Aligned' in so far as the Paris Agreement calls for financial flows towards low carbon and

resilient development, not for attributed financial portfolio emissions to mirror climate scenarios.

NZIF 2.0 places emphasis on improving the alignment of investments via asset selection, management, engagement, as well as climate solutions investments. Emphasis is also placed on policy advocacy, as well as stakeholder and market engagement, which are crucial to create the enabling conditions for decarbonisation to occur.

We continue to recommend that investors use all objectives and targets together, on the basis that they serve different purposes. However, it is understood that for various reasons, ranging from capacity to specialty, it may be that not all are relevant or can be set at once, especially target setting across all asset classes.

Changes to material sectors

NZIF 2.0 has reclassified 'Agriculture, Forestry and Fishing' (NACE section A, Divisions 1 – 3) as a high impact material sector. This means associated entities must meet NZIF's decarbonisation plan and capital allocation alignment criteria to be classified as aligned to a net zero pathway. The change recognises the importance of GHG emissions emanating from Agriculture, Forestry, and Other Land Uses (AFOLU). Also, it is the start of ongoing efforts to highlight the importance of nature impacts and dependencies on net zero ambition.

Recommended action points

NZIF 2.0 has incorporated action points that have been recommended by major initiatives. This has been done on a best effort basis as many initiatives have only recently published their guidance. Many action points integrated into NZIF 2.0 originate from the TCFD expectations of transition plans and map to global disclosure frameworks such as IFRS/ISSB.²

The premise is that they all support investors to develop their own best practice net zero strategies and transition plans. Also, implementing recommended action points within NZIF can consequently enable investors to satisfy wider industry expectations.

The intention is not that investors should be immediately expected to implement every recommended action point. Investors should choose and prioritise recommended action points that are most appropriate to their circumstances.



Recommended action points are described as either 'core' or 'advanced'. Core action points are deemed to be those where attention should be originally focused within each particular section. However, NZIF does not have any formal requirements; it is a guide to help support investors to develop their own net zero strategies and transition plans to support the management of their own individual portfolios.



Future work

As is demonstrated in this update to NZIF, the PAll investor networks and their members are continually developing and iterating the framework given the dynamically changing and evolving landscape in which investment decisions are made. Planned future work includes guidance around investment themes such as nature³, emerging markets⁴, just transition, and index investing.

Work will also continue on better defining metrics and targets for increasing investment in climate solutions across asset classes. Components and supplementary guidance will be released as they are completed and will be updated into future iterations of NZIF.

Net Zero Investment Framework

The NZIF outlines the key components of a net zero strategy and transition plan that an investor can consider, with two key objectives:

Transitioning investment portfolios in a way that is consistent with the mitigation goals of the Paris Agreement, focusing on real economy decarbonisation.

Increasing investment in the range of climate solutions to enable the transition.

NZIF recognises that investors have a range of levers at their disposal to contribute to the transition, although many are indirect and not easily attributable to the specific actions of a single investor. These levers will have various levels of efficacy depending on the context.

NZIF provides a suite of options for different types of investors, with different strategies, to manage climate risks in the economic interests of their clients and beneficiaries, as well as making financial flows consistent with the goals of the Paris Agreement.

NZIF is designed to guide investors to consider and to develop their own net zero strategies, targets, and transition plans (the latter is seen as equivalent to other terms such as 'Investor Climate Action Plans'). It is only a guide, not a prescriptive protocol, nor a standard, and it is not a reporting framework. Investors should use it within the context of their own strategies, agendas, starting points, fiduciary duties, client mandates and regulatory considerations, from which and with which they make their own unilateral decisions regarding the ways and means with which they will set and reach their own net zero goals.



How objectives and targets work together

NZIF recommends setting four objectives and targets, which when used together, promotes an approach that seeks real economy decarbonisation.⁵

At the portfolio level, the 'Portfolio Decarbonisation Reference Objective' supports portfolio alignment by setting the foundations of the net zero strategy, monitoring changes in portfolio emissions, and ensuring it stays on track to satisfy fair share contributions towards global net zero goals. The 'Allocation to Climate Solutions Objective' supports investments in technologies which are required to decarbonise the real economy and ensures portfolios are exposed to investments in aligned activities.

Asset level targets help determine and implement a net zero strategy using the levers of influence available to investors. The 'Asset Alignment Target' provides an overview of where investments are on their net zero journey and a comprehensive understanding into what an investee or asset could do to achieve net zero. Approaches are identified to support action specific to each asset class. Finally, the 'Engagement Threshold Target' focuses targeting of the most GHG intensive investments in a portfolio. It also segregates out investments which need less engagement, focusing efforts on those still not at least aligned to a net zero pathway.

How to use this guide

NZIF is designed to be implemented at the organisation level via an 'implement or explain' approach.⁶ It can also be flexibly applied at fund or asset class level. Core action points are those considered particularly relevant and where investors should initially focus (for example, to fulfil the Paris Aligned Asset Owners (PAAO) initiative and Net Zero Asset Managers (NZAM) initiative commitment statements). Advanced action points are best practice recommendations which would benefit users and external stakeholders but may not be possible in the short term and may not be essential to fulfilling commitment statements.

Asset owners are encouraged to use the full framework and ensure investment consultants and asset managers are supporting or implementing mandates accordingly.

Asset managers should, to the greatest extent possible:

Use NZIF across all AUM.

Develop aligned products, funds, and strategies.

Educate clients on these offerings.

Provide net zero aligned mandates to clients who want them.

Investment consultants should integrate NZIF into advisory services including asset manager recommendations, and work with clients on NZIF adoption.

Investors setting targets using NZIF should update these targets every five years and best efforts to include new asset classes for targets should be made within 18 months of their release.

This document is an overall summary of what investors could do to align their portfolios with the goals of the Paris Agreement. Investors should prioritise and adopt recommendations that are most appropriate to their circumstances.

NZIF is designed to be used in conjunction with supplementary guidance and materials made available by the PAll investor networks. These have been referenced in this document where they are relevant. These are complemented by implementation support sessions, which provide a forum for investors to develop best practises and formulate leading guidance to align their individual portfolios.

NZIF is purposefully a guide and not a prescriptive protocol or a transition plan standard. It is acknowledged that investors will implement NZIF differently according to their own unique circumstances and strategies. NZIF does not determine the minimum requirements of net zero initiatives, such as the PAAO and NZAM initiatives.

NZIF exists in an ecosystem of guidance on the net zero transition of the finance sector in which many investors and investor organisations are involved. GFANZ's 'Financial Institution Net-Zero Transition Plans' and the UK Transition Plan Taskforce framework are financial sector neutral guidance resources which have both received input from PAll investor networks and their members, and heavily reference NZIF and related resources. Similarly, the PAll investor networks are part of the Investor Agenda, which developed the Investor Climate Action Plans (ICAPs) Expectations Ladder.⁷ NZIF can be seen as the specific, action orientated guidance for investors using these broader, interrelated publications.

Maximising contributions to real economy decarbonisation

NZIF guides investors in the management of their own individual portfolios. In doing so, it recommends investors use the levers at their disposal to support real economy emissions reductions to the maximum practical extent possible. It is only through the reduction of GHG emissions in the real economy that the systemic financial risks posed by climate change can be mitigated.

NZIF focuses on 'asset alignment' as the premise through which investors could pursue real economy emission reductions, based on its multi-criteria and maturity scale. Investors are encouraged to use identified levers to support investments to improve their performance against relevant net zero pathways.

The various recommended action points across the framework support investors to contribute towards the achievement of global climate goals, as well as address transition risk within their portfolios and take advantage of any potential opportunities posed by the net zero transition.

It is recognised that action by other stakeholders (e.g. governments) is crucial for the global economy to reach net zero emissions. Additionally, it is recognised that short term progress towards reducing real-economy emissions could be inhibited by:



- Legal obligations, fiduciary duties, and client mandates.
- Available, reasonable, and supportable information without undue cost or uncertainty.
- Internal skills, capabilities, and resources.
- Available methodologies and scenarios.
- Policies that create an enabling environment.

The NZIF has a comprehensive structure which supports investors to work to address these barriers within net zero strategies as part of maximising their efforts to '*finance reduced emissions*' rather than '*reduce financed emissions*'.

Net zero decarbonisation pathways

NZIF supports investors to adopt net zero-aligned decarbonisation pathways when setting climate objectives and to underpin asset-level alignment assessment. Net zero-aligned decarbonisation pathways ('net zero pathways') refer to science-based emissions, technology, and/or investment trajectories that limit global average temperature rise to 1.5°C above pre-industrial levels with a sufficiently high probability.

Net zero pathways enable rigorous net zero objectives, strategies, and targets allowing investors to:

Set decarbonisation and climate solutions objectives.

Assess alignment of, and set, asset-level targets.

Ensure market service providers use a proper analytical basis.

Contextualise target setting.

When setting net zero goals and objectives, NZIF continues to recommend the IPCC 1.5°C Special Report⁸, the IEA's Net Zero by 2050 roadmap⁹ and the One Earth Climate Model.¹⁰ These global net zero pathways are consistent with global carbon emissions reaching net zero by 2050, with low or no overshoot, and thus providing a sufficient probability of limiting warming to 1.5°C.

Recent developments with national-level net zero pathways are noted and NZIF recommends these are used if they are of sufficient quality. The use of such pathways is important to ensure emerging and frontier markets are not expected to decarbonise in the same manner as developed markets. It is important that national-level net zero pathways take into account fair share considerations to facilitate a just transition.

It is important to note most net zero pathways are not specifically developed for transitioning investment portfolios to net zero, and per all forward-looking scenarios, they are illustrative and informative of possible futures, not deterministic. They are modelled using the best available physical science, with various economic overlays and assumptions. They are subject to both technical and political review by various stakeholders in reaching consensus.



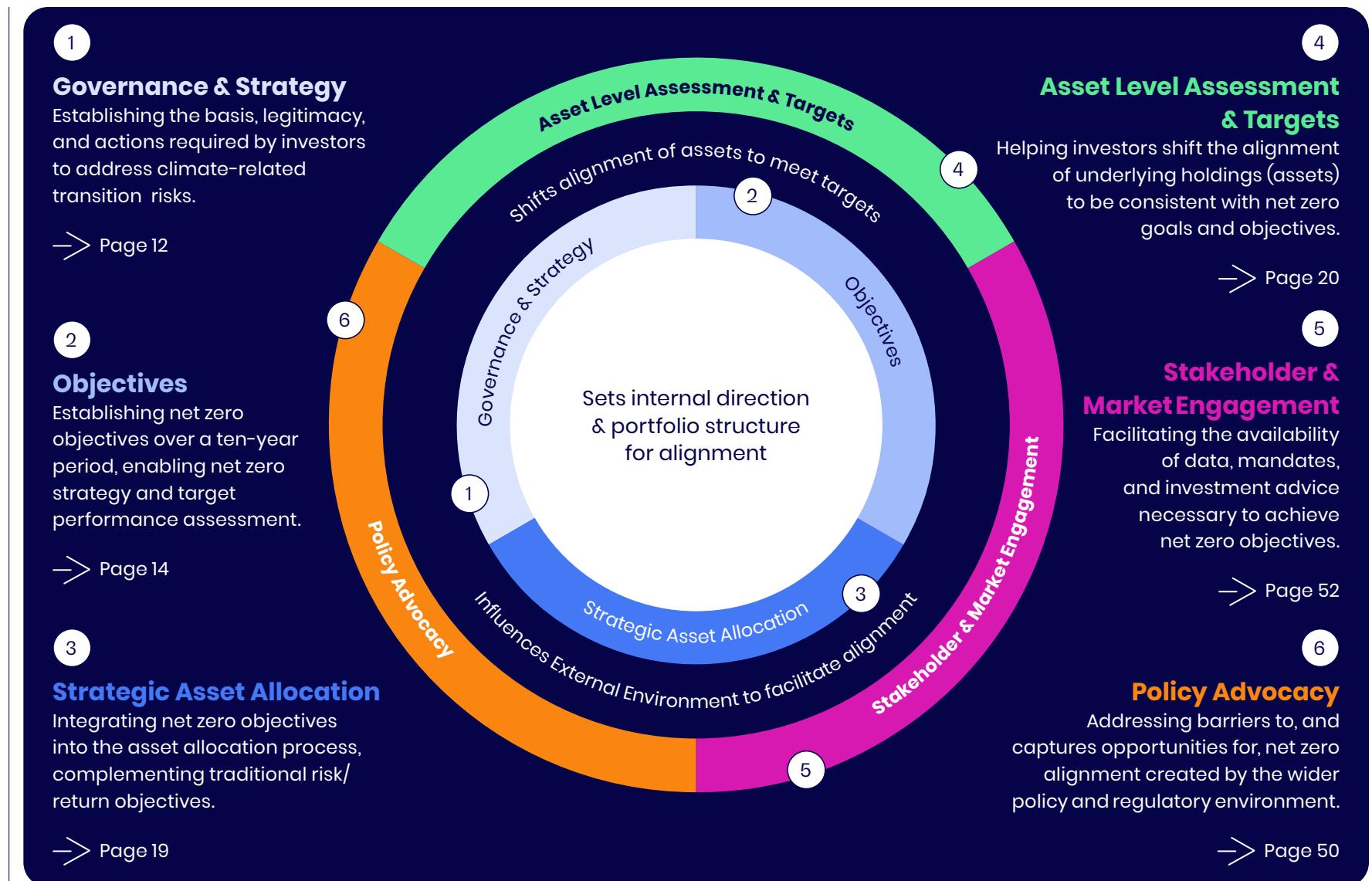
As such, and as per standard practice of using projections in risk management and investment strategies, multiple net zero pathways may be used by investors, and the structure of NZIF is designed to be used in relation to any forward-looking climate model.

NZIF recommends investors disclose the pathways utilised, including associated assumptions and limitations. Engagement with pathway providers will become an increasingly important activity for investors as they continue to navigate the transition across a broad range of markets with differing characteristics and circumstances.

The wheel

A new figure, the NZIF wheel, highlights the interconnected nature of each core area and their equal importance. It aims to show that net zero strategies are more likely to be effective if they address the external environment, which itself can either facilitate or inhibit investor activities. Each element interacts and there is no hierarchy.

Ultimately, an investor's experience will vary based on their individual circumstances and strategies, but the wheel seeks to offer a visual representation of all the potential levers of change in one place. It remains each investor's decision to use the context-specific tools at their disposal to reduce emissions in the real economy.





Governance and Strategy

Introduction

This section establishes the basis, legitimacy, and actions required by investors to address climate-related transition risks. It supports setting ambition towards contributing to global net zero emissions, providing direction and basis for action. Together with the sections on 'Objectives and Targets' and 'Strategic Asset Allocation', it forms part of NZIF's lever of 'Setting internal direction and portfolio structure for alignment'.

Core action points

NZIF recommends the following actions for investors using the framework and considers them core:

- ✓ Assess and disclose climate financial risk assessment in line with legal obligations, fiduciary duties, and industry best practice (e.g. TCFD and ISSB).
- ✓ Commit to achieving net zero portfolio emissions in line with a suitable global net zero pathway, or sooner, and gain explicit endorsement by the board.¹¹
- ✓ Assign implementation responsibility for the net zero strategy to the investment committee and implementation oversight to the board.¹²
- ✓ Ensure senior leadership have sufficient knowledge to effectively oversee implementation of the transition plan.
- ✓ Develop and disclose the transition plan comprising each NZIF section and lever, explaining implications and reasons for any omissions.

- ✓ Incorporate the transition plan into mandates and objectives for investment and portfolio managers, and review progress over time.¹³
- ✓ Develop investment products and funds aligned with net zero objectives, strategy, and targets; and educate clients accordingly.
- ✓ Integrate net zero goals, objectives, strategies, and targets into asset manager selection, appointment, and monitoring processes.
- ✓ Provide net zero aligned mandates to clients who want them.





Advanced action points

NZIF recommends the following advanced actions specific to **governance**. These may initially be difficult when beginning to implement net zero strategies (when attention is likely to be placed on implementing core action points).

- ✓ Develop an energy sector policy that is endorsed by a relevant governance body to inform decarbonisation approaches and climate solutions investments.¹⁴
- ✓ Develop a deforestation policy that is endorsed by a relevant governance body to inform strategies and activities to eliminating deforestation and associated carbon emissions.¹⁵
- ✓ Establish an internal system to periodically monitor implementation of the net zero strategy in its ability to deliver net zero objectives (including reviewing and updating net zero objectives, strategy, and targets).¹⁶

- ✓ Establish a plan to ensure the appropriate resources, skills, competencies and knowledge exist across the organisation to effectively implement net zero strategies.
- ✓ Integrate net zero objectives, strategy and targets into remuneration incentives as appropriate and when relevant, with care to avoid unintended consequences.
- ✓ Establish progress reporting processes for net zero objectives, strategy, and targets to the board, senior management and external stakeholders, including intended and unintended outcomes.
- ✓ Obtain independent review or third-party assurance or verification of transition plan (this could be in the form of an audit or by another entity, such as a research or policy think tank).
- ✓ Integrate climate considerations into the process for selecting a portfolio/fund custodian.

NZIF recommends the following advanced actions specific to **strategy**. These may initially be difficult when beginning to implement net zero strategies (when attention is likely to be placed on implementing core action points), but would likely prove beneficial over the long term:

- ✓ Disclose the current constraints on net zero strategy and what actions will be taken to overcome these.
- ✓ Define the relationship of the net zero objectives, strategy, and targets to other organisational goals.
- ✓ Make plans to ratchet up net zero targets to include additional target types, asset classes and AUM until 100% is covered by asset alignment targets.
- ✓ Review implications of assumptions and dependencies within a transition plan, including implications if assumptions are not realised.
- ✓ Review consistency of transition plan assumptions with those used in financial accounts, capital expenditures, and investment decisions.
- ✓ Define how scenario analysis will be used to inform investments.
- ✓ Assess and communicate achievability of the transition plan using scenario analysis to relevant stakeholders.





Objectives

Introduction

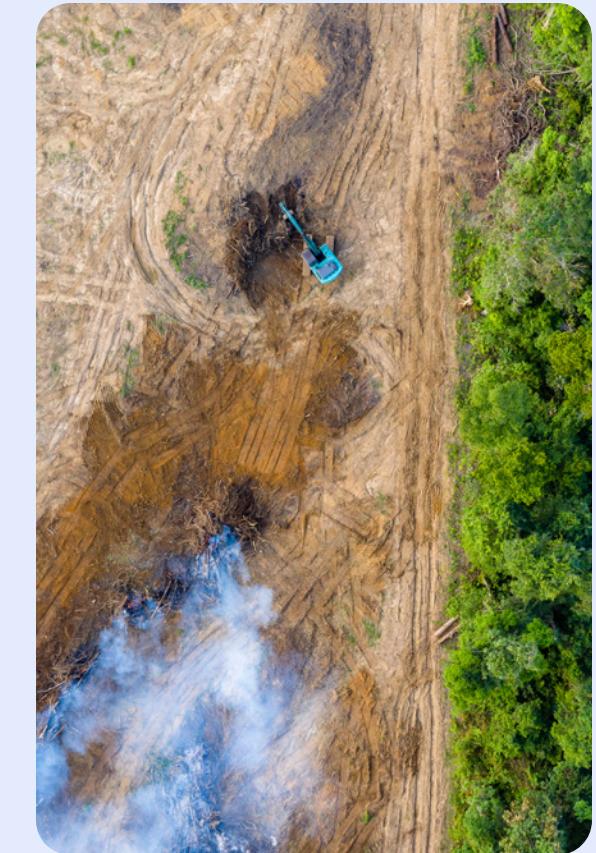
This section establishes net zero objectives over a ten-year period, enabling net zero strategy and target performance assessment. It establishes climate objectives but not the means to achieve these (for this, see sections: 'Asset Level Assessment & Targets', 'Policy Advocacy', and 'Stakeholder & Market Engagement'). Together with 'Governance and Strategy' and 'Strategic Asset Allocation', it forms part of NZIF's lever of 'Setting internal direction and portfolio structure for alignment'.

Core action points

NZIF recommends the following actions for investors using the framework and considers them core:

- ✓ Monitor and disclose baseline portfolio scope 1 and 2 financed emissions, with portfolio scope 3 emissions kept separate, and sovereign-related assets disclosed separately.¹⁷
- ✓ Set and disclose medium term portfolio level reference objectives to inform asset allocation and monitor progress, based on portfolio scope 1 and 2 emissions and disclosing its associated rationale:
 - Portfolio Decarbonisation Reference Objective: <10 year CO₂e emissions reduction objective.¹⁸
 - Allocation to Climate Solutions Objective: <10 year objective for allocating capital to climate solutions.¹⁹

- ✓ Disclose the methodology used to calculate portfolio level objectives, including an assessment of the quality of underlying information used.
- ✓ Define the influence of portfolio level objectives over investment decision-making and communicate to investment managers.
- ✓ Set a target to reduce operational scope 1 and scope 2 emissions in line with a suitable global net zero pathway.²⁰
- ✓ Disclose the AUM committed to be managed in line with net zero, explaining reasons if this cannot be 100% of AUM.
- ✓ Disclose how targets represent fair share contributions towards global GHG emissions reduction efforts.²¹



Advanced action points

NZIF recommends the following advanced actions specific to 'Objectives'. These may initially be difficult when beginning to set net zero objectives (when attention is likely to be placed on implementing core action points), but would likely prove beneficial over the long term:

- ✓ Assess and disclose the relative strengths and weaknesses of the methodology, metrics, and data used to set portfolio level objectives.
- ✓ Disclose performance against targets over time, and any updates or adjustments to objectives that are relevant, on at least an annual basis.

- ✓ Assess and disclose factors behind changes in emissions performance via attribution analysis when possible.
- ✓ Develop a high level strategy to address scope 3 emissions of investments at portfolio level.
- ✓ Develop a policy to define the circumstances and frequency for recalculating baseline financed emissions to ensure the consistency, comparability, and relevance of the reported GHG emissions data over time.
- ✓ Disclose reasons for any assets uncommitted to be managed in line with portfolio level objectives, including the process, progress, and timeline for inclusion.
- ✓ Assess and disclose financed emissions of uncommitted assets relative to those of committed assets.
- ✓ For Sovereign Bonds, incorporate consumption emissions into the design of the Portfolio Decarbonisation Reference Objective on a best effort basis.





Decarbonisation attribution analysis and rebaselining

Attribution

A focal principle of NZIF is to reduce real economy emissions. Consequently, it is recommended that investors seek to understand which factors are driving the changes in financed emissions attached to their portfolios. This enables investors to understand if they are '*financing reduced emissions*' and not merely '*reducing their financed emissions*'. Attribution analysis is a key component of this and can support investors in several ways:²²

- Increase investor understanding of portfolio decarbonisation to quantify real economy impact and recognise the achievement of climate goals.
- Inform net zero investment strategies and capital allocation decisions.
- Guide external engagements with underlying assets, external managers, and data vendors.
- Guide internal engagements with fund managers, board members and analysts.
- Inform policy advocacy that promotes real economy and sustainable finance policy measures supporting the net zero transition.
- Prevent greenwashing by ensuring credit is not taken for financed emissions reductions not attributable to changes in the real economy.²³
- Enhance transparency and support public reporting with key stakeholders, including clients and trustees.

Rebaselining

The PCAF Standard requires a policy defining the circumstances that trigger a recalculation of base year financed emissions to improve consistency, comparability, and relevance of reported GHG emissions data over time, such that underlying progress can be assessed.²⁴

NZIF recommends that baselines reflect a portfolio's composition and any changes be attributed to allow equivalent comparison. Reasons to rebaseline include:

- Significant changes to data coverage, availability, or quality.
- Significant shifts in sectoral or industry exposure.
- New money or portfolio growth (for absolute targets), requiring attribution for targets.

NZIF recommends that a rebaselining policy be established, either dynamically, periodically, or on an ad hoc basis.



Monitoring portfolio (financed) emissions

Monitoring portfolio-level financed emissions can support portfolio alignment with net zero goals but investors may wish to add context by identifying and monitoring financed emissions associated with climate solutions, transition assets, and/or emerging markets (STEM emissions). These represent avenues for significant real economy emissions reductions but need concerted effort, from both investors and governments.

Identifying emissions associated with climate solutions (such as renewable energy) is important, as these could rise in line with their required global scale up. Emissions associated with manufacturing and installation will be the largest source of lifetime emissions for many of these activities, especially in the short term.²⁵ However, they will likely have long term emissions performance which is compatible with net zero pathways.

Investors may wish to identify emissions associated with some forms of transition finance. Carbon intensive assets, particularly

within high impact material sectors, may be acquired or remain in portfolios to facilitate decarbonisation. This may be the case if investors have real economy emission reductions goals, as high impact material sectors will tend to be the largest sources of portfolio emissions.

Finally, investors may wish to identify emissions associated with emerging market investments. These decarbonise along different net zero pathways relative to developed markets, taking longer to both reach peak emissions and net zero. Identifying financed emissions associated with emerging markets is recommended as part of incorporating fair share principles into net zero strategies.

Monitoring of STEM emissions will only be valuable to stakeholders if these categories are well defined and genuinely denote activities that contribute to achieving global decarbonisation. It is not envisaged that these activities should exclude assets from the alignment criteria in the asset alignment target, which is outlined in the 'Asset Level Assessment and Targets' section of this document.

The PAll investor networks are continually working together and with broader stakeholders on the definitions of these categories to provide appropriate methodologies in their calculation.

Absolute emissions reductions metrics

NZIF recognises that to set objectives and evaluate progress, it is useful to employ a 'dashboard' range of metrics, each of which provides important insights and serve different purposes. This includes the broad consideration of whether to use absolute- or intensity-based metrics and whether to use production or financial denominators.

Whilst some advocate for absolute metrics as the more direct way to measure performance, this can be problematic for investors, especially as capital flows into and out of portfolios. Investor experience also indicates that a sole focus on absolute emissions and rigid annual reduction requirements may inadvertently lead to:

- Application of undifferentiated pathways across material and high impact material sectors,
- Capital flight from emerging and frontier economies,

- Aversion to financing climate solutions which tend to have upfront emissions (e.g. clean energy),
- Restricting needed transition finance for high impact material sectors,
- Ignoring differing investor profiles, progress, and risk tolerances.

This could paradoxically undermine progress towards achieving the goals of the Paris Agreement. Consequently, a dashboard approach whereby a range of metrics are collectively used and considered is broadly recommended.²⁶ It is also recognised that due to industry expectations (e.g. due to TCFD or PCAF), the headline figure will tend to be an emissions intensity approach using a financial denominator (either WACI or EVIC); however, it is noted that these metrics themselves have limitations.²⁷



Portfolio Decarbonisation Reference Objective

The Portfolio Decarbonisation Reference Objective establishes a <10 year objective for decarbonisation efforts expressed in absolute (CO₂e) or emissions intensity (e.g. tCO₂e/\$mn invested) terms. A five year stocktake is recommended to facilitate assessment of progress. NZIF endorses the PCAF Standard for accounting and/or attributing 'financed emissions' to listed corporate assets and sovereign bonds.²⁸

The purpose of the Portfolio Decarbonisation Reference Objective is to encapsulate net zero goals over a long to medium time frame. Actual progress can be contrasted against this reference point, facilitating internal accountability, understanding of why changes have occurred, and assessment of the efficacy of net zero strategies in reducing portfolio emissions. It also allows emissions to be monitored at a portfolio level, rather than asset class level.

It is not intended or recommended to be used for portfolio optimisation, investment decision making, or as a target setting tool to reduce financed emissions through year-on-year reductions. Using financed metrics alone may lead to decisions that are misaligned with net zero goals. NZIF adopts an alignment centric approach to target setting, as set out in the 'Asset Level Assessment and Targets' section of this document.

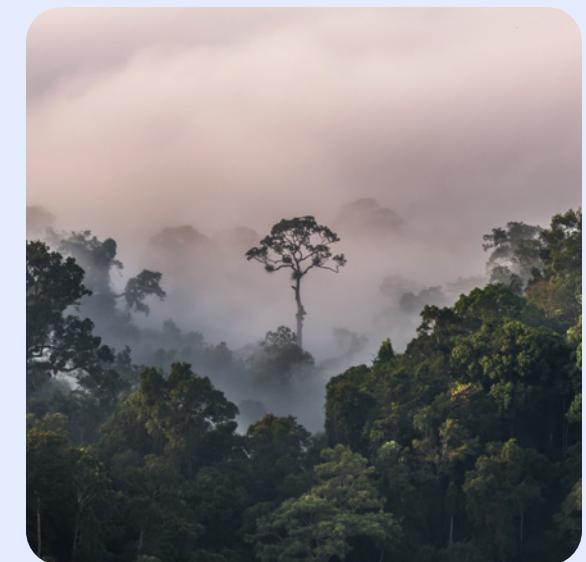
No minimum performance expectation for decarbonisation is provided as this depends on various factors (e.g. the methodology used for target setting, as well as asset mix and location). Inclusion of portfolio scope 1 and 2 emissions is considered necessary for comparison with a contextually relevant net zero pathway and consideration of fair share principles.

Key design decisions when making a Portfolio Decarbonisation Reference Objective are 1) to adopt a self-decarbonisation or benchmark relative approach, and 2) to adopt a cumulative emissions²⁹ or point-in-time reduction approach.³⁰

The Portfolio Decarbonisation Reference Objective is directed towards scope 3 category 15 emissions.³¹ This is because this is typically most material to their carbon footprint and their ability to reduce real economy emissions. However, those directly owning or managing assets may have elevated operational scope 1 and 2 emissions and so may find utility in setting a Portfolio Decarbonisation Reference Objective on these emissions.

NZIF considers that for corporate assets, its Portfolio Decarbonisation Reference Objective must include portfolio scope 1 and 2 emissions. It is recommended that material portfolio scope 3 emissions be phased into net zero efforts at the portfolio level, as data availability, quality, and consistency allow, as well as where meaningful to net zero goals.³² However, it is currently recommended that they be monitored separately to portfolio scope 1 and 2 emissions and a separate strategy is created to address these due to measurement, aggregation, and misincentivisation challenges (including double counting).

Sovereign Bonds should have their own baseline and decarbonisation objective, as aggregation with other assets may over-reward changes in sovereign alignment versus other assets. It is expected that the baseline reports on production emissions (including and excluding land use, land use change, and forestry (LULUCF)) include consumption emissions on a best effort basis, if desired. It should also take into account fair share principles and use processes, such as normalisation weights, to ensure equitable treatment of annex and non-annex I countries.³³ Any process and methods to account for fair share principles should be transparently disclosed.





Strategic Asset Allocation

Introduction

This section integrates net zero objectives into the asset allocation process, complementing traditional risk/return objectives.

Together with 'Governance and Strategy' and 'Objectives and Targets', it forms part of NZIF's lever of 'Setting internal direction and portfolio structure for alignment'.

Some recommended actions will be less relevant for asset managers not undertaking asset allocation for clients; but relevance can still exist for those involved in similar activities (e.g., portfolio optimisation).

Judgement is necessary to ensure portfolios are not over-exposed to specific risk factors and are well-diversified across regions, technologies, sectors, and not over-exposed to policy uncertainties.

Core action points

NZIF recommends the following actions for investors using the framework and considers them core:

- ✓ Undertake scenario analysis to update capital market assumptions, asset-level risk/return expectations, and stress test portfolios.³⁴
- ✓ Supplement standard financial objectives with portfolio-level net zero objectives.
- ✓ Update investment benchmarks, when possible and relevant, to ensure that climate-related objectives are specified in sufficient detail and performance objectives are clearly defined.
- ✓ Integrate net zero objectives into portfolio construction alongside standard indicators. Additional alignment objectives should ideally cover both decarbonisation and climate solutions.

Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult when beginning to update strategic asset allocation (when attention is likely to be placed on implementing core action points), but would likely prove beneficial over the long term:

- ✓ Consider different asset classes and investments when constructing portfolios, as well as the importance of primary issuances of corporate bonds given the role these have in driving real economy decarbonisation.
- ✓ Integrate forward-looking non-financial climate metrics into asset valuation approaches.
- ✓ Specify asset class variants using systematic approaches to increase climate solutions exposure (including nature-based solutions) and reduce carbon intensity (e.g., custom benchmarks, climate-tilted indices, climate-focused variants).
- ✓ Review constraints to achieving alignment within the context of portfolio optimisation to understand if they are strictly necessary.

- ✓ Monitor achievement of alignment objectives, including portfolio carbon intensity and allocation to climate solutions.
- ✓ Supplement standard financial objectives with material forward-looking non-financial metrics capturing some dimensions of alignment, such as:
 - Exposure to fossil fuel production or reserves.³⁵
 - Percentage of material corporates within portfolio with methane emissions reduction commitments.³⁶
 - Percentage of portfolio with net zero science-based targets.
 - Aggregate management indicators score.
 - Level of capex relating to relevant taxonomies.
 - Proportion of portfolio companies with clean energy commitments.
 - Percentage of corporates within portfolio with material deforestation related commitments to halt commodity driven deforestation and habitat conversion within their entire operations and supply base.³⁷



Asset Level Assessment and Targets

Introduction

This aims to help investors shift the alignment of underlying holdings (assets) to be consistent with net zero goals and objectives. Net zero target setting and implementation guidance is specific for each asset class, although the overall target structure remains the same and aggregation across asset classes remains possible.

Core action points

NZIF recommends the following actions for investors using the framework and considers them core:

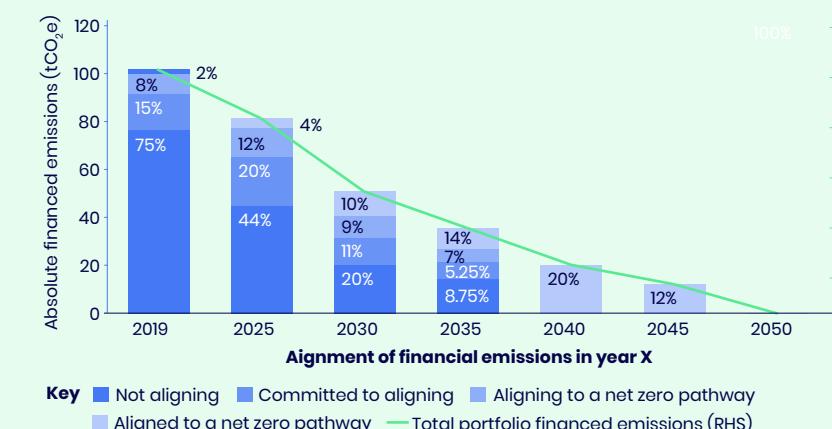
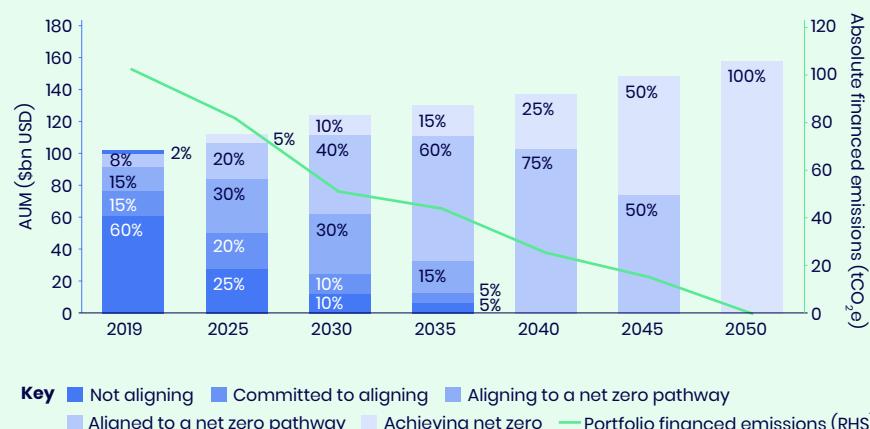
- ✓ Set the scope of assets within each asset class for alignment action.
- ✓ Assess and disclose the baseline alignment of assets in scope, using the specified criteria relevant to each asset class.

- ✓ Define and disclose which sectors have been considered as high impact.
- ✓ Set and disclose short term targets and implement approaches to improve alignment of assets by asset class:³⁸

- Asset alignment target: A 5-year target for increasing the % of AUM (or financed emissions³⁹) in material sectors that are 'aligning'⁴⁰ or 'aligned' to a net zero pathway, or achieving net zero' (see below for visual demonstration).

- Engagement threshold target: A minimum proportion of assets (based on scope 1 and 2 of financed emissions⁴¹) are assessed as 'achieving' or 'aligned' to a net zero pathway, or are subject to engagement, increasing gradually over time. This should be accompanied by a description of the investor's approach or strategy regarding engagement with assets with material scope 3 emissions, at least for high impact material sectors.

The graphs below show how setting and achieving alignment targets can vary dependent on the metric chosen using a dummy portfolio. The left graph shows a growing portfolio that is assessing alignment based on AUM. The right graph shows the same portfolio but uses financed emissions to assess alignment.



Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult when beginning to set and implement net zero targets (when attention is likely to be placed on implementing core action points), but would likely prove beneficial over the long term:

- ✓ Disclose the science-based scenario(s) or pathway(s) used to guide target setting and assess the alignment of investments, including how scenarios meet key parameters, and critical assumptions used.
- ✓ Disclose why any assets are not in scope under asset level targets, including the process, progress, and timeline for inclusion.
- ✓ Regularly assess and disclose alignment of assets, including those not in scope.
- ✓ Disclose metrics, targets and methodologies used to assess and track alignment of assets according to each asset class, and the extent to which these are consistent with NZIF's target setting methodology.

- ✓ Disclose portfolio construction approaches implemented and/or products developed to facilitate allocation to products aligned with net zero objectives.
- ✓ Disclose engagement, stewardship, and/or direct management actions undertaken in relation to the engagement threshold target, and key outcomes achieved.
- ✓ Disclose where divestment or exclusion has been used, the rationale, and the extent to which this has been the means to achieve targets.
- ✓ In addition to the engagement threshold based on scope 1 and 2 of financed emissions, disclose a 'shadow' engagement threshold metric for material scope 3 of financed emissions, to indicate the proportion of assets (based on material scope 3) that are assessed as 'achieving' or 'aligned' to a net zero pathway or are subject to engagement.⁴²

Performance expectations

It is expected by 2040, that 100% of assets are, as a minimum, aligned to a net zero pathway. This applies across all asset classes set out below. This expectation aims to enhance the probability that 100% of assets are consistent with the global goal to achieve net zero by 2050 and thus consistent with investors transitioning their individual portfolios in a manner consistent with global net zero goals.⁴³

Within the engagement threshold target it is expected that investors set an engagement threshold target which immediately ensures that at least 70% of scope 1 and 2 financed emissions in material sectors are originating in assets that are either categorised as achieving net zero, aligned to a net zero pathway, or are subject to engagement and stewardship actions. This threshold should increase at least to 90% by 2030 at the latest.

These expectations are not requirements of NZIF itself, they serve as a guide.⁴⁴ Investors should seek to determine what these precise figures should be for themselves based on their individual strategies, circumstances, and definitions. They should also decide what assets and asset classes should be in scope of these expectations.

Investors utilise a range of approaches and face a number of constraints, some of which they do not have full agency to address. Consequently, generic industry wide performance expectations are not generally considered possible. However, investors can disclose their individual performance against these generic performance expectations, explaining the reasons for any divergence.

Selective divestment

As a general rule, NZIF does not recommend divestment from secondary equity markets as an approach to drive alignment in individual portfolios⁴⁵, especially when primary market issuances such as bonds are more associated with new production capacity.⁴⁶ However, investors could consider divestment or exclusion based on their own strategies and client/beneficiary needs and:

- As a consequence of climate financial risk assessment.
- As a consequence of escalation following engagement.
- For companies whose primary activities and expansion plans⁴⁷ are incompatible with a credible net zero pathway, with exclusions identified over relevant timeframes.

NZIF recommends investors develop a deforestation and energy investment policy to inform strategies and activities, as associated transition risks may become more acute in the future as the likelihood of a disorderly transition increases.

Alignment assessment methodology

NZIF's asset level assessment and targets methodology is based upon a common framework of criteria and categories. It provides a consistent and seamless conceptual base between the assessment of assets and the improvement of their alignment to a net zero pathway. The framework is consistently applied across all approaches to realising targets (across asset selection, management, and engagement).



Alignment categories

NZIF consistently uses five categories of alignment, representing progressive steps towards alignment with a net zero pathway. Investors can use these to evaluate where investments are on this progression and by extension, a forward-looking nuanced understanding of their portfolio alignment (when investments are aggregated). The five categories are:

1

'Not aligning'

Refers to assets without a commitment to decarbonise in a manner consistent with achieving global net zero.

2

'Committed to aligning'

Refers to assets with a long term decarbonisation goal consistent with achieving global net zero by 2050

3

'Aligning to a net zero pathway'

Refers to assets with emissions performance not equal to a contextually relevant net zero pathway. However, importantly they have science-based targets⁴⁸ and a decarbonisation plan, and are thus ready to transition

4

'Aligned to a net zero pathway'

Refers to assets which have science-based targets, a decarbonisation plan, and current absolute or emissions intensity at least equal to a relevant net zero pathway. This category broadly signifies that transition risk is being managed at an asset level

5

'Achieving net zero'

Typically, this refers to when assets meet all relevant criteria and have an emissions performance at net zero which can be expected to continue.⁴⁹



Criteria underpinning

NZIF asset alignment

NZIF uses a set of ten backwards, current, and forward-looking criteria to assess assets, but only a subset to determine alignment. The subset differs across each asset class due to specificities and whether assets are in high impact material sectors.

A subset is used because data availability and/or quality can be problematic (e.g., within emerging markets). High impact material sectors require more attention and thus criteria as they underpin economies via their inputs, and are vital to wider decarbonisation efforts. Other material sectors use fewer criteria to reduce the data dependency of the alignment process because they are expected to decarbonise as inputs into economies decarbonise.

The set of ten backwards, current, and forward-looking criteria used by NZIF to assess assets are set out below. These are specified in more detail under each asset class to ensure they are contextually specific.

- Ambition
- Targets⁵⁰
- Emissions performance
- Disclosure
- Decarbonisation plan
- Capital allocation alignment
- Climate policy engagement
- Climate governance
- Just transition⁵¹
- Climate risk and accounts⁵²

The criteria laid out above provide a high-level framework for the alignment assessment of investments. Indicators for each criterion are purposefully unspecified to allow investors the flexibility to determine what indicators and data sources suit their circumstances. The criteria and subsequent assessment should cover scope 1, 2 and material scope 3 emissions.⁵³ Investors should explain and justify the materiality approach taken.

Information on alignment criteria and indicators should be found within the transition plans of investments and should be chosen until decisions on the alignment of an asset can be adequately made.⁵⁴ Investors should disclose, as appropriate, the indicators and data sources used to determine the fulfilment of alignment criteria.

Material sectors

NZIF considers sectors covered by NACE codes A-H and J-L as material and should be covered at a minimum by net zero objectives and targets:

- A) Agriculture, forestry and fishing
- B) Mining and quarrying
- C) Manufacturing
- D) Electricity, gas, steam and air conditioning supply
- E) Water supply; sewerage; waste management and remediation activities
- F) Construction
- G) Wholesale and retail trade; repair of motor vehicles and motorcycles
- H) Transporting and storage
- J) Information and communication
- K) Financial and insurance activities⁵⁵
- L) Real estate activities

Sectors which are not considered material are not the recommended subject of NZIF net zero objectives and targets. This is so that investor net zero efforts are channelled to material sources of GHG emissions.

High impact material sectors

Certain material sectors are deemed high impact based on GHG emissions in their value chain. Transition of high impact material sectors are critical to achieving net zero and are those linked to the company focus lists of Climate Action 100+ and TPI, plus banks, real estate, agriculture, forestry, and fishing. Currently these sectors equate to:

| | |
|--|---|
| • Agriculture, forestry, and fishing ⁵⁶ | • Electric utilities ⁶¹ |
| • Airlines | • Food producers ⁶² |
| • Aluminium | • Industrials |
| • Automobiles ⁵⁷ | • Oil and gas (plus distribution) ⁶³ |
| • Banking ⁵⁸ | • Paper |
| • Cement | • Real estate |
| • Chemicals ⁵⁹ | • Shipping |
| • Consumer goods & services | • Steel ⁶⁴ |
| • Coal and diversified mining ⁶⁰ | • Transportation |

Investments in listed and unlisted corporates that are within high impact material sectors must satisfy more criteria to be classified as 'aligned to a net zero pathway' (typically decarbonisation plan and capital allocation alignment), as exposure to transition risk will be especially prevalent in these sectors and they are key to decarbonising the wider economy.

Listed Equity & Corporate Fixed Income

Alignment target

- Asset alignment target: A 5-year target for increasing the % of AUM in material sectors that are 'aligning' or 'aligned' to a net zero pathway, or achieving net zero'.
- Engagement threshold target: A minimum proportion of financed emissions are assessed as achieving or aligned to a net zero pathway, or are subject to engagement.

Scope

- At a minimum it is recommended that material companies are those covered by sectors in NACE code categories: A-H and J-L.

Criteria underpinning alignment assessment

Key Green ticks represent when a criterion is required to be fulfilled for a particular alignment category to be obtained.

| Criteria | Committed to aligning | Aligning to a net zero pathway | Aligned to a net zero pathway | Achieving net zero |
|--|-----------------------|--------------------------------|-------------------------------|--------------------|
| Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance. | | | | |
| Emissions performance: Current absolute or emissions intensity is at least equal to a relevant net zero pathway. ⁶⁵ | | | | |
| * Capital allocation alignment: A clear demonstration that capital expenditures are consistent with a relevant net zero pathway. | | | | |
| * Decarbonisation plan: A quantified set of measures exists to achieve short and medium term science-based targets by reducing GHGs and increasing green revenues, when relevant. | | | | |
| Disclosure: Disclosure of operational scope 1, 2 and material scope 3 emissions. | | | | |
| Targets: Short and medium term science-based targets to reduce GHG emissions. | | | | |
| Ambition: A long term goal consistent with the global goal of achieving net zero by 2050. | | | | |

* Additional alignment criteria that a corporate within a high impact material sector needs to meet.

Data sources that investors may especially wish to consider, and which are publicly available for this asset class, are:

- The Climate Action 100+ Net Zero Company Benchmark and associated net zero standards.⁶⁶
- Transition Pathway Initiative Carbon Performance and Management Quality indicators.⁶⁷
- Science Based Targets Initiative (for assessing criteria: science-based targets, emissions performance⁶⁸, and disclosure⁶⁹).
- Carbon Tracker (for assessing capital allocation alignment⁷⁰).

Investors can use a mixture of data sources to make as much of an informed judgement as possible. Investors using private data vendors should disclose the provider and product when appropriate.⁷¹ To represent best practice, data vendors providing assessments consistent with the alignment criteria should ensure and disclose their consistency with the latest detailed guidance on indicators from the Climate Action 100+ Net Zero Company Benchmark.

We anticipate continued evolution of indicators under each criterion, including subsequent enhanced guidance notes on indicators (current resources are identified within the 'High impact material sectors' section above).



Company emissions reporting for Derivatives and Hedge Funds

Neither derivatives nor hedge fund holdings are considered to constitute an asset class. Derivatives are considered to be financial instruments that offer indirect exposure to an underlying asset class, a portion of the market, or a specific security. Hedge funds are considered as vehicles that offer a variety of investment strategies across different asset classes.

Although indirect exposure to assets through derivatives may not directly contribute to GHG emissions, it is tied to underlying assets, such as stocks or bonds, which do have associated emissions. IIGCC guidance recommends investors report the following separately:⁷²

- Financed emissions – Attributed emissions from companies where the investor owns securities directly and can influence, whether purchased through secondary or primary markets.
- Long associated emissions – Associated emissions from companies where long exposure is gained via prime brokers or derivatives.
- Short associated emissions – Associated emissions from companies where short exposure is gained via prime brokers or derivatives.

Notably, long and short emissions should not be reported aggregated and/or netted, for financed emissions or associated emissions.

Asset managers and hedge fund managers can choose to additionally report the aggregate of the direct and indirect long exposures, but they should ensure they also report them separately.

Climate solutions

Investors looking to increase allocation to climate solutions in listed equity and corporate fixed income may consider adopting IIGCC's four-step approach to classifying and calculating allocation to climate solutions for Listed Equity and Corporate Fixed Income, and utilise the disclosure template shown below.⁷³

Classification and measurement

Step 1

Solutions classification: Identify and classify activities, products and services that contribute to emissions reductions using net zero scenarios and/or local taxonomies.

Step 2

Contribution type: Assess the type of contribution those activities make to decarbonisation (transition of own performance and/or enabling).

Step 3

Corporate indicators: Assess contribution of a corporate using revenue and capex data.

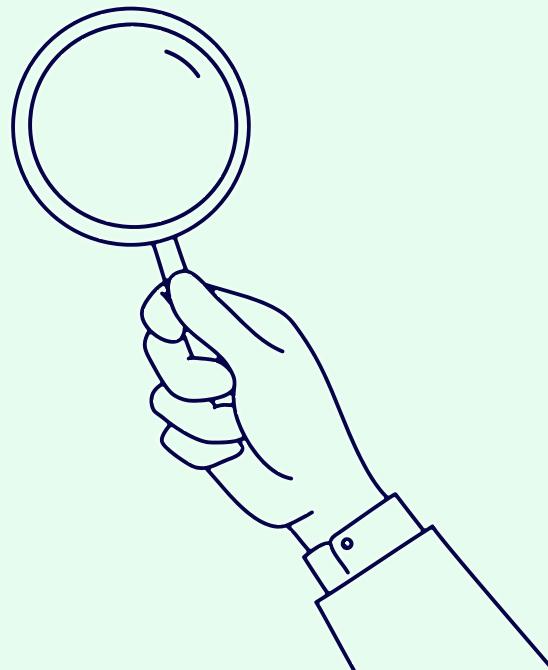
Step 4

Portfolio/fund metrics: Aggregate corporate green activity up to portfolio or fund level, using "green ratio" or "financed green" metric.





Investors can use a dashboard of climate solutions classifications and metrics to measure and communicate allocation to climate solutions and inform corporate transition plan analysis, stewardship and engagement, as well as policy advocacy and industry engagement.



| Metric | Classification | Activity type | Recommendation |
|---|--------------------------------------|-------------------------------|--|
| Green revenue ratio (\$m and/or %) | Technical screening criteria-aligned | Transition of own performance | Recommended minimum disclosure if setting climate solutions targets under NZIF, in line with EU Taxonomy Regulation. |
| | Taxonomy-aligned | | Disaggregation of metrics by activity type is optional. |
| | Taxonomy-equivalent | Enabling | |
| | Taxonomy-plus | | |
| Financed green revenues (\$m / \$m invested) | Taxonomy-eligible | Transition of own performance | Recommended minimum disclosure if setting climate solutions targets under NZIF. |
| | Taxonomy-aligned | | Disaggregation of metrics by activity type is optional. |
| | Taxonomy-equivalent | Enabling | |
| | Taxonomy-plus | | |
| Data coverage % of AUM where revenue data is unavailable | N/A | N/A | Minimum required if setting climate solutions targets under NZIF. |
| | | | |
| | | | |
| Green capex ratio (\$m and/or %) | Taxonomy-eligible | Transition of own performance | Recommended disclosure, as data availability improves, in line with EU Taxonomy Regulation. |
| | Taxonomy-aligned | | Disaggregation of metrics by activity type is optional. |
| | Taxonomy-equivalent | Enabling | |
| | Taxonomy-plus | | |
| Financed green capex (\$m / \$ invested) | Taxonomy-eligible | Transition of own performance | Recommended disclosure, as data availability improves. |
| | Taxonomy-aligned | | Disaggregation of metrics by activity type is optional. |
| | Taxonomy-equivalent | Enabling | |
| | Taxonomy-plus | | |

Source: IIGCC's Climate Solutions Guidance.

Reporting and disclosures

To support clear and transparent disclosures and protect the integrity of climate solutions classifications, two core disclosure principles for investors using this guidance can be used:

- Transparency: Disclose assumptions and methodologies in a clear, fair and non-misleading manner when using a taxonomy-plus approach.
- Standardisation: Use a disclosure template to enhance standardisation of green revenue and green capex disclosures across the industry.

Approaches to achieve asset level targets

The approaches below can be used to achieve asset alignment targets. They are presented agnostically (regarding their efficacy) as their utility will depend on the context an individual investor operates within.



Asset selection / portfolio construction

- Active. Screening and/or weighting new investments within a sector based on alignment criteria and climate solutions metrics, with particular attention given to primary market issuances of equity and debt.
- Invest in specialist products/funds (alignment/use of proceeds/climate solutions focused), that are consistent with regulatory labels when available.
- Passive and index investing. Apply benchmark with positive weightings for alignment criteria and climate solutions revenue.

Asset engagement

NZIF does not provide a definition for 'engagement'. This is for clients and their investment managers to discuss and perhaps formalise (e.g. via investment management agreements, investment policy statements, and fund prospectus material). However, NZIF does recommend the following actions for investors in relation to engagement:⁷⁴

- Set and publish an engagement strategy (including definitions, prioritisation process, clear milestones and an escalation process) which links to investment, weighting, and divestment decisions.
- Publish a NZIF-aligned voting policy and communicate this to relevant stakeholders.⁷⁵
- Publish voting actions and records (including rationale for policy deviation).
- Engage with companies, including on a value chain basis, to improve performance against alignment criteria and climate solutions activities (including announcing and explaining broad voting intentions).
- Join and actively participate in engagement initiatives, such as Climate Action 100+, IIGCC's Net Zero Engagement Initiative, and the Asian Utilities Engagement Program.⁷⁶
- Disclose to clients how assets have been managed in alignment with clients' stewardship and investment policies.⁷⁷
- Assess engagement and stewardship capacity of external funds and investment managers, to ensure achievement of net zero objectives, strategy, and targets are not materially affected.⁷⁸

Additional engagement actions for listed corporate assets

Listed Equity

- Utilise routine votes, shareholder resolutions and other means when the corporate is insufficiently progressing towards 'aligned' status.⁷⁹
- Co-file and/or support shareholder resolutions in line with the criteria.⁸⁰
- Implement an escalation approach, including a time-bound escalation strategy.
- Consider alignment criteria when voting on mergers and acquisitions, including whether the post company meets or can be expected to meet the criteria within a reasonable period.⁸¹
- Ensure voting rights exist, including with external investment managers, to undertake the above actions.

Corporate Fixed Income

- Engage issuers to secure agreement to alignment criteria and climate solutions activities, including the potential use of covenants and verified labelled bonds (e.g. GSSS+ issuances) as mechanisms to ensure alignment criteria are met during the lifetime of the bond.⁸²
- Commence engagement in advance of the primary issuance process itself and continue engagement across the financing lifecycle.
- Set clear expectations of companies in relation to alignment criteria and climate solutions activities that should be demonstrated to secure financing.
- Assess how issuances are aligned with the net zero objectives and targets of the issuer.





Sovereign Bonds

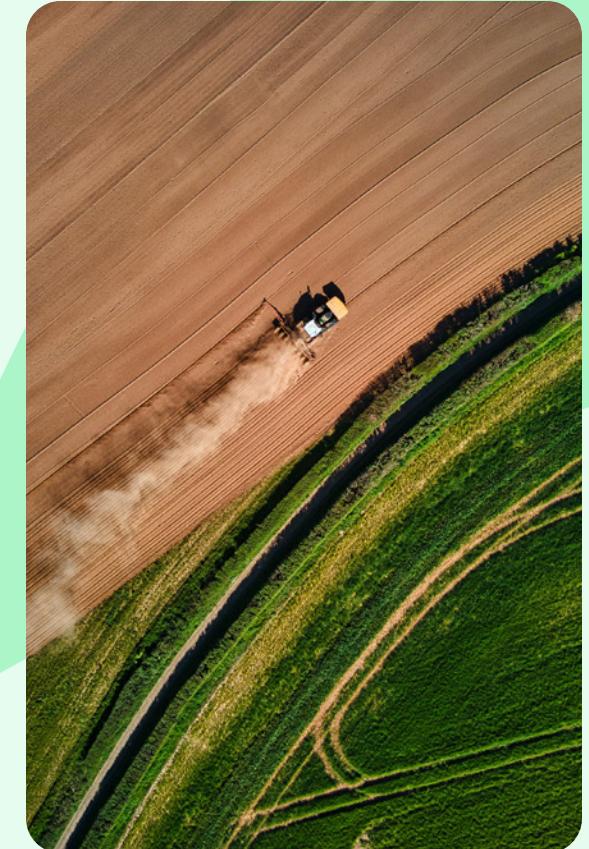
Alignment targets

- Asset alignment target: Set a 5-year target for increasing the % of sovereign bonds allocation to issuers that are categorised as 'aligned' to a net zero pathway, or 'achieving' net zero.⁸³
- Engagement threshold target: A threshold of financed emissions from sovereign bonds in a portfolio and undertake engagement actions with the relevant countries and territories.

Scope

- Include sovereign bonds of all maturities issued in domestic or foreign currencies.
- All sovereign issuance from national governments is considered in scope, including holdings required for liability matching, regulatory purposes, and cash management. However, inevitable restrictions likely exist that will affect the practical extent these assets can be aligned. Any restrictions should be disclosed.
- Sub-sovereigns, municipal or state authorities and supra-nationals that issue bonds are not explicitly covered, although investors may apply similar concepts on a best effort basis. As data availability improves, these will be considered in future workstreams. However, labelled and climate-related instruments issued by these entities may be considered under the climate solutions objective.

- Where the issuer is a publicly (majority) owned company (i.e., state-owned enterprises), investors should follow the guidance for corporate fixed income and include it in targets associated with this asset class.
- It is acknowledged that investors face limitations specific to this asset class, some of which they do not have full agency to address. Consequently, a singular performance expectation is not considered possible. However, investors are invited to use all the levers they have at their disposal to achieve their maximum contribution towards real-economy decarbonisation and transparently disclose where limitations apply.





Criteria underpinning alignment assessment

Key Green ticks represent when a criterion is required to be fulfilled for a particular alignment category to be obtained.

| Criteria | Committed to aligning | Aligning to a net zero pathway | Aligned to a net zero pathway | Achieving net zero |
|---|-----------------------|--------------------------------|-------------------------------|--------------------|
| Budget / capital / allocation alignment: A clear demonstration that the budgeting actions of the country are consistent with global net zero goals (e.g. climate budget tagging, where an ambitious share of the budget is green). | | | | |
| Emissions performance: Current absolute GHG emissions trend is at least equal to a relevant net zero pathway, or converging in a manner that is satisfactory. | | | | |
| Decarbonisation plan: A robust quantified plan setting out the measures that will be deployed to deliver GHG targets (LT-LEDS), and how the sovereign is enacting the policies necessary to deliver against its NDCs. | | | | |
| Disclosure: Comprehensive and timely disclosure of emissions (e.g. data quality, historical data, LULUCF, etc). | | | | |
| Targets: Short and medium term emissions reduction targets aligned with global net zero goals. These are set at the production emissions level (scope 1) and should be consistent with the Paris Agreement (NDCs). | | | | |
| Ambition: A long term goal consistent with the global goal of achieving net zero by 2050, as well as interim goals and targets that are coherent with it (NDCs absolute emissions targets). | | | | |

To account for 'fair share' considerations, investors can relax some of the criteria for the countries they classify as EMDEs.⁸⁴

The alignment criteria apply to issuers exclusively; hence labelled bonds should not be allocated an alignment status. Providing that they meet external validation and safeguards, labelled bonds and other climate related issuance are to be considered under the climate solutions objective.

Further guidance may qualify these criteria for some countries, based on principles of fair share and common but differentiated responsibilities and respective capabilities.

The criteria laid out above provide a high level framework for the alignment assessment of sovereigns, and their net zero transition plans. Methodologies used to assess the alignment of assets should include the above features.

The recommended existing data sources which are publicly available and can be used in the assessment of this asset class are: ASCOR, CAT, and CCPI. Investors can use a mixture of data sources, to make as much of an informed judgement as possible.

However, whilst these are recommended sources, investors are free to choose the source of data that they wish to use and are not expected to use all to form an assessment. Additionally, it is not guaranteed that these sources of information allow an investor to make a comprehensive judgement on alignment.



Approaches to achieve asset level targets

The approaches below can be used to achieve asset alignment targets. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within.

Portfolio construction

- Tilt portfolios towards higher performing issuers based on the alignment criteria and climate solutions.
- Explore allocations to climate solutions, such as verified labelled bonds, when possible, taking measures to assess their credibility.
- For indexed-based strategies, utilise a benchmark incorporating tightening alignment criteria requirements to inform portfolio weights that improve portfolio alignment over time.

While these actions are theoretically available to support alignment efforts, the limited issuer universe creates limits to the extent to which they can be practically used without exacerbating material risk factors (e.g. concentration risk).

Asset engagement

- Active engagement with highest impact sovereigns or largest exposures, based on % financed emissions, that do not perform well against the criteria.
- Participate in engagement efforts, both directly with governments or indirectly through investor network initiatives.
- Engage with issuers, investment banks and development agencies to increase issuance of labelled bonds, including sustainability-linked bonds (SLBs) with Paris-aligned KPIs.
- Commence engagement well in advance of the issuance process itself and seek opportunities to shape bond characteristics, such as KPIs for SLBs, in a manner that enhances climate ambition.

Stewardship

Broader stewardship is likely required for this asset class as currently several impediments to alignment exist. Some examples of stewardship topics are listed below:

- Advocate for data providers to develop and continuously improve indicators to assess criteria set out by the asset alignment target methodology.
- Advocate for the enhancement and standardisation of pathway tools to incorporate and make explicit the assessment of fair share principles within national level assessments.

- Advocate for governments to enhance and standardise national disclosures based on the alignment criteria set out.
- Advocate for issuers to improve land use, land use change, and forestry (LULUCF) and methane emissions reporting.
- Advocate for issuers to improve consumption emissions disclosures.
- Advocate for issuers to increase the issuance of labelled bonds.



Real Estate

Alignment targets

- Asset alignment target:** A 5-year target for increasing the % of AUM (or financed emissions) in material sectors that are 'aligning' or 'aligned' to a net zero pathway, or achieving net zero.'

Engagement threshold target:

A minimum proportion of financed emissions are assessed as achieving net zero or 'aligned' to a net zero pathway, or are subject to engagement.

Scope

- Include individual direct investments, investments in assets pooled through a fund or trust structure, investments in listed real estate companies, and real estate debt.⁸⁵
- Include all types of real estate: retail, office, industrial, residential, hotel, lodging, leisure & recreation, education, and technology/science.
- Include existing real estate assets and those in development.



Criteria underpinning alignment assessment

Key  Green ticks represent when a criterion is required to be fulfilled for a particular alignment category to be obtained.

| Criteria | Committed to aligning | Aligning to a net zero pathway | Aligned to a net zero pathway | Achieving net zero |
|---|---|---|---|---|
| Asset with emissions and energy intensity required by the sector and regional pathway for global net zero by 2050 and whose operational model will maintain this performance. | | | |  |
| Emissions performance: Current absolute or emissions and energy intensity is at least equal to a relevant net zero pathway. |  |  | | |
| Decarbonisation plan: Development and implementation of a quantified plan setting out a decarbonisation strategy for scope 1, 2, and material scope 3 emissions. |  |  |  | |
| Governance: Governance/management responsibility for targets and/or decarbonisation plan. |  |  |  | |
| Disclosure: Disclosure of scope 1 and 2 emissions, and disclosure of material scope 3, in line with regulatory requirements where applicable or the PCAF Standard. |  |  |  | |
| Targets: Short and medium term targets for scope 1, 2 and material scope 3 emissions in line with science-based 'net zero' pathway. These may be absolute, or intensity based: a) where available, a sectoral decarbonisation/ carbon budget approach should be used; b) minimum for other assets is a global or regional average pathway. |  |  |  | |
| Ambition: A long term goal consistent with the global goal of achieving net zero by 2050. |  |  |  |  |

Over time funds or assets may move between 'aligned' and 'aligning' on the maturity scale, depending on a fund's or asset's decarbonisation plan (for example, undertaking renovation at future lease expiry).



Additional notes on alignment

Carbon reduction pathways should include scope 1, 2 and material scope 3 emissions. When assessing the alignment of assets, investors should consider:

- Current and forward-looking alignment based on carbon emissions and energy intensity in line with net zero pathways.
- For projections of future alignment, investors should account on a best-case basis:
- Assumptions about the energy mix and demand in different buildings and locations.
- Potential for, and plans relating to, retrofit, renovations, refurbishments and other investments to address emissions and energy use.
- Fugitive emissions and transmission losses associated with the relevant energy system.

Methodologies used to assess the alignment of assets should include the above features. Currently, the recommended methodology for the assessment of this asset class is:

- The Carbon Risk Real Estate Monitor (CRREM).

In regions or countries where CRREM is currently less applicable due to market-specific differences, investors may use other equivalent 1.5° aligned methodologies or tools, but should disclose when this has occurred, explaining what tool has been used and how it is suitable.⁸⁶

Embodied carbon

Investors may consider setting targets for and disclosing embodied carbon emissions of new construction and major retrofits and include this in their decarbonisation plan.⁸⁷ Embodied carbon emissions performance against a net zero pathway should be accounted for when methodologies become available.





Approaches to achieve asset level targets

The approaches below can be used to achieve asset alignment targets. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within.

Portfolio construction

- Collect necessary data to assess a portfolio using the relevant decarbonisation pathway, e.g. CRREM tool or equivalent standard, using estimations and approximations for missing data.
- Screen all new investments (direct, listed, and non-listed) using the CRREM methodology or equivalent standard to assess current and future asset alignment and incorporate into decision-making in order to achieve targets over time.
- Consider real estate impact investments where changes in governance, ownership or management can drive swift decarbonisation actions.

Management

- Develop a clear timebound management and investment strategy supported with strong decarbonisation plan and commitments that, over time, achieves a portfolio consistent with CRREM pathways, or equivalent standard.
- Develop strategies to address and manage whole life carbon emissions across the property life cycle.⁸⁸
- Translate strategies and plans adopted and implemented by all relevant stakeholders into agreements with relevant parties involved in the management of real estate assets.
- Align direct investments (and own buildings) via investment/management plans to improve energy efficiency and increase renewable energy use.

Engagement and stewardship

- Prioritise engagement based on transition risk and exposure.
- For listed real estate companies, follow the Listed Equity and Corporate Fixed Income engagement guidance⁸⁹ and for unlisted real estate funds, use either the listed equity and corporate fixed income or private equity engagement guidance.
- For directly held assets, engage with tenants, prioritising engagement based on the level of alignment and size of exposure to assets, in order to:
 - Improve the data collection process for energy use by encouraging or even requiring tenants to share energy use data with building owners (where possible).
 - Facilitate actions and investments that reduce energy costs for tenants and owners and reduce emissions in line with net zero pathways.
- Address any split incentive between building owners and tenants and allow the costs of retrofits to be shared through building service charges.
- Encourage corporate tenants to adopt corporate emissions reduction targets consistent with net zero.
- Strengthen the role of green leases.
- Strengthen cooperative policy engagement to improve the policy framework around investments in building retrofits.
- Report and disclose on GRESB tenant engagement indicators related to climate and energy use, with the objective of achieving a positive scoring.

Infrastructure

Alignment targets

- **Asset alignment target:** A 5-year target for increasing the % of AUM (or financed emissions) in material sectors that are 'aligning' or 'aligned' to a net zero pathway, or achieving net zero.⁹⁰
- **Engagement threshold target:** A minimum proportion of financed emissions are assessed as 'achieving' or 'aligned' to a net zero pathway, or are subject to engagement.

NZIF recommends that for new assets where the general practitioner has significant influence, 100% of operational assets are to be classified as 'aligned' or 'net zero' by 2030, or, for acquisitions after 2025, within five years of investment. Additionally, for fund of funds, the asset owner or asset managers should aim, by 2030 at the latest, to only invest with firms or fund managers who themselves are setting asset alignment targets.

Given the scale and impact of energy intensive infrastructure assets, it is additionally recommended that, for infrastructure investments, 100% of carbon-based energy and transport assets are the subject of collective or direct engagement.

Scope

- Infrastructure as an asset class should be broadly defined to incorporate equity and debt exposure held through direct or co-investments, listed and unlisted infrastructure funds, project finance or passive investments. It typically includes greenfield and brownfield investments in economic and social infrastructure.
- Potential crossover with other asset classes is high, which is why investors will need to assess which guidance methodology is most appropriate to their individual circumstances.⁹¹

Criteria underpinning alignment assessment

Key Green ticks represent when a criterion is required to be fulfilled for a particular alignment category to be obtained.

| Criteria | Committed to aligning | Aligning to a net zero pathway | Aligned to a net zero pathway | Achieving net zero |
|--|-----------------------|--------------------------------|-------------------------------|--------------------|
| Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance. ⁹² | | | | |
| Emissions performance: Current and forecast emissions performance (scope 1, 2 and material scope 3) relative to a net zero benchmark/pathway or an asset's science-based target. An aligned asset would need to see emissions decline consistent with targets set to converge an asset with a net zero pathway. | | | | |
| Decarbonisation plan: Development and implementation of a quantified plan setting out a decarbonisation strategy for scope 1, 2, and material scope 3. | | | | |
| Governance: Governance/management responsibility for targets and decarbonisation plan. | | | | |
| Disclosure: Disclosure of scope 1 and 2 emissions, and disclosure of material scope 3, in line with regulatory requirements where applicable or the PCAF Standard. | | | | |
| Targets: Short and medium term targets for scope 1, 2 and material scope 3 emissions in line with science-based 'net zero' pathway. These may be absolute, or intensity based: a) where available, a sectoral decarbonisation / carbon budget approach should be used; b) minimum for other assets is a global or regional average pathway. | | | | |
| Ambition: A long term goal consistent with the global goal of achieving net zero by 2050. | | | | |



Greenfield assets

For greenfield assets, the highest status that can be achieved is 'aligning'. For this, operational criteria for ambition, targets, decarbonisation plan and climate governance must all be met along with the following:

- The asset will be, or is being, constructed in a way that is designed to deliver an asset that can be aligned to a net zero pathway, including consideration of whole lifecycle emissions to minimise embodied emissions and avoid carbon lock-in.⁹³
- There is a decarbonisation or management strategy to minimise emissions in the construction phase.

In transitioning from greenfield to operational status, an investor should ensure scope 1, 2 and 3 emissions data is compiled and disclosed, as well as a target set to maintain aligning status. The most advanced status a greenfield site can reach is aligning. As an asset becomes operational, beyond meeting the required criteria for a greenfield asset to be aligning, an investor should ensure that scope 1, 2 and 3 emissions data is compiled and disclosed as well as a target set.

Although this is a distinct requirement, the first criteria for greenfield assets to be aligning requires a plan for the lifecycle of the asset to be consistent with net zero. Providing

the asset follows the expected trajectory for emissions in the plan, the correct disclosures and establishment of a target should be consistent with aligning status being maintained in operation.

For both operational and greenfield assets, achieving emissions disclosure (and several other indicators) may take a significant period. Investors should use the best available data or estimates to address gaps and engage with companies, users, regulators as relevant to improve disclosure. It will be possible, over time, to credibly benchmark embedded emissions related to steel and concrete with a 1.5° scenario. It will be important for infrastructure investors to incorporate this into their assessment of the value chain.

Investors are recommended to work towards their assets achieving these indicators as soon as possible. However, it is expected that assets will achieve these indicators progressively and targets relating to alignment can be set to take account of the timeframes it may take to achieve these.

Third party verification of an asset's disclosures associated with the criteria is recommended and should be annual if possible.





Brownfield assets

The approaches below can be used to achieve an asset alignment target. However, they are presented agnostically (regarding their efficacy), as this will depend on the context an individual investor operates within:

Portfolio construction

- Negative screening:

- Assess emissions intensity of the asset, including material scope 3 and facilitated emissions, and potential for the asset to align with a net zero pathway. For greenfield assets, this assessment should consider full lifecycle emissions; where assets cannot be aligned, new investment should not be considered.
- For debt investments, given more limited ability to influence during the holding period, the screening test should be higher, including whether the asset has an alignment target and/or strategy, or the investor has a reasonable expectation that they can engage the issuer to achieve this.
- Undertake climate risk assessment and, to the extent possible, assess marginal abatement cost curves, and forecast internal rate of return (IRR) in a net zero scenario and only invest in assets where forecast IRR hurdles can be achievable in these net zero scenarios.

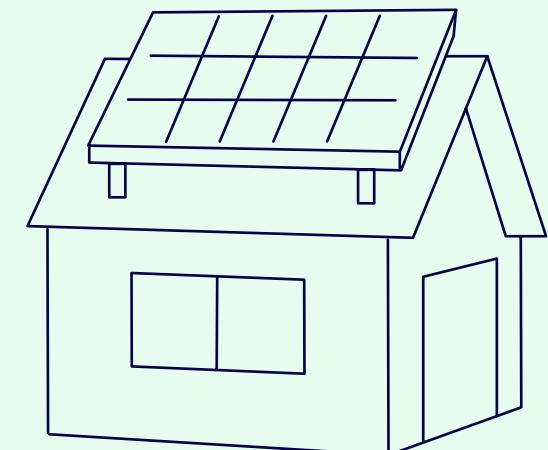
- Positive screening: Investors should seek to increase exposure in assets that are climate solutions.
- Conduct a Do No Significant Harm assessment: Where opportunities with credible strategies and/or pathways to address harm can be identified and implemented, investment is not precluded.

Management

- Define a net zero investment strategy and set portfolio/fund level objectives and targets.
- Assess and disclose current and ongoing scope 1, 2 and 3 emissions, net zero strategy and progress towards delivering against targets.
- For open ended funds, it is expected that emissions performance will be reported on an intensity basis. Where investors are setting portfolio level reference targets, a rebaselining policy for emissions intensity should take account of significant changes to fund exposure.
- For closed ended funds, where the end of fund date is sooner than the recommended target dates (2030, 2040), an appropriate shorter term end target should be set.

Engagement

- Investors should include infrastructure assets within the scope of the portfolio engagement goal; engagement targets should include 100% of carbon-based energy and transport infrastructure assets should immediately be the subject of collective or direct engagement, or management interventions.
- Direct engagement to establish timebound KPIs for emissions measurement and disclosure, target setting, development, and implementation of strategies, possibly including support through training and knowledge sharing.
- Ensure governance and management responsibilities for climate change are defined for each asset/operator, including establishing remuneration linkage.
- Undertake collaborative stewardship and engagement with escalation strategy, based on achievement of alignment indicators.
- For debt holdings, use change/waiver processes to introduce relevant ESG requirements.
- Monitoring and reporting on carbon performance and achievement of milestones and actions defined in company strategies.
- Engagement of employees, suppliers, regulators and community to ensure a just and effective transition process.
- Engagement with suppliers and greenfield developers to advocate for reducing emissions from purchased materials and assets' embodied emissions.



Private Equity

Alignment targets

- **Asset alignment target:** A % of invested/committed capital or financed emissions to be managed in alignment with net zero by 2030 and an increased % by 2040; achieve 100% net zero by 2050. GPs can also set this target for each fund.⁹⁴
- **Engagement threshold target:** Complete the specified engagement actions for all (100%) applicable private equity investments.⁹⁵

Scope

- GP buyout fund
- GP growth fund
- GP continuation fund
- LP investments in buyout, growth or continuation funds
- LP co-investment
- GP fund of funds
- LP-led secondaries

Managed in alignment with net zero

In addition to NZIF's typical system for asset alignment, a concept called "managed in alignment with net zero" is used to address the asymmetric information relationship between General Partners (GPs) and Limited Partners (LPs) with respect to underlying PCs.

PCs should progressively achieve each alignment category within a time limit. For new funds raised after committing to net zero, a GP must establish and disclose a target percentage of invested capital that will be managed in alignment with net zero.

- Timelines and measurement of actions are based on a fund's cycle, reflecting that an investor's influence exists when the company is within their portfolio.
- When investments span multiple influence bands, the weighted average of invested capital based on the anticipated distribution should inform target setting.

Criteria underpinning alignment assessment

Key

Green ticks represent when a criterion is required to be fulfilled for a particular alignment category to be obtained.

| Criteria | Committed to aligning | Aligning to a net zero pathway | Aligned to a net zero pathway | Achieving net zero |
|---|-----------------------|--------------------------------|-------------------------------|---|
| *Ambition: Long-term goal for the company to be net zero emissions by 2050 or sooner. | ✓ | ✓ | ✓ | |
| Governance: Board oversight for climate risk and execution of climate strategy. Climate risk management and strategy are discussed by the Board at least once a year. | ✓ | ✓ | ✓ | |
| Disclosure: Annual disclosure to investors of scope 1, 2, and material scope 3* absolute GHG emissions. Public disclosure is best practice but not an expectation. | | ✓ | ✓ | Company with emissions intensity required by the sector and regional pathway for 2050 and whose ongoing investment plan or business model will maintain this performance. |
| Targets: 5– to 10-year Paris-aligned GHG emissions reduction target (Scope 1, 2, and material Scope 3**) | ✓ | ✓ | | |
| Emissions performance: Cumulative YoY reduction meets or exceeds the linear annual reduction established as the target for Scope 1, 2, and material Scope 3 emissions.** | | ✓ | | |
| Climate strategy: A proportionate plan is established that sets out the measures to deliver the target. For high impact sectors, the strategy should be quantified and include capex and opex required to achieve targets. | | | ✓ | |

| PCs meeting the portfolio alignment criteria listed above, within milestones established to the right, are considered "managed in alignment with net zero" and the capital invested in them will count towards coverage targets established by GPs. | Fund vintage | | | | |
|---|--------------------------|-------------------------|--------------------------|--------------------------|--------------------|
| | Funds launched 2023–2029 | 1 year after deal close | 2 years after deal close | By exit | Not required |
| | Funds launched 2030–2050 | 1 year after deal close | 2 years after deal close | 4 years after deal close | No later than 2050 |

* For the Committed to Aligning milestone the board should acknowledge the importance for the company to take action toward a net zero future and encourage the company to begin exploring pursuit of Aligning and Aligned criteria.

** Material Scope 3 as defined by leading guidance such as SBTi.

Private Equity continued

GPs and LPs have differing influence when encouraging PCs to decarbonise. Influence bands, each with objectives, account for these dynamics. They are ambitious yet reflective of practical conditions for each investment type. These affect the asset-level targets.

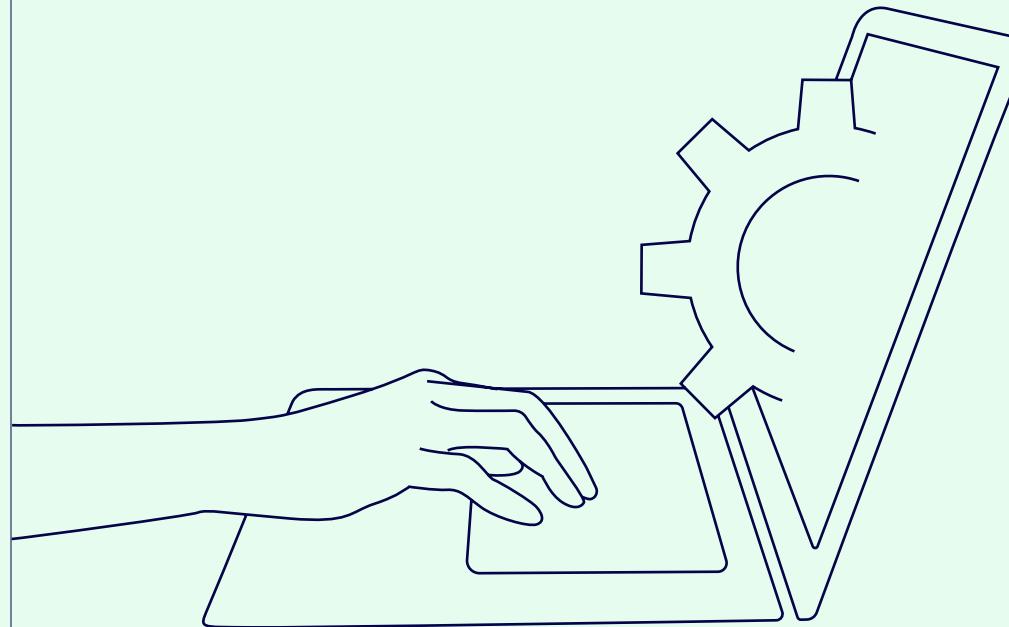
Each influence band has associated:

- Expectations for achieving alignment.
- Influence levels on asset alignment target to be set.
- Engagement actions designed around the influence levers available.

Direct bands apply to investments made directly into a PC and are specific to board voting seat rights.

Indirect bands apply to investments where a GP exists between the investor and the PC. Different bands reflect relative investment size and if they have been made after fund closure.

| Asset classes | Band | Criteria | Influence Level |
|-----------------|------|--|---------------------|
| Direct | 1a | > 50% of board voting seat appointments (usually the majority shareholder) | Strong (with PCs) |
| | 1b | ≤ 50% of board voting seat appointments (usually a significant minority shareholder) | Moderate (with PCs) |
| | 1c | No board votes | Limited (with PCs) |
| Indirect | 2a | Big ticket investors* and/or first close investors | Strong (with GPs) |
| | 2b | Investment made during fundraise not included in 2a; co-investment | Moderate (with GPs) |
| | 2c | Investment made through secondaries market | Limited (with GPs) |





Asset engagement (for GPs)

Most GPs pursuing net zero may want to consider focusing their efforts on motivating and supporting PCs on net zero actions.

GPs are encouraged to proactively engage directly with their portfolio companies.

| Asset classes | Band | Criteria | Recommended Engagement Actions | Timing |
|---------------|------|-------------------|---|---|
| Direct | 1a | > 50% board votes | No engagement requirement. Engagement directly with PCs is expected in pursuing alignment targets or portfolio reference targets but is not covered under the Private Equity Engagement Threshold Target. | N/A |
| | 1b | ≤ 50% board votes | <p>Universal</p> <ul style="list-style-type: none"> Inform other board members of your firm's net zero commitment. Request that climate risks and opportunities be a regular agenda item for board meetings. Request that the PC be managed in alignment with NZ and that as a first step, management is asked to develop a net zero proposal that should be presented to the board of directors for a formal vote. The proposal should include: <ul style="list-style-type: none"> Importance of net zero and business benefits for the company Action plan for implementation Estimates of cost and impact associated with the plan | <ul style="list-style-type: none"> Within 1 year Within 1 year Within 1 year |
| | 1c | No board votes | <p>Conditional</p> <ul style="list-style-type: none"> If, prior to investment, the target company is in a high emitting industry and co-owners are not in agreement to manage the company in alignment with net zero, the investment's potential mis-alignment with the net zero commitment should be explicitly raised at the investment committee. <p>Universal</p> <ul style="list-style-type: none"> Communicate with the largest co-owners/shareholders to share your net zero commitment and express your organization's desire to have the portfolio company managed in alignment with net zero. | <ul style="list-style-type: none"> Prior to investment |
| | | | <p>Conditional</p> <ul style="list-style-type: none"> If, prior to investment, the target company is in a high emitting industry and co-owners are not in agreement to manage the company in alignment with net zero, the investment's potential mis-alignment with the net zero commitment should be explicitly raised at the investment committee. | <ul style="list-style-type: none"> Within 1 year |



LP approaches to achieve asset level targets

The approaches below can be used to achieve an asset alignment target. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within:

Manager and fund selection (for LPs)

- Seek to ramp up investment in funds managed in alignment with net zero as quickly as possible, to keep pace with the reductions that climate science states are necessary.
- Balance the need for fast action with an understanding that increased adoption of net zero practices across the private equity industry will be necessary to provide adequate investment options to LPs.
- Consider how existing GPs can be encouraged to take up net zero commitments.
- Anticipate differences in GP net zero uptake across relevant and specific markets and/or geographies in which investments are held; and
- Consider fund duration – if all investments need to be net zero by 2050, commitments made to a 12-year fund in 2038 should plan to be 100% managed in alignment with net zero.

| Asset classes | Band | Criteria | Recommended Engagement Actions | Timing |
|-----------------|-----------|-----------------------------------|--|---|
| Indirect | 2a and 2b | Investment made during fund raise | <p>Universal actions after committing to net zero</p> <ul style="list-style-type: none"> • Send a letter to all the following: the Chairman of the Board, the CEO, Investor Relations, and the ESG leader of every GP in which you invest. The letter should share your commitment to net zero, your expectation of GPs to adopt net zero practices in new funds, and how consideration of net zero could impact your investment decisions going forward. Request that the GP make their own net zero commitment and have Limited Partnership Agreements stipulate a commitment to net zero. | <ul style="list-style-type: none"> • Within 6 months of making your net zero commitment. |
| | | | <p>Universal actions during fund selection</p> <ul style="list-style-type: none"> • Engage with senior leaders of the GP, including Investor Relations, to request the fund include a commitment to net zero within the Limited Partnership Agreement. If that is rejected, propose a side letter with the GP that stipulates a commitment by the GP to manage a portion of the invested capital in line with net zero. The specific percent of invested capital can be negotiated. • LPs can choose to invest with GPs that refuse to align with net zero. But, over time, the proportion of capital that LPs can commit to GPs that don't manage in alignment will diminish rapidly. LPs should make sure this dynamic is clearly understood by GPs that refuse to align. | <ul style="list-style-type: none"> • Before making fund selection |
| | | | <p>Conditional actions during ownership</p> <ul style="list-style-type: none"> • If you have an LPAC seat: <ul style="list-style-type: none"> • Request that climate-related performance is integrated into LPAC reporting for the fund. • If the GP is not meeting its net zero targets, request net zero performance as an LPAC agenda item. • If you don't have an LPAC seat: <ul style="list-style-type: none"> • Engage with other LPs to discuss and seek to collectively push for net zero commitments at the GP level AND/OR when attending a GP's annual investor day, raise net zero as a concern and share your expectation that the GP will commit future funds. • If the GP is not meeting its net zero targets, hold a meeting with ESG lead and relevant senior leader(s) at the GP to raise your concern and seek assurances the situation will be rectified. | <ul style="list-style-type: none"> • Within 1 year • If targets are not on track to be met • Within first 3 years • If targets are not on track to be met |



Manager engagement (for LPs)

Engaging GPs to adopt net zero practices is needed for LPs to meet their asset alignment target.⁹⁶

| Asset classes | Band | Criteria | Recommended Engagement Actions | Timing |
|---|------|--|--|---|
| Indirect • LP investments in buyout, growth or continuation funds • LP co-investment • GP fund of funds • LP-led secondaries | 2c | Investment made through secondaries market | <p>Universal actions after committing to net zero</p> <ul style="list-style-type: none"> Send a letter to all the following: the Chairman of the Board, the CEO, Investor Relations, the ESG leader of every GP in which you invest. The letter should share your commitment to net zero, your expectation of GPs to adopt net zero practices in new funds, and how consideration of net zero could impact your investment decisions going forward. Request that the GP make their own net zero commitment and have Limited Partnership Agreements stipulate a commitment to net zero. <p>Universal actions during fund selection</p> <ul style="list-style-type: none"> Engage with senior leaders of the GP, including Investor Relations, to make clear your commitment to net zero, and how consideration of net zero will impact your investment decisions going forward. Request that the GP make their own net zero commitment. LPs can choose to invest with GPs that refuse to align with net zero. But, over time, the proportion of capital that LPs can commit to GPs that don't manage in alignment will diminish rapidly. LPs should make sure this dynamic is clearly understood by GPs that refuse to align. <p>Conditional actions during ownership</p> <ul style="list-style-type: none"> If you have an LPAC seat you should: <ul style="list-style-type: none"> Request that climate-related performance is integrated into LPAC reporting for the fund. If the GP is not meeting its net zero targets, request net zero performance as an LPAC agenda item. If you don't have an LPAC seat you should: <ul style="list-style-type: none"> Engage with other LPs to discuss and seek to collectively push for net zero commitments at the GP level AND/OR when attending a GP's annual investor day, raise net zero as a concern and share your expectation that the GP will commit future funds. If the GP is not meeting its net zero targets, hold a meeting with ESG lead and relevant senior leader(s) at the GP to raise your concern and seek assurances the situation will be rectified. | <ul style="list-style-type: none"> Within 6 months of making your net zero commitment Before making fund selection Within 1 year If targets are not on track to be met Within first 3 years If targets are not on track to be met |



Private Debt

Alignment targets

- **Asset alignment target:** A % of invested capital or financed emissions to be “managed in alignment with net zero” by 2030 and an increased % by 2040; achieve 100% net zero by 2050.⁹⁷
- **Engagement threshold target:** Complete the specified engagement actions for all (100%) applicable private debt investments.

Scope

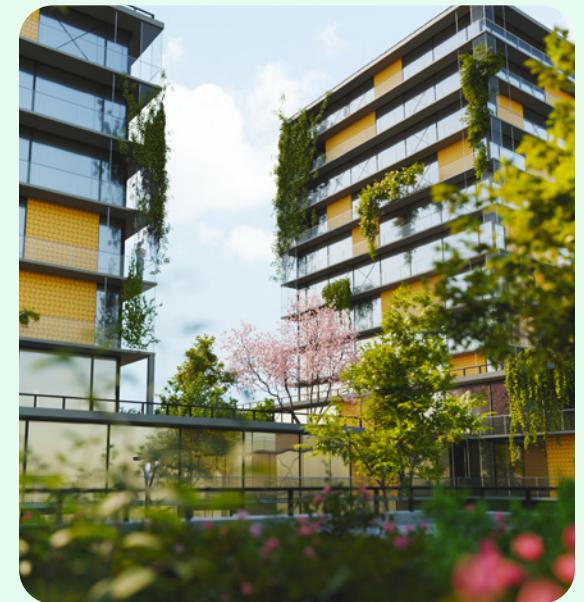
- GP direct corporate lending
- GP venture and/or growth debt
- GP private structured credit
- GP fund/NAV financing
- GP continuation funds across these strategies
- GP fund of funds
- LP investments across private credit (direct & indirect)
- LP co-investment
- LP-led secondaries

Other private debt sub-asset classes have been excluded because specific NZIF guidance already exists for them (specifically real estate debt and infrastructure debt).

Publicly listed and tradeable tranches of CLOs are excluded from this guidance as these investments fall under the Corporate Fixed Income methodology (see above). Likewise, the underlying collateral of CLOs (broadly syndicated loans) are excluded.

Broadly syndicated loans are loans where the bank is the lead arranger who underwrites the loan, initially finances it and then syndicates to a group of lenders (usually larger than a club of lenders in private debt). They are usually tradeable to some extent although liquidity may be limited.

There can be a degree of overlap between the definitions of syndicated loans and direct corporate lending as mentioned above, but to clarify; the general guidance is if a non-bank lender is originating, underwriting, structuring and executing the loan, this should be considered as a form of private debt and fall under the NZIF private debt framework. On the other hand, if a bank lender originates the loan with the borrower, structures and executes the loan (with the view to further syndicate this), This should be considered as a broadly syndicated loan. Broadly syndicated loans will fall under NZIF fixed income framework. Some syndicated loans have little or no secondary market liquidity, including commercial bank arranged debt syndicates in certain jurisdictions, as well as those offered by Multilateral Development Banks and Development Finance Institutions. These specific cases⁹⁸ may be considered private debt and fall under the NZIF private debt framework.





Criteria underpinning alignment assessment

Key Green ticks represent when a criterion is required to be fulfilled for a particular alignment category to be obtained.

| Criteria | Committed to aligning | Aligning to a net zero pathway | Aligned to a net zero pathway | Achieving net zero |
|---|-----------------------|--------------------------------|-------------------------------|--------------------|
| *Ambition: Long-term goal for the company to be net zero emissions by 2050 or sooner. | | | | |
| Governance (HIGH IMPACT SECTORS ONLY): Board oversight for climate risk and execution of climate strategy. Climate risk management and strategy are discussed by the Board at least once a year. | | | | |
| Disclosure: Annual disclosure to investors of scope 1, 2, and material scope 3 absolute GHG emissions. Public disclosure is best practice. | | | | |
| Targets: 5– to 10-year Paris-aligned GHG emissions reduction target (Scope 1, 2, and material Scope 3). | | | | |
| Emissions performance: Cumulative YoY reduction meets or exceeds the linear annual reduction established as the target for Scope 1, 2, and material Scope 3 emissions. | | | | |
| Climate strategy (HIGH IMPACT SECTORS ONLY): A proportionate plan is established that sets out the measures to deliver the target. The strategy should be quantified and include capex and opex required to achieve targets. | | | | |

* For the Committed to Aligning milestone, the board should acknowledge the importance for the company to take action toward a net zero future and encourage the company to begin exploring pursuit of Aligning and Aligned criteria.

GPs are encouraged to assess each PCs current alignment status and get a commitment from and support the PC to move at least one step further to the right along the alignment criteria.

Whilst this guidance only expects PCs to move one step further along the alignment scale, efforts to make multiple steps are

strongly encouraged and will become more important from 2040 onwards when we anticipate that achieving the initial steps should become easier and faster; and the majority of the companies will already be well advanced (aligning or aligned) along the alignment scale with a clear path to net zero by 2050.





Private Debt continued

| Fund vintage alignment milestones | Committed to Aligning | Aligning | Aligned | Net Zero |
|---|---|--|--|---|
| Funds launched after guidance published but before 2030 | Expression of intent by PC to move to this category by end of grace period Achieve 'Committed to Aligning' by exit | PC is already 'Aligning' Expression of intent by end of grace period to move to 'Aligned' Achieve 'Aligned' by exit | Not required | Not required |
| Funds launched between 2030 – 2040 | Expression of intent by PC to move to this category by end of grace period Achieve 'Committed to Aligning' by exit | PC is already 'Committed to Aligning' Expression of intent by end of grace period to move to 'Aligning' Achieve 'Aligning' by exit | PC is already 'Aligning' Expression of intent by end of grace period to move to 'Aligned' | Not required |
| Funds launched between 2041 – 2045 | Expression of intent by PC to move to this category by end of grace period Achieve 'Committed to Aligning' by exit | PC is already 'Committed to Aligning' Expression of intent by end of grace period to move to 'Aligning' Achieve 'Aligning' by exit | PC is already 'Aligning' Expression of intent by end of grace period to move to 'Aligned' | PC commitment to achieve no later than 2050 |
| Funds launched between 2046 – 2050 | Achieve 'Committed to Aligning' before deal close | Achieve 'Aligning' before deal close | Achieve 'Aligned' by exit or 2050, whichever is sooner. | All PCs achieve net zero no later than 2050 |



Fund-level targets

For all new funds raised after committing to net zero, the GP should establish a target percentage of the fund's invested capital that will be managed in alignment with net zero.

The fund-level net zero target should be shared with LPs during fundraising in the fund marketing materials, similar to how funds share forecasted financial returns. This will enable LPs to make asset allocation decisions in furtherance of their own net zero commitments and calculate their net zero committed capital.

Because of legal commitments made to LPs as part of legacy funds, it may be difficult to add a net zero commitment after capital has been committed and deployed. As a result, funds raised prior to the GP making their net zero commitment do not need to be included. Data on net zero alignment of existing funds can be reported to LPs and counted toward the LP's own commitment on a voluntary basis.

Firm-level portfolio milestone targets

The second type of asset alignment target that GPs can commit to meet are firm-level portfolio milestone targets for 2030, 2040, and 2050 across their full private debt portfolio (excluding funds that launched prior to the GP committing to net zero).

Influence bands

GPs and LPs experience varying levels of influence in their ability to encourage underlying PCs to decarbonise. A GP that is the sole lender or lead arranger of the debt within a private debt deal can potentially exert greater influence on a company's management when negotiating deal terms, while a GP that is a minority holder of the debt tranche may face more difficulty in positively influencing the direction of the company through the private debt deal terms. Particularly in competitive private debt deal environments, there can be limited or even no discussion with company management which further impacts the GP's ability to influence deal terms pre-close. Also, certain types of private debt deals, particularly in structured credit for example, offer very limited scope to negotiate with underlying PCs or collateral, making it near impossible for GPs to influence any deal terms with PCs.



Similarly, an LP who invests while the fund is still being launched has a greater ability to influence GP actions than one that enters the fund following the first close or through the secondaries market.

To account for these dynamics, both the private debt asset alignment target and private debt engagement threshold targets use influence bands to establish objectives that are ambitious yet reflective of the practical circumstances that each investment type faces. There are seven

influence bands in total that can be broadly grouped into two categories: 1) direct influence; and 2) indirect influence.

Expectations for the speed at which net zero alignment can be achieved vary across influence bands, and a GP's or LP's exposure to different bands will inform appropriate asset alignment targets. Each influence band also includes tailored engagement actions that are designed around the influence levers available, given the band's dynamics.



Asset engagement (for GPs)

The recommended engagement actions to be undertaken by GPs when engaging with PCs is set out below.

| Asset classes | Band | Private Debt Criteria | Recommended Engagement Actions | Timing |
|--|------|--|--|---|
| • GP direct corporate lending • GP venture and/or growth debt | 1a | Sole lender or lead arranger of the debt and/or Holder of 50%+ of the debt tranche and/or Board seat and/or Any form of significant equity holding in the deal ¹⁰⁰ | Engage with PC management with decarbonisation and climate risk as key engagement priorities. This could include correspondence, meetings, webinars and/or training. It is important to engage on the PC's ambition, disclosures, targets and emissions performance. Governance and climate strategy should also be engagement priorities for PCs in high impact sectors. | Post Deal Close/ Grace Period until Exit |
| | 1b | Significant minority holder of the debt tranche (have blocking or veto rights). Between 25-50% of the debt tranche | Best practice: climate-related ESG margin ratchet loans / sustainability-linked loans and/or language in loan documentation requiring climate disclosure. The climate related KPIs included may vary across loans. For high impact sectors, in addition to meeting all the recommended alignment criteria, managers should (1) actively use selection as a tool to identify and/or avoid and/or select them; (2) use climate-related ESG margin ratchets and / or covenants in related legal documentation; (3) ensure such investments have a clear path to net zero by exit from 2040. | |
| • GP private structured credit • GP fund/NAV financing | 1c | Small participant of tranche – less than 25% | | |
| | 1d | Any % tranche holding where limited scope to negotiate directly with underlying company / collateral | It may not be possible to access underlying PCs. As such, GPs are encouraged to engage with the issuer and consider, if possible, the issuer's firm level attributes instead of portfolio companies' characteristics. | Post Deal Close/ Grace Period until Exit |



Private Debt continued

The recommended engagement actions to be undertaken by GPs when engaging with PE sponsors where appropriate are set out below.

| Asset classes | Band | Private Debt Criteria | Recommended Engagement Actions | Timing |
|--------------------------------|------|--|--|--------------------------------------|
| GP Direct corporate lending | 1a | Sole lender or lead arranger of the debt and/or Holder of 50%+ of the debt tranche and/or Board seat and/or Any form of equity holding in the deal | Identify PE sponsors across debt portfolio. Engage with investment leads and/or sponsor's ESG personnel on the PC's ambition, disclosures, targets and emissions performance. Governance and climate strategy should also be engagement priorities for PCs in high impact sectors. | Within first 12 months of deal close |
| GP venture and /or growth debt | 1b | Between 25–50% of the debt tranche | Notify all PE sponsors of Net Zero ambition and targets and introduce NZIF PE framework if they are not already committed to that. | Annually thereafter |
| | 1c | Less than 25% | Provide them with standardised data request for all deals going forward. | |
| GP private structured credit | 1d | Any holding | N/A | N/A |
| GP fund/NAV financing | | | | |



LP approaches to achieve asset-level targets

While LPs sit two—sometimes three—steps away from the actual operations of PCs, they may have an opportunity to influence the practices of GPs through the commitment of their capital. Because most LPs engage with many GPs, their potential to catalyse and encourage real economy decarbonisation is substantial. In fact, many LPs have already committed to net zero and they are encouraged to lean into appropriate engagement actions that may rapidly shift GP behaviour in future funds. This guidance establishes two target types that LPs can set below.

Manager and fund selection (for LPs)

For the milestone years of 2030, 2040, and 2050, LPs should seek to increase the amount of committed capital that GPs plan to manage in alignment with net zero.

In practice, this means that LPs should focus on selecting funds and managers who have committed to net zero and who will implement net zero investment strategies. This will facilitate LP's investments to meet the recommendations outlined by this Guidance. GPs should also regularly report on the progress of the net zero alignment criteria of PCs to LPs. This Guidance also encourages LPs to avoid investments in industries whose primary activity is no longer considered permissible within a credible net zero pathway.

By 2050, 100% of committed and invested capital across the indirect bands should be net zero.

The 2030 and 2040 targets are based on committed capital and vary based on influence band.

LPs should consider the following principles:

- Seek to ramp up investment in funds managed in alignment with net zero as quickly as possible to keep pace with the reductions that climate science says are necessary;
- Balance the need for fast action with an understanding that increased adoption of net zero practices across the private debt industry will be necessary to provide adequate investment options to LPs;
- Consider your organisation's ability to influence existing GPs to take up net zero commitments;
- Anticipate differences in GP net zero uptake across specific markets/geographies in which your organisation invests; and
- Consider fund duration; If all investments need to be net zero by 2050, commitments made to a 10-year fund in 2040 should plan to be 100% managed in alignment with net zero.

The LP's milestone target and calculation of performance should consider the percent of invested capital that the GP plans to manage in alignment with net zero. Especially in early years, many GPs will set fund-level targets to manage less than 100% of invested capital in alignment with net zero. LPs should apply the GP's fund-level commitment percentage (based on final invested capital) to the capital they are committing to the fund.

Calculation of progress toward the LP's targets should include all committed capital that was committed after the LP made a commitment to achieve net zero or this Guidance was released (whichever came later). Committed capital that was committed prior to this point can be omitted.

On an annual basis, LPs should also calculate and disclose the percent of invested capital being managed in alignment with net zero, as this reflects the reality of how investments are actually being managed. These calculations should be based on actual performance reported by GPs and not assumed to be equivalent to a fund's target. As above, investments that were made prior to the LP's net zero commitment or the release of this guidance release can be excluded.



Manager engagement (for LPs)

For LPs to meet their asset alignment target, they will need to be successful at engaging and influencing GPs to adopt net zero aligned practices. As such, LP private debt engagement threshold targets are arguably one of the most important elements of this Guidance.

LPs are asked to complete the recommended engagement actions specified below for 100% of investments. The intention is that LPs build these practices into their standard operating procedures.

| Asset classes | Band | Private Debt Criteria | Recommended Engagement Actions | Timing |
|--|------|---|--|-------------------------|
| Indirect • GP continuation funds across these strategies • GP fund of funds • LP investments across private credit (direct & indirect) • LP co-investment • LP-led secondaries | 2a | Big ticket investors and/or first close | <p>Universal actions after committing to net zero:</p> <ul style="list-style-type: none"> Send a letter to all the following: the Chairman of the Board, the CEO, Investor Relations, and the ESG leader of every GP in which you invest. The letter should share your commitment to net zero, your expectation of GPs to adopt net zero practices in new funds, and how consideration of net zero could impact your investment decisions going forward. Request that the GP make their own net zero commitment and have Limited Partnership Agreements stipulate a commitment to net zero.¹⁰¹ | During fund selection |
| | 2b | Investment made during fund raising, not 2a. Coinvestment | | Throughout life of fund |
| | 2c | Investment via secondaries | <p>Universal actions during fund selection:</p> <ul style="list-style-type: none"> Engage with senior leaders of the GP, including Investor Relations, to request the fund include a commitment to manage the portfolio in alignment with net zero within the Limited Partnership Agreement. If that is rejected, propose a side letter with the GP that stipulates a commitment by the GP to manage a portion of the invested capital in line with net zero. The specific percent of invested capital can be negotiated. LPs can choose to invest with GPs that refuse to align with net zero. But, over time, the proportion of capital that LPs can commit to GPs that don't manage in alignment with net zero will diminish rapidly. LPs should make sure this dynamic is clearly understood by GPs that choose not to align. <p>Conditional actions:</p> <ul style="list-style-type: none"> If you have an LPAC seat: <ul style="list-style-type: none"> Request climate-related performance integrated into LPAC reporting for the fund. If the GP is not meeting its net zero targets, request net zero performance as an LPAC agenda item. If you don't have an LPAC seat: <ul style="list-style-type: none"> Engage with other LPs to discuss and seek to push for net zero commitments at the GP level AND/OR when attending a GP's annual investor day, raise net zero as a concern and share your expectation that the GP will commit future funds. If the GP is not meeting its net zero targets, hold a meeting with ESG lead and relevant senior leader(s) at the GP to raise your concern and seek assurances the situation will be rectified. | |

Policy Advocacy

Introduction

This section addresses barriers to, and captures opportunities for, net zero alignment created by the wider policy and regulatory environment, enabling key sectors and the wider economy to transition.

Policy engagement is becoming increasingly recognised as a critical component of net zero strategies and transition plans.¹⁰² Engaging with regulators and policymakers to advocate for the development and implementation of coherent and well-designed policies has the potential to address key barriers to decarbonisation across entire economies and create the incentives necessary to scale investment in climate solutions. Relative to NZIF's alignment categories, investments may struggle to progress from 'aligning' to 'aligned' to a net zero pathway without plausible net zero pathways and the required business case/incentives created by enabling policy environments.

Core action points

NZIF recommends the following actions for investors using the framework and considers them core:

- ✓ Align direct and indirect policy advocacy efforts towards what is relevant for achieving global net zero emissions by 2050 or sooner.
- ✓ Participate in policy advocacy (directly or collectively) to international, national and sub-national policymakers to promote the implementation of climate and wider economic policies and regulations that support net zero objectives.
- ✓ Disclose internal climate policy positions and that of industry associations, participation in any advocacy or lobbying activities and submissions, and an assessment of the alignment of industry associations in alignment with the Global Standard on Responsible Climate Lobbying.

- ✓ Create procedures for robust internal oversight of policy advocacy efforts, including monitoring, review, and transparency through disclosure.
- ✓ Engage with investment managers or clients on the need for net zero aligned policy advocacy to achieve net zero objectives.¹⁰³





Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult but would likely prove beneficial:

- ✓ Disclose within a transition plan the interdependencies between net zero targets and the wider policy environment.
- ✓ Engage with portfolio companies on their lobbying practices and industry associations, promoting the need for alignment with the Paris Agreement.¹⁰⁴

Below is a non-exhaustive list of examples of important policy topics that investors may wish to consider when encouraging enhanced policy action to facilitate their net zero efforts.¹⁰⁵

Disclosure and Transparency

- Mandatory disclosure of standardised corporate transition plans, above certain thresholds, to improve asset alignment assessment, along the basis of double materiality.¹⁰⁶
- Improved and standardised national disclosures required for assessing the net zero alignment of national governments.
- Work towards enhancing interoperability and coherency of regulatory disclosure frameworks to support investors with global portfolios.

Government Policies and Coordination

- Collaboration and coordination between national and subnational governments to facilitate achievement of net zero related goals.
- Aligning government subsidies, taxes, and other incentives so that they facilitate and do not inhibit achievement of net zero goals.
- Improving disclosure of information relevant to assessing alignment and investment in climate solutions.
- Implementation of sectoral decarbonisation strategies, particularly in high emitting sectors, with clear emissions reduction targets and underpinned by clear policies that support the deployment of critical net zero technologies.
- Development of an economy-wide transition plan and supportive financing plans that is aligned with the Paris Agreement.
- Development of fossil-fuel¹⁰⁷, renewable energy¹⁰⁸, and deforestation¹⁰⁹ policies that are consistent with fair share contributions towards global commitments.

Financial Regulation and Oversight

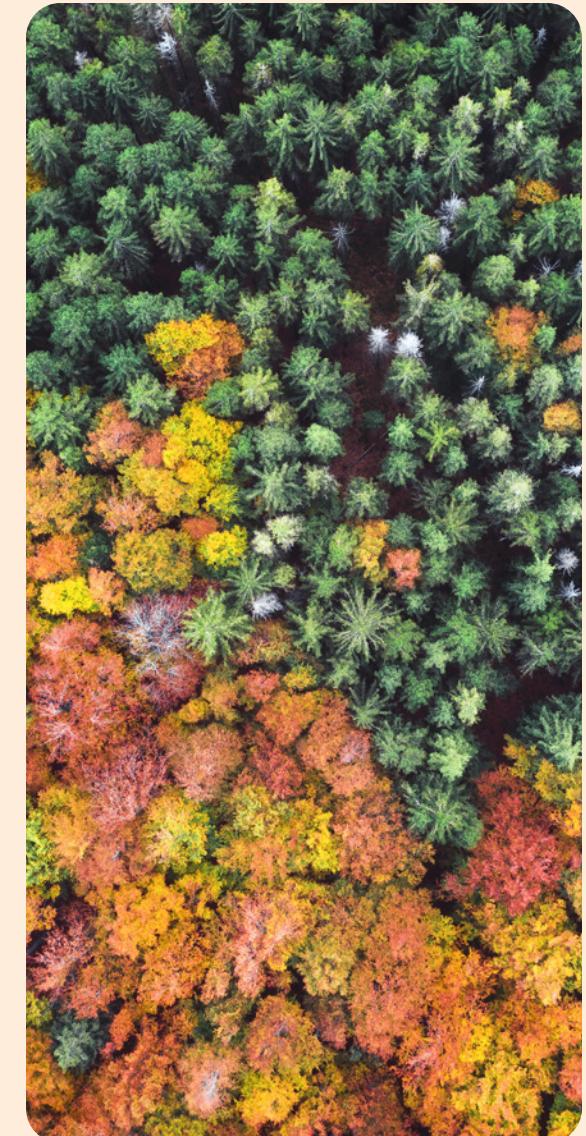
- Central banks and financial supervisors to incorporate transition plans as part of their prudential oversight of financial institutions.
- Advocating for transition finance to be embedded within regulatory architecture.
- Greater scrutiny of traditional benchmarks and the role of index providers.

Global Agreements and Standards

- Global agreement to phase out unabated fossil fuels at a trajectory which aligns with the goals of the Paris Agreement.

Investment Facilitation and Support

- Advocate for taxonomies which facilitate climate solutions investment in accordance with fair share principles and the latest climate science, adopt clear and usable criteria, account for transition/enabling activities, and are interoperable with existing taxonomies.
- Suitable vehicles for low-carbon investment in emerging and frontier markets.
- Improving shareholder rights to affect corporate strategy and management.
- Adequate support for protecting communities adversely impacted by transition activities.
- Improving availability of granular sector, regional, and national net zero pathways, which incorporate fair share principles.





Stakeholder & Market Engagement



Introduction

This section is dedicated to facilitating the availability of data, mandates, and investment advice necessary to achieve net zero objectives.

Stakeholder and market engagement is deemed a critical component of net zero strategies and transition plans. NZIF concepts are widely used by investors but are yet to permeate across the wider body of actors serving the investment community.

Relative to NZIF's alignment system, investors may struggle to assess the alignment of investments without the necessary disclosures, analysis, and data products. Furthermore, long term improvements in alignment may be impeded by investment products, such as by index providers environments.

Core action points

NZIF recommends the following actions for investors using the framework and considers them core:

- ✓ Participate in advocacy to market service providers (directly or collectively through industry networks) for the tools, data, and advice required to achieve net zero goals.
- ✓ Undertake stewardship with market actors to ensure that their assessments, data and products are based on alignment criteria, robust methodologies, and are consistent with net zero goals.
- ✓ Undertake stewardship with industry peers to share expertise, experience, and address common challenges in support of the achievement of net zero objectives.

- ✓ Engage external fund managers on the need to manage funds in alignment with net zero that is consistent with NZIF's alignment criteria.
- ✓ Engage with existing and potential clients to encourage the uptake of net zero investment strategies and products, provide research and analysis to support climate risk assessment and net zero investing.
- ✓ Promote disclosure of corporate transition plans across industries, such as in accordance with IIGCC's sector neutral transition plan guidance and net zero standards covering high impact material sectors.¹¹⁰



Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult but would likely prove beneficial:

- ✓ Participate in regulator-industry initiatives to develop voluntary and mandatory standards of transition plans and other disclosures, such as Paris-aligned accounts.¹¹¹
- ✓ Participate in investor industry network associations to advance knowledge around benchmarking portfolios with the Paris Agreement goals.
- ✓ Engage with existing and potential asset managers to encourage managers to provide strategies and products to achieve asset owners' net zero investment goals.
- ✓ Engage private data vendors to pursue assessments that are consistent with alignment criteria within the latest detailed guidance on indicators from the Climate Action 100+ Net Zero Company Benchmark.¹¹²
- ✓ Engage private data vendors to pursue data on scope 3 emissions that details which categories are used within assessments and their accuracy disclosed.

- ✓ Undertake participation in activities of the investor networks to facilitate knowledge creation relating to net zero investment.
- ✓ Communicate expectations relating to alignment criteria across asset classes (e.g. pre-issuance of bonds).
- ✓ Engage with index providers to provide benchmarks better aligned with net zero.¹¹³
- ✓ Engage with providers of bond indices that may inadvertently require investors to purchase new bonds irrespective of climate impacts.
- ✓ Encourage through signalling, early-stage investing, or other methods for compatible firms to make it to the IPO stage.
- ✓ Encourage credit rating agencies, sell-side analysts, and fund managers to incorporate climate-related risk factors into financial analysis.
- ✓ Advocate for the development of contextually specific sector transition pathways which can be used to assess the alignment of investments.¹¹⁴



Appendix

Certificate of deposits

This guidance is specific to certificate deposit holdings which may appear across portfolios and funds, yet are often overlooked for their climate impact. Its premise is that:

- All possible portfolio emissions should be covered by net zero goals, objectives, strategies, and targets.
- Management of cash will result in emissions due to and relative to the carbon-intensity of associated bank lending.
- Emissions could be relatively large as NZIF considers banking as a high impact material sector.

Managing cash associated emissions is purposefully an 'appendix' and not a 'main report' item. This is due to several factors:

- Carbon footprinting methodologies are nascent.
- Within a fund, cash is primarily used for liquidity purposes, and is typically only a small component of total holdings.
- The normally limited size of cash as a proportion of total holdings should not distract attention from where more impact can be achieved.
- Service providers are selected on many practical factors and risk management restrictions apply on the adopted service provider.
- Choice of service provider may be imposed on a fund/investor.

Scope

It is recognised that 'cash' has many interpretations. This methodology applies specifically for certificate of deposits. Other cash equivalents should be managed using other asset class methodologies:

- Banker's acceptance: See NZIF 2.0 methodology for Corporate Fixed Income.
- Commercial paper: See NZIF 2.0 methodology for Corporate Fixed Income.
- Repurchase agreement: See NZIF 2.0 methodology for Sovereign Bonds/ Corporate Fixed Income.

During assessment and target setting, investors should specify the assets in scope and a contextually relevant net zero pathway be used.

Investors can prioritise engagement using either a financed emissions-based approach or a materiality approach. The financed emissions approach approximates footprinting by multiplying cash deposits by the associated carbon intensity of bank lending. Data can be sourced from corporate reporting supported and validated with other reputable sources. The materiality-based approach uses relative institutional exposure to providers of certificates of deposits to determine prioritisation of engagement.

Approaches to align certificate of deposits

The approaches below can be used to align certificate of deposits. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within.

Asset selection

- Incorporate alignment criteria into considerations when compiling counterparty list.
- Tilt allocations towards higher performing service providers based on the alignment criteria.
- Select 'green' products – when possible and practically feasible to do so – ensuring proper oversight and strong guardrails exist.

It is recognised that relative to other portfolio asset classes, practical limitations may restrict allocation decisions regarding certificate deposits (e.g. liquidity and risk management considerations).

Asset engagement

- Set an engagement strategy with clear milestones and an escalation process with a feedback loop to counterparty list selection and decision-making.
- Undertake prioritised engagement with service providers to improve performance against alignment criteria.
- Engage relevant senior representatives of service providers, to make clear any net zero goals, and implications for future selection decisions.
- Engage service providers on counterparty list on the utility of publicly disclosing:
 - Material scope 3 emissions, particularly lending exposure to high impact material sectors.
 - % total lending in line with relevant taxonomies (or a similar climate solutions framework).
 - Financed and facilitated emissions as well as any net zero targets and transition plan.
- Advocate that banks join established initiatives (e.g. Net Zero Banking Alliance, Principles for Responsible Banking and its 'Climate Change Commitment').
- Advocate on the importance of developing thematic lending policies e.g. 'energy' and 'deforestation'.

Stewardship

- Engage corporate holdings within portfolios on the inclusion of cash investments in their own material scope 3 calculations and the importance for these emissions to be addressed within transition plans.
- Engage data providers on the inclusion of cash investments in their corporate level GHG estimation methodologies.

Offsetting

As a general principle, it is recommended that investors should not use purchased offsets at the portfolio level to achieve emissions reduction targets. They should also adopt a precautionary approach when assessing assets' alignment with net zero and the use of offsets.

Recognising the finite availability of offsets from land use in particular, and the need to rapidly decarbonise all activities within sectors to the extent possible, investors should not allow the use of external offsets as a significant long-term strategy for achievement of decarbonisation goals by assets in their portfolios, except where there is no technologically or financially viable solution. PAII will undertake further analysis to assess the appropriate use of offsetting in specific sectors. Credits purchased by participants within regulated carbon markets that are designed to meet the net zero emissions goal can be used.

Decarbonisation and avoided emissions should generally be treated separately. Similarly, investors should not offset emissions in one part of their portfolio through accounting for avoided emissions in another part. Given the necessity of effectively reaching zero emissions from investments over time, trading these two against each other is not consistent with creating incentives for investors and underlying assets to maximise their efforts to decarbonise their portfolios to the fullest extent possible.

PAAO commitment statement

Commitment

As asset owners with millions of beneficiaries around the world, we reiterate our full support for the Paris Agreement and strongly urge governments to implement the actions that are needed to achieve the goals of the accord, with utmost urgency.

Recognising the need to address the risks that investors and their beneficiaries face from climate change, investors are taking action, but we acknowledge that there is an urgent need to accelerate the transition towards global net zero greenhouse gas emissions and do our part in helping deliver the goals of the Paris Agreement.

In this context, my institution commits to the following consistent with our fiduciary obligations:

1. Transitioning our investments to achieve net zero portfolio GHG emissions by 2050, or sooner.
2. Implementing this commitment with the aim of achieving real economy emissions reductions and undertaking a comprehensive set of actions available to investors, drawing on the Paris Aligned Investment Initiative's Net Zero Investment Framework.

3. Setting objectives and targets, including an interim target for 2030 or sooner for reducing Scope 1, 2 and 3 emissions associated with our portfolios and setting a target for increasing investment in climate solutions, consistent with a fair share of the 50% global reduction in CO₂ identified as a requirement in the Intergovernmental Panel on Climate Change special report on global warming of 1.5°C.
4. Where offsets are necessary where there are no technologically and/or financially viable alternatives to eliminate emissions, investing in long-term carbon removals.
5. Ensure any direct and collective policy advocacy we undertake supports policy and regulation relevant for achieving global net zero emissions by 2050 or sooner.
6. Implementing a stewardship and engagement strategy, with clear voting policy that is consistent with an objective for all assets in the portfolio to achieve net zero emissions by 2050 or sooner.
7. Engaging with asset managers, credit rating agencies, auditors, stock exchanges, proxy advisers, investment consultants, and data and service providers to ensure that funds, products and services available to investors are consistent with achieving global net zero emissions by 2050 or sooner.
8. Setting a target and reducing our operational (Scope 1 and 2) emissions in line with achieving global net zero emissions by 2050, or sooner.
9. Disclosing objectives and targets, and publishing a clear Investor Climate Action Plan for achieving these goals as soon as possible, no later than one year from making this commitment, and reviewing and updating targets every five years or sooner.
10. Reporting annually on the strategy and actions implemented and progress towards achieving objectives and targets, and in line with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

Our institution's commitment recognises that investors across the globe have different opportunities, constraints and starting points for achieving net zero emissions and there are a range of methodologies and approaches available to investors to set targets and implement strategies. In some asset classes or for some investment strategies, agreed net zero methodologies do not yet exist. We will, therefore, work to address these challenges, including through the Paris Aligned Investment Initiative.

Our commitment is based on the expectation that governments and policy makers will deliver on their commitments to achieve the 1.5°C temperature goal of the Paris Agreement, and in the context of fulfilling our fiduciary obligations.

Any institutional asset owner may sign the Net Zero Asset Owner Commitment and use the Net Zero Investment Framework. To be recognised and showcased as making a net zero commitment under the Paris Aligned Investment Initiative an asset owner must complete and submit a signatory form to one of the four regional investor networks (AIGCC, Ceres, IGCC, IIGCC) indicating their CEO has approved signing on.

Asset owners that are members of AIGCC, Ceres, IGCC, IIGCC will have access to activities to support implementation of the commitment provided by the networks.

A separate Q&A document is available upon request and will be updated as relevant to provide further explanation and clarification of the commitment.

NZAM commitment statement

In line with the best available science on the impacts of climate change, we acknowledge that there is an urgent need to accelerate the transition towards global net zero emissions and for asset managers to play our part to help deliver the goals of the Paris Agreement and ensure a just transition.

In this context, my organisation commits to support the goal of net zero greenhouse gas ('GHG') emissions by 2050, in line with global efforts to limit warming to 1.5°C ('net zero emissions by 2050 or sooner'). It also commits to support investing aligned with net zero emissions by 2050 or sooner.

Specifically, my organisation commits to:

- Work in partnership with asset owner clients on decarbonisation goals, consistent with an ambition to reach net zero emissions by 2050 or sooner across all assets under management ('AUM').
- Set an interim target for the proportion of assets to be managed in line with the attainment of net zero emissions by 2050 or sooner.
- Review our interim target at least every five years, with a view to ratcheting up the proportion of AUM covered until 100% of assets are included.

In order to fulfil these commitments my organisation will:

For assets committed to be managed in line with the attainment of net zero emissions by 2050 or sooner (under commitment b)

- Set interim targets for 2030, consistent with a fair share of the 50% global reduction in CO₂ identified as a requirement in the IPCC special report on global warming of 1.5°C.
- Take account of portfolio Scope 1 & 2 emissions and, to the extent possible, material portfolio Scope 3 emissions.
- Prioritise the achievement of real economy emissions reductions within the sectors and companies in which we invest.
- If using offsets, invest in long-term carbon removal, where there are no technologically and/or financially viable alternatives to eliminate emissions.
- As required, create investment products aligned with net zero emissions by 2050 and facilitate increased investment in climate solutions Across all assets under management.
- Provide asset owner clients with information and analytics on net zero investing and climate risk and opportunity.
- Implement a stewardship and engagement strategy, with a clear escalation and voting policy, that is consistent with our ambition for all assets under management to achieve net zero emissions by 2050 or sooner.

8. Engage with actors key to the investment system including credit rating agencies, auditors, stock exchanges, proxy advisers, investment consultants, and data and service providers to ensure that products and services available to investors are consistent with the aim of achieving global net zero emissions by 2050 or sooner.

9. Ensure any relevant direct and indirect policy advocacy we undertake is supportive of achieving global net zero emissions by 2050 or sooner.

Accountability

- Publish TCFD disclosures, including a climate action plan, annually, and submit them to the Investor Agenda via its partner organisations for review to ensure the approach applied is based on a robust methodology, consistent with the UN Race to Zero criteria, and action is being taken in line with the commitments made here.

We recognise collaborative investor initiatives including the Investor Agenda and its partner organisations (IIGCC, CDP, Ceres, IIGCC, IIGCC, PRI, UNEP FI), Climate Action 100+, Climate League 2030, Paris Aligned Investment Initiative, Science Based Targets Initiative for Financial Institutions, UN-convened Net-Zero Asset Owner Alliance, among others, which are developing methodologies and supporting investors to take action towards net zero

emissions. We will collaborate with each other and other investors via such initiatives so that investors have access to best practice, robust and science-based approaches and standardised methodologies, and improved data, through which to deliver these commitments.

We also acknowledge that the scope for asset managers to invest for net zero and to meet the commitments set forth above depends on the mandates agreed with clients and clients' and managers' regulatory environments. These commitments are made in the expectation that governments will follow through on their own commitments to ensure the objectives of the Paris Agreement are met, including increasing the ambition of their Nationally Determined Contributions, and in the context of our legal duties to clients and unless otherwise prohibited by applicable law. In some asset classes or for some investment strategies, agreed net zero methodologies do not yet exist. Where our ability to align our approach to investment with the goal of net zero emissions by 2050 is, today, constrained, we commit to embark with determination and ambition on a journey, and to challenge and seek to overcome the constraints we face.

[Learn more about the Net Zero Asset Managers initiative here: www.netzeroassetmanagers.org](http://www.netzeroassetmanagers.org)

Further support

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Endnotes

1. The PAII welcome the adoption of its asset alignment concepts (which it developed in 2021) by pan-finance sector target setting and transition plan frameworks and initiatives. In particular, SBTi's forthcoming FINZ Standard (see SBTi. 2024b) and the GFANZ Transition Plan framework, (see 'GFANZ. 2022).
2. For more information see both the main TCFD list of disclosures but particularly its expectations of transition plans, see TCFD (2021). For the International Financial Reporting Standards' general and climate-related disclosure requirements, see ISSB. 2023a, 2023b). Investors should note that mapping between NZIF's recommended action points and major disclosure frameworks is underway, those interested in understanding this mapping should reach out to the PAII's investor networks.
3. For more information on the current landscape of biodiversity initiatives for investors (as of November 2022), see 'The biodiversity imperative for investors – a horizon scan of key initiatives' (IIGCC. 2022e).
4. For more information on how asset owners can integrate emerging market considerations into their net zero strategies and transition plans, see 'Mobilising climate investment in emerging markets: Opportunities for Australian pension and superannuation funds' (IIGCC. 2023e).
5. For more information on how the climate objectives and targets within NZIF work best in combination, see 'Net Zero Investment Framework: Implementation Guidance for Objectives and Targets' (IIGCC. 2024j).
6. The adoption of an 'implement or explain' approach is purposefully different to a 'comply or explain' approach which tends to be associated with regulation, whereas NZIF is a guide for investors in considering and navigating their individual journey towards developing their own net zero strategies and transition plans, it is expressly not a standardised list for implementation as each investor makes their own decisions in the context of their own strategies, agendas, mandates, fiduciary duties and regulatory considerations.
7. For more information on the ICAPs Ladder, see (Investor Agenda. 2023a).
8. For more information see 'Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty' (IPCC. 2018).
9. For more information see 'Net Zero by 2050: A Roadmap for the Global Energy Sector' (IEA. 2021); 'World Energy Outlook 2022' (IEA. 2022).
10. For more information see 'Sectoral pathways and Key Performance Indicators: aluminium, chemical, cement, steel, textile & leather industry, power utilities, gas utilities, agriculture, forestry, the aviation and shipping industry, road transport, and the real estate & building industry' (Teske, S., Niklas, S., Nagrath, K., Talwar S., Atherton, A., Guerrero Orbe, J. 2020).
11. For more information on how asset owner trustees and boards can incorporate climate-related risks and opportunities into board level processes, see 'Addressing climate risks and opportunities in the investment process' (IIGCC. 2018a).
12. This could potentially also include any official and relevant governance body if officially delegated by the Board.
13. For more information on how asset owners can support a more consistent approach to the relationship between themselves and their asset managers in terms of exercising climate-related stewardship responsibilities and reporting on climate engagement, see 'Asset Owner Stewardship Questionnaire' (IIGCC. 2023c).
14. For more information on developing an energy investment policy, including why this term is being used, see 'A five-step process to an energy investment policy: A building block for a robust transition plan' (IIGCC. 2024a); 'Key Insights from Asia's institutional Investors on climate scenario analysis, decarbonisation, and fossil fuel policies' (AIGCC. 2024b).

15. For more information on the importance of deforestation, see 'Investor Guide to Deforestation and Climate Change' (Ceres. 2020); 'Forest and Land Use – 2023 Year in Review' (AIGCC. 2024a). Deforestation policies and commitments could be part of a broader policy on addressing the drivers of nature loss including land conversion activities, which accelerate climate change and limit the mitigation potential of intact ecosystems. For more information on the urgent need for investor action on biodiversity, see 'The biodiversity imperative for investors – a horizon scan of key initiatives' (IIGCC. 2022e); 'Nature at a Tipping Point: A guide and case studies for Asia Pacific investors on managing nature-related risks' (AIGCC. 2024c).
16. To support monitoring of the implementation of net zero strategy, investors could use the ICAPs Ladder to benchmark performance as it has various tiers of progress (see, Investor Agenda. 2023a).
17. For more information on investor perspectives on the importance and complexity of the value chain emissions of their investee companies in the context of achieving net zero portfolio emissions, see 'Investor approaches to scope 3: Its importance, challenges and implications for decarbonising portfolios' (IIGCC. 2024h); 'Supplementary guidance on scope 3 emissions of investments' (IIGCC. 2024n).
18. For more information on how to set a Portfolio Decarbonisation Reference Objective, see 'Net Zero Investment Framework: Implementation Guidance for Objectives and Targets' (IIGCC. 2024j).
19. For more information on where investors can either rapidly scale up climate solutions investment or focus engagement efforts with corporates and policymakers, see 'Climate Investment Roadmap: A tool to help investors accelerate the energy transition through investment and engagement' (IIGCC. 2022a).
20. This will be more important for investors directly managing assets (e.g. real estate).
21. Fair share considerations represent the recognition that the ultimate global goal to achieve net zero GHG emissions by 2050 will require different sectors, industries, and regions to decarbonise at different rates. This is related to the common but differentiated responsibilities and respective capabilities principle used within international climate negotiations.
22. For more information on how to conduct attribution analysis, see 'Net Zero Investment Framework: Implementation Guidance for Objectives and Targets' (IIGCC. 2024j); 'Understanding the Drivers of Investment Portfolio Decarbonisation: A discussion paper on emissions attribution analysis for net-zero investment portfolios' (NZAOA. 2023e).
23. For more information on greenwashing, see 'Greenwashing and how to avoid it: An introductory guide for Asia's finance industry' (AIGCC. 2023b).
24. For more information on how to rebaseline, see 'Net Zero Investment Framework: Implementation Guidance for Objectives and Targets' (IIGCC. 2024j); 'The Global GHG Accounting and Reporting Standard Part A: Financed Emissions' (PCAF. 2022).
25. The need to nuance the emissions associated with climate solutions may be particularly important given many of the traditional activities they replace can result in carbon lock-in which may be incompatible with net zero pathways.
26. This dashboard could involve absolute emissions (tCO₂e), Enterprise Value Including Cash (tCO₂e/\$m Invested), and weighted average carbon intensity (tCO₂e/\$m Revenue).
27. For more information on the limitations of individual metrics, see 'What is driving portfolio decarbonisation? A net zero surgery mini-series' (IIGCC. 2024o).
28. For the PCAF Standard, see 'The Global GHG Accounting and Reporting Standard Part A: Financed Emissions' (PCAF. 2022).
29. For more information on developing a cumulative emissions approach, see 'Cumulative Benchmark Divergence (CBD) metric: Implementation guidance' (IIGCC. 2024c).
30. For more information on how to set a Portfolio Decarbonisation Reference Objective and navigate the decisions entailed, see 'Net Zero Investment Framework: Implementation Guidance for Objectives and Targets' (IIGCC. 2024j).
31. A separate recommended action point is to set a science-based targets to reduce operational scope 1 and 2 emissions although these are not as relevant as scope 3 category 15 emissions to reducing real economy emissions. They would be required for those who wish to comply with SBTi's forthcoming net zero standard for financial institutions (see SBTi. 2024b)
32. For more information on how investors can integrate scope 3 into their net zero strategies and transition plans, see 'Supplementary guidance on scope 3 emissions of investments' (IIGCC. 2024n).
33. For more information, see <https://unfccc.int/process-and-meetings/what-are-parties-non-party-stakeholders>.
34. For more information on how investors can use scenario analysis to understand how climate changes drives financial impact across their portfolios, see 'Navigating climate scenario analysis: A guide for institutional investors' (IIGCC. 2019c); 'How can investors effectively use climate scenarios? Perspectives from the IFoA, University of Exeter and NGFS' (IIGCC. 2024f). It is recognised that currently the ability to conduct climate scenario analysis is inhibited by data and other practical considerations. Consequently, undertaking of climate scenario analysis should be done on a best effort basis and the findings contextualised against any impediments. For a review of challenges relating to climate models in financial services, see 'The Emperor's New Climate Scenarios Limitations and assumptions of commonly used climate-change scenarios in financial services' (IFoA. 2023).
35. For more information on the importance of the topic of exposure to fossil-fuel production or reserves within the context of global net zero goals and the need to address carbon lock-in within transition finance, see 'Mechanisms to Prevent Carbon Lock-in in Transition Finance, Green Finance and Investment' (OECD. 2023).

36. For more information to support investor engagement with fossil fuel producers on methane, see 'Addressing methane emissions from fossil fuel operations' (IIGCC. 2024b).

37. Typically, deforestation commitments at the corporate level likely should form part of 'no deforestation, peat-land conversion, and exploitation' commitments due to the common link between the three issues. For more information on what expectations investors might have for corporates directly or indirectly involved in agriculture, livestock, and forestry sectors see 'Investor expectations of companies' (FSDA. 2022). Commitments made should look for consistency with the COP28 agreement "towards halting and reversing deforestation and forest degradation by 2030" (see UNFCCC 2023). Investors should also note that the European Union's new regulation '2023/1115' on deforestation-free products covers seven high risk commodities: cattle, cocoa, coffee, oil palm, soya, wood, and rubber (see <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1115>).

38. For more information on setting asset alignment targets across each asset class, see 'Net Zero Investment Framework: Implementation Guidance for Objectives and Targets' (IIGCC. 2024j).

39. It is possible for investors to use % financed emissions instead of % AUM across listed equities, corporate fixed income, real estate, infrastructure, and sovereign bond assets. Such an approach would focus attention on assets within high impact material sectors. A minority of investors have adopted this approach, but the majority investors use %AUM. For more information see 'Net Zero Investment Framework: Implementation Guidance for Objectives and Targets' (IIGCC. 2024j).

40. NZIF encourages investors to maximise their contribution towards reducing real economy emissions. Stewardship efforts aimed at engaging investments so that they are ready to decarbonise (e.g. by using levers of influence to push for the development of science-based targets and decarbonisation plans) should be considered as the foundation to these efforts. The wide adoption of science-based targets and decarbonisation plans may also facilitate governments to create the policy environment required for decarbonisation to occur.

41. By using % financed emissions, the engagement threshold aims to focus attention on the highest emitting assets within the portfolio. However, it is proposed that 'scope 1 and 2' and 'scope 3' of financed emissions be treated distinctly in this context to avoid driving unintended behaviour in practical engagement prioritisation. For example, scope 3 is typically higher than combined scope 1 and 2 emissions on average, so accumulation of these two measures into the engagement threshold target could result in de-prioritisation of engagement with assets for whom scope 1 and/or 2 is more material to their impact on climate change. However, not including scope 3 would limit visibility of how investors are addressing the climate impacts and risks that exist in the value chains of assets, which can be material to investors. For more information on this nuanced challenge, see 'Investor approaches to scope 3: Its importance, challenges and implications for decarbonising portfolios' (IIGCC. 2024h). By separating the engagement threshold approach into a core scope 1 and 2 metric, and, separately, a strategy to address scope 3; investors can identify, track and communicate progress on the extent to which companies with material scope 3 emissions are being captured by engagement action, without disregarding scope 1 and 2 emissions for assets in sectors where they are material.

42. The investor's approach to determining material scope 3 emissions should be explained and justified alongside its disclosure (along with data limitations and/or exclusions where relevant).

43. Investors should note that the IPCC AR6 Synthesis Report (see fig. 4.1) states emissions associated with land-use change and energy supply need to reach net zero earlier than 2050. The possible implication is that corporates associated with these sectors need to become aligned to a net zero pathway sooner than NZIFs sector agnostic performance expectation year of 2040. For instance, land-use change emissions are scheduled to reach net zero by 2030 and this includes halting deforestation (see IPCC. 2023).

44. Within NZIF 1.0 the immediate proportion of financed emissions was established as 70% rising to 90% by 2030. NZIF 2.0 has not eliminated these expectations because they have been widely used by investors within their net zero targets. These numbers serve only as a guide, and it is ultimately up to investors to determine what these precise figures should be based on their investment strategies, circumstances, and definitions. For this reason, these numbers have been removed from the asset class target setting and implementation guidance sections of this document.

45. For more information on how investors can act to alleviate potential and unintended negative consequences from the sale of emissions-intensive assets, see 'Emissions-intensive asset exits: A Universal Owner Perspective on Sales and Managed Closures' (IIGCC. 2023c).

46. For more information on the importance of debt markets as the most significant source of fossil fuel expansion activities, see 'Evidence-based climate impact: A financial product framework' (Quigley. 2023).

47. Expansion plans for corporates in high impact material sectors should be of particular concern as these can either lock-in GHG emissions which can be incompatible with net zero pathways or become future stranded assets. see 'Mechanisms to Prevent Carbon Lock-in in Transition Finance, Green Finance and Investment' (OECD. 2023).

48. NZIF does not require corporate net zero targets to be accepted and validated by the Science Based Targets initiative; however, they should be equivalent in terms of robustness.

49. See Appendix section on offsets for guidance on this topic.

50. The SBTi can form the basis of corporate short- and medium-term net zero targets, see 'The corporate net zero standard' (SBTi. 2024d). Many corporates within high impact material sectors will need to use SBTi's enhanced short- and medium-term net zero target setting methodology, see 'Sector Guidance. Science Based Targets initiative' (SBTi. 2024c).

51. For more information on how investors can advocate for a just transition within the Australian context, see 'Investing in Australia's vital regions: Investor perspectives on how to leverage private capital to transform Australia's emissions-intensive regional economies and deliver a just transition' (IIGCC. 2023d).

52. For more potential investor expectations on the steps companies should take in preparing 'Paris-aligned' company accounts, see 'Investor expectations for Paris-aligned accounts' (IIGCC. 2020b).

53. Where this document refers to material scope 3, the following considerations apply. Assessment of scope 3 materiality is at the ultimate discretion of the investor. The approach to materiality and any exclusions – for example, due to factors such as data gaps or limitations – should be explained and justified alongside the disclosure. Investors can refer to a number of additional resources on scope 3 produced by P411 network partners for additional implementation support. For more information on the importance of measuring scope 3 emissions, see 'The Strong Business Case for Measuring, Reporting, and Reducing Scope 3 Emissions' (Ceres. 2022c). For more information on the current limitations of investee scope 3 disclosures, see 'Uses and Limitations of Investee Scope 3 Disclosures for Investors' (IIGCC. 2024). For more further guidance on implementing the approach to scope 3 emissions as set out see 'Supplementary guidance on scope 3 emissions of investments' (IIGCC. 2024n).

54. Investors should be conscious of data limitations and use their own judgement to make effective use of the available data to determine current and future alignment.

55. For more information reviewing the climate risk strategies of U.S. insurance companies', see 'Climate Risk Management in the U.S. Insurance Sector' (Ceres. 2023d). For more information into insurers' patterns of investments in fossil fuel-related assets and how the industry can harmonize its approach to climate change across its underwriting, risk, and investing functions, see 'The Changing Climate for the Insurance Industry' (Ceres. 2023k).

56. For more information on how investors can engage food companies to drive agricultural innovation to meet ambitious climate targets outlined in their transition plans, see 'Cultivating Innovation: Practical Solutions for Companies to Reduce Agricultural Emissions' (Ceres. 2023e). For specific target setting guidance for corporates associated with agriculture, forestry, and fishing, see SBTi's new methodology for companies in land-intensive sectors (SBTi. 2024a).

57. For more information on the corporate, investor, and value chain interventions that could accelerate the transition in the trucks sector, see 'Accelerating the transition in the trucks sector and its value chain' (IIGCC. 2021a). For an alignment analysis of 14 major auto manufacturers' global production plans with the goals of the Paris Agreement, see 'Changing Gear: Alignment of major auto manufacturers with the goals of the Paris Agreement' (IIGCC. 2020a). For more information on where corporate advocacy and procurement practices in the electric vehicle battery supply chain can help shape a responsible EV industry, see 'Electric Vehicle Batteries: A Guidebook for Responsible Corporate Engagement Throughout the Supply Chain' (Ceres. 2023i).

58. For more information on potential investor expectations for banks and their management of climate-related risks and opportunities, see 'Aligning the Banking Sector with the Goals of the Paris Agreement' (IIGCC. 2021b). For more information on assess alignment of banks' transition plans, see 'Net Zero Standard for Banks' (IIGCC. 2023). For more information on the potential financial risks that derivatives activities pose the 25 largest U.S. banks and actions to address them, see 'Derivatives & bank climate risk: Financing a Net Zero Economy' (Ceres. 2022b). For an examination of the climate-related risk management, governance, and lobbying practices of 13 of the largest banks operating in the US, see 'Responsible policy engagement benchmarking for banks' (Ceres. 2024d).

59. For more information on investor expectations that can help inform engagement strategy and priorities for relevant companies in the chemicals sector, see 'Investor expectations of chemical companies' transition to net zero' (IIGCC. 2023h).

60. For more information on how investors can assess the alignment of and engagement corporates within the diversified mining sector, see 'Investor Expectations for Diversified Mining' (CA100+. 2023b); 'Net Zero Standard for Diversified Mining. Climate Action 100+' (CA100+. 2023c).

61. For more information on how US electric utilities compare against a robust benchmark, see 'Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States 2022' (Ceres. 2022a). For more information examining the climate-related risk management, governance, and lobbying practices of 12 of the largest electric utility companies operating in the United States, see 'Toward consistency: Assessing the power sector's climate policy advocacy' (Ceres. 2024g).
62. For more information on how investors can assess transition plans of corporates involved in the food sector, see 'The Investor Guide to Climate Transition Plans in the U.S. Food Sector' (Ceres. 2022d).
63. For more information on how investors can assess the alignment of oil and gas companies' transition plans and develop corporate engagement priorities and escalation strategies, see 'Net Zero Standard for Oil & Gas' (IIGCC. 2023m). For more information to help investors assess and manage risk from oil and gas mergers and acquisitions, see 'An Investor Guide to the Climate Principles for Oil and Gas Mergers and Acquisitions' (Ceres. 2023a). For more information on the exploration and production emissions of the largest U.S oil and gas producers, see 'Benchmarking Methane and Other GHG Emissions of Oil and Natural Gas Production in the United States 2023' (Ceres. 2023b). For more information on the different pathways and technologies that can be used by investors and companies to decarbonise the gas distribution industry, see 'Decarbonizing U.S. gas distribution: An investor guide' (Ceres. 2023g).
64. For more information on how investors can engage with steel purchasers to encourage them to pursue low emissions steel procurement, and benchmark targets, see 'Steel Purchaser Framework' (IIGCC. 2023n).
65. REITs would have to be equal to the CRREM pathway for that time period.
66. For more information on the benchmark, see 'Climate Action 100+ Net Zero Company Benchmark 2.0' (CA100+. 2023a). For more information on how investors can apply the benchmark to the Asia context using a nuanced interpretation of company assessments and the initiative's overall expectations, see 'Climate Action 100+ Investor Guide for Engaging in Asia An updated guide for 2022' (CA100+. 2022).
67. For more information, see 'TPI's methodology report: Management Quality and Carbon Performance Version 4' (TPI. 2021).
68. Investors should be aware that SBTi currently do not have a monitoring, reporting, and verification system to track how well corporates are performing relative to their submitted and validated science-based targets. However, this system is currently being developed and expected in the short term. The view that a 'SBT' validated' target fulfills the emissions performance criteria is dependant on this system becoming operational. In the interim, investors may wish to use additional data to determine whether NZIF's emissions performance criteria is being fulfilled.
69. Investors should note that SBTi requires disclosure through standardised and comparable data platforms such as CDP's climate change annual questionnaire, rather than through annual disclosures published on its own website.
70. For more information, see <https://carbontracker.org/>.
71. For more information on the data sets and products in the market from 16 participating data vendors, see 'Delivering net zero: A data catalogue for investors' (IIGCC. 2022b).
72. For more information on including derivatives and hedge fund holdings within net zero efforts, see 'Derivatives and Hedge Funds Guidance' (IIGCC. 2024e).
73. For more guidance on how to identify, classify, and measure allocation to climate solutions, see 'Investing in climate solutions: listed equity and corporate fixed income' (IIGCC. 2023g).
74. For more information on how investors can enhance their stewardship practices to deliver the decarbonisation required to put the world on course for net zero by 2050 or sooner, see 'Net Zero Stewardship Toolkit' (IIGCC. 2022d).
75. For more information on how investors can develop their own net zero voting policies and practices, see 'Net Zero Voting Guidance' (IIGCC. 2024g). For more information on how asset owners can set expectations for, evaluate, and engage with asset managers on their climate-related proxy voting activities, see 'Elevating Climate Diligence on Proxy Voting Approaches: A Foundation for Asset Owner Engagement of Asset Managers' (NZAOA. 2021).
76. For more information on the Net Zero Engagement Initiative, see 'Introducing the Net Zero Engagement Initiative: The next step in investor corporate engagement' (IIGCC. 2023f). For more information on the Climate Action 100+ initiative, see 'Global investors driving business transition' (CA100+. 2024). For more information on the Asian Utilities Engagement Program, see 'Asian Utilities Engagement Program (AUEP) 2022-2023 Year in Review: Progress Update' (AIGCC. 2023a).
77. For more information on how asset owners and asset managers can develop a consistent approach to exercising climate-related stewardship responsibilities and reporting, see 'Asset Owner Stewardship Questionnaire' (IIGCC. 2023c).
78. For more guidance on this topic, see 'Net zero strategies for externally managed investments: new levers and targets' (IIGCC. 2024k). 'Elevating Asset Manager Net-Zero Engagement Strategies: A foundation for asset owner expectations of asset managers' (NZAOA. 2023c).
79. Other means could be public letters or AGM statements.
80. For more information on how investors can consider shareholder resolutions as a complement to other stewardship within the Asia region, see 'Net zero engagement in Asia: A guide to shareholder climate resolutions' (AIGCC. 2022).
81. For more information that investors can use to engage oil and gas companies entering merger and acquisition transactions, see 'Climate Principles for Oil and Gas Mergers and Acquisitions' (Ceres. 2023c).

82. For more information on the challenges and opportunities presented by different bond types, as well as a six-step toolkit and examples of corporate bondholder stewardship in action, see 'A Critical Element: Net Zero Bondholder Stewardship Guidance' (IIGCC. 2023a).

83. For more information on how investors can implement NZIFs sovereign bonds methodology, see: 'Sovereign Bonds and Country Pathways. Towards greater integration of sovereign bonds into net zero investment strategies' (IIGCC. 2024i); 'Sovereign bonds and country pathways – target setting guidance' (IIGCC. 2024m).

84. For more information, investors can see 'Sovereign bonds and country pathways – target setting guidance' (IIGCC. 2024m).

85. Private market investors should also read the NZIF sections on private equity and debt when choosing which methodology to use as a guide. For instance, private market investors may choose to use the private equity and debt guidance for assessment to facilitate aggregation of funds (which may be spread across different asset classes); however, they should use the real estate methodology for implementation guidance.

86. Currently CRREM does not cover all geographies or have high take up in some markets, whilst work is being undertaken to address this, other methodologies may be considered. NZIF takes a 'whole building' approach. In some markets, for example Australia, the market separates base building (Scope 1 and 2 emissions) and tenant emissions (Scope 3), where there are jurisdictional differences away from a 'whole building' approach, investors should explain their methodology.

87. For more information on potential investor expectations for climate strategies of companies operating in the construction materials sector, see 'Investor expectations of construction materials sector' (IIGCC. 2019b).

88. For more information on how investors can consider whole life carbon emissions in net zero portfolios and decarbonisation strategies, see 'Addressing whole life carbon in real estate portfolios: A step-by-step guide' (IIGCC. 2023b).

89. For more information on potential Investor expectations for listed real estate companies, see 'Investor expectations for listed real estate companies' (IIGCC. 2019a).

90. For more information on how to implement NZIFs infrastructure target setting and implementation guidance, see 'Guidance for infrastructure assets: Complement to the Net Zero Investment Framework' (IIGCC. 2023e).

91. For instance, private market investors may choose to use the private equity and debt guidance for assessment to facilitate aggregation of funds (which may be spread across different asset classes); however, they should use the infrastructure methodology for implementation guidance.

92. Investments could be categorised as achieving net zero when A) they are disclosing their emissions, B) emissions performance is already at least equal to what is required by its sector/ regional pathway for the year 2050, and C) their operational model will maintain this performance. They do not need to fulfil the preceding criteria as these (along with the preceding categories) represent steps towards the ultimate achievement of net zero emissions. This means the ambition, decarbonisation strategy, and governance criteria do not have to be fulfilled. This does not negate the utility of these criteria. For instance, science-based targets and decarbonisation plans are important for the on-going maintenance of facilities or the importance of issues such as embodied emissions. However, currently it is considered that the lack of these should not inadvertently demote the categorisation of investments.

93. For more information on how investors can consider whole life carbon emissions in net zero portfolios and decarbonisation strategies, see 'Addressing whole life carbon in real estate portfolios: A step-by-step guide' (IIGCC. 2023b); 'Measuring and managing whole life carbon in real estate portfolios' (IIGCC. 2023j).

94. For more information on how to implement NZIFs private equity target setting and implementation guidance, see 'Net Zero Investment Framework Component for the Private Equity Industry' (IIGCC. 2023k).

95. For more information on how private equity managers are using to measure and report portfolio emissions to help portfolio companies reduce emissions and take advantage opportunities posed by the transition, see 'Data as the Key: Essential Steps for Decarbonizing Private Equity' (Ceres. 2023f).

96. For in depth engagement guidance, see 'Net Zero Investment Framework Component for the Private Equity Industry' (IIGCC. 2023k).

97. For more information on how to implement NZIFs private debt target setting and implementation guidance, see 'Net Zero Investment Framework for the Private Debt Industry' (IIGCC. 2024i).

98. Subject always to assessment and identification at the investors' discretion.

99. For the Committed to Aligning milestone the board should acknowledge the importance for the Figure 13: Table of private debt portfolio company alignment criteria and milestones company to take action toward a net zero future and encourage the company to begin exploring pursuit of Aligning and Aligned criteria.

100. Significant equity holding is defined as 10% or more.

101. With the understanding that changes to fund documentation are not easily implemented after a fund's first close.

102. For more information on the limitations that a sole focus on investee engagement can have, see 'The Future of Investor Engagement: A call for systematic stewardship to address systemic climate risk' (NZAOA. 2023d).

103. For more information on how asset owners can assess the climate policy engagement of their asset managers, see 'Aligning Climate Policy Engagement with Net-Zero Commitments A foundation for asset owner engagement of asset managers' (NZAOA. 2023a). For more information on the principles asset managers could adopt for engagement, see 'Elevating Asset Manager Net-Zero Engagement Strategies: A foundation for asset owner expectations of asset managers' (NZAOA. 2023c).
104. For more information on investor expectations of corporate lobbying, see 'Investor expectations on corporate lobbying' (IIGCC. 2018b). For more information on how oil and gas companies can align their climate lobbying and policy advocacy activities, see 'Investor Guidance for Engaging on Oil and Gas Sector Public Policy' (Ceres. 2024c).
105. For more information on how investors can engage on EU sustainable finance issues and promote a supportive policy environment for net zero, see 'Delivering 2030: Investor expectations of EU sustainable finance' (IIGCC. 2024d). For more information on how investors can promote a supportive policy environment for net zero in the Australian context, see 'Driving Australian climate innovation: Unlocking capital to support a clean industrial revolution' (IGCC. 2023b).
106. For more information on investor expectations of corporate sustainability disclosures to support investors' sustainability information needs, regardless of the jurisdiction in which they operate, see 'IIGCC Expectations of Policymakers on Corporate Sustainability Disclosures' (IIGCC. 2022c). These should also conform to global recognised and adopted disclosure frameworks such as the IFRS/ISSB S1 and S2 structure.
107. For instance, 60 countries have signed the commitment to accelerate the transition from coal to clean energy under the Powering Past Coal Alliance (see <https://poweringpastcoal.org/>).
108. For instance, at COP28 133 countries signed the 'Global Renewables and Energy Efficiency Pledge' which involved a commitment to work together to triple the world's installed renewable energy generation capacity, double the global average annual rate of energy efficiency (see <https://www.cop28.com/en/global-renewables-and-energy-efficiency-pledge>).
109. For instance, Parties to the UNFCCC at COP28, emphasised "importance of conserving, protecting and restoring nature and ecosystems towards achieving the Paris Agreement temperature goal, including through enhanced efforts towards halting and reversing deforestation and forest degradation by 2030, and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by conserving biodiversity, while ensuring social and environmental safeguards, in line with the Kunming-Montreal Global Biodiversity Framework" (see UNFCCC. 2023)
110. For more information on potential investor expectations of the key components of a credible transition plan, see 'Investor expectations of corporate transition plans: From A to Zero' (IIGCC. 2023i); 'Corporate climate transition plans: A guide to investor expectations' (see IIGCC. 2022); and 'Expectations for Real-economy Transition Plans' (see GFANZ. 2023).
111. For more information on potential investor expectations for companies to prepare 'Paris-aligned' company accounts and associated expectations for auditors, see IIGCC resource: Investor expectations for Paris-aligned accounts.
112. For more information on how investors can engage with private data vendors to increase the quality and usability of net zero data to assess alignment and targets, see 'Six asks of data vendors improving net zero data provision' (IIGCC. 2023o).
113. For more information on how index providers can better align benchmarks with net zero, see 'Enhancing the quality of net zero benchmarks' (IIGCC. 2023d), which is broadly consistent with NZAOA (2023b) principles on constructing net-zero-aligned benchmarks and index universes.
114. For more information on the potential investor expectations for sector transition pathways, see 'Decarbonisation investment solutions for sectors: A discussion paper on Sector Transition Plans and their importance to investors' (IIGCC. 2023a)

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