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Supplementary NZIF implementation guidance: Private Markets Infrastructure

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Disclaimer

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1 Introduction

1.1 The NZIF Infrastructure component

The Net Zero Investment Framework (NZIF) is designed for asset managers and asset owners. It provides a suite of options for different types of investors, with different strategies, to consider as they manage climate risks in the economic interests of their clients and beneficiaries, as well as aligning financial flows with the goals of the Paris Agreement.

NZIF serves as a comprehensive guide to support investors setting individual voluntary targets and producing related net zero strategies and transition plans. It covers governance, objectives, strategic asset allocation, asset level assessment and targets (specific to each asset class), stakeholder and market engagement, and policy advocacy. It provides high-level guidance supported by supplementary guidance to support their operationalisation[1].

The high-level recommendations are designed to apply to a broad spectrum of investors, regardless of their industry, location, or regulatory environment. Investors using NZIF are encouraged to adhere to the 'implement or explain' principle and the "maximum (practical) contributions towards real economy impacts" principle, to account for the diverse real-world contexts in which they operate[2].

The 'Guidance for Infrastructure Assets', published in 2023 and incorporated into NZIF 2.0, offers recommendations which specifically consider the existing differences between Equity and Debt; funds and fund-of-funds; and climate solutions and other assets. It can also be considered alongside the IIGCC Climate Solution Guidance and the NZIF Supplementary Target Setting Guidance.

1.2 Purpose of the Supplementary Guidance for Infrastructure

Objectives

This supplementary guidance draws on investor experiences gathered since the initial publication of the NZIF Guidance for Infrastructure Assets. These insights have been used to help address questions on implementation of the guidance and have been explored to help better facilitate its use and adoption. Specifically, this document aims to:

- **Clarify methodological and technical issues** faced by asset managers and asset owners that may be associated with asset alignment assessment, target setting, and implementation guidance (i.e. direct management and asset engagement).
- **Present detailed case studies tailored to the infrastructure asset class,** representative of various stages along the maturity scale, demonstrating how to progress toward the 'Aligned to a net zero pathway' and 'Achieving Net Zero' categories.

The recommendations from NZIF's 'Asset Level Assessment and Targets' section encourage investors to consider the following steps:

1. Determine which assets should be considered within scope of target setting.
2. Assess the alignment of existing and new assets using NZIF's alignment criteria.
3. Set individual targets to increase the alignment of assets to net zero within a five-year period.
4. Deliver the target utilising available levers (asset selection, management, and engagement).
5. Monitor to ensure sufficient progress is made and targets are updated when necessary.

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[1] These are linked within the framework document and on the NZIF website.

[2] For detailed information, see IIGCC, NZIF 2.0, p9.

Intended audience

This guidance is intended for General Partners (GPs) and Limited Partners (LPs), covering both equity and debt investments. Since the alignment analysis is conducted at the asset level (or activity level), it does not distinguish between equity and debt exposure. Given the levels of influence and the different engagement potential for debt investors, however, the required targets will likely differ.

1.3 NZIF: a strategic tool for Infrastructure Asset Managers

NZIF features an Asset Alignment Target, which uses a multi-criteria maturity scale for assessment. Each asset is classified into a predefined category, with predetermined criteria, ranging from least mature to most mature along its transition journey. This allows investors to use approaches within asset selection, management, and engagement to increase the percentage of Assets under Management (AuM) categorised as either 'aligning' or 'aligned' to a net zero pathway or achieving net zero. The asset alignment target is expressed as a percentage of invested assets, excluding committed capital, in AuM, belonging to each category. (**Figure 1**).

NZIF is designed as a strategic tool for investors to gain insights into asset transition risk as well as preserve and generate capital value in the context of increasing transition risks (**Figure 2**). Used consistently, NZIF allows for year-on-year tracking of a fund or investment company's net zero trajectory, and allows for the prioritisation of assets.

Figure 1: NZIF 'Asset Alignment'

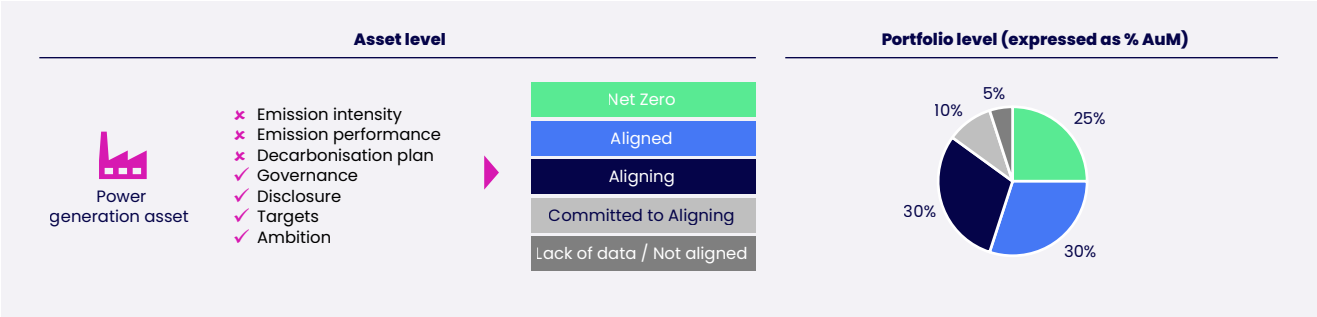
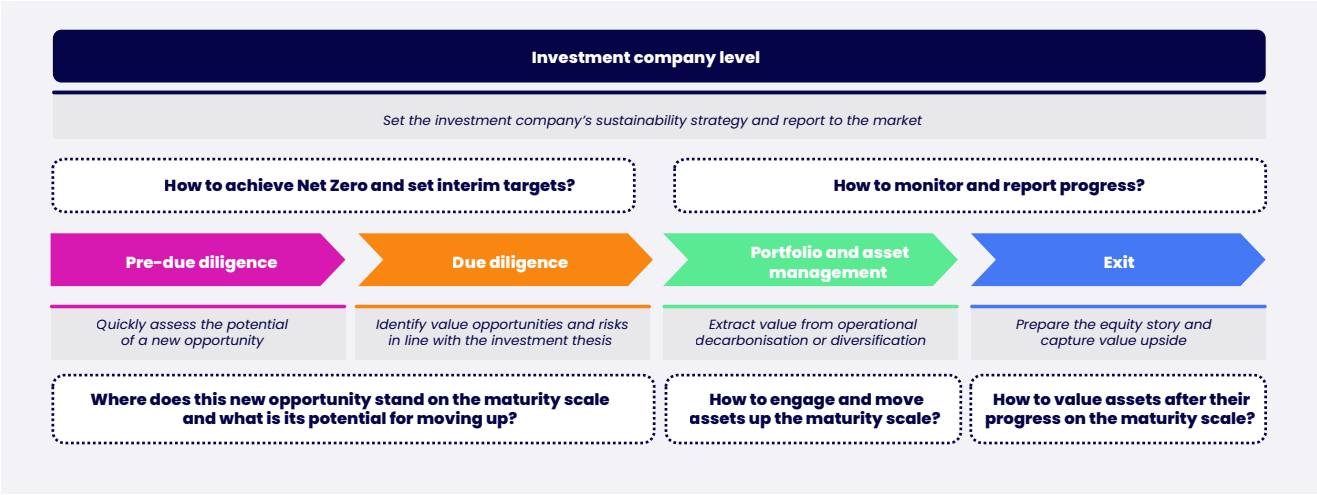


Figure 2: Integration of the NZIF into the investment lifecycle and strategic challenges addressed



2 Putting the guidance into practice – analysing existing portfolios and assessing new opportunities

2.1 Analysing 'brownfield' asset alignment

2.1.1 From 'Committed to Aligning' to 'Achieving Net Zero'

The analysis of assets is conducted according to quantitative and qualitative criteria provided by the maturity scale of the NZIF. **Table 2** details the criteria for brownfield assets (already constructed) for the infrastructure asset class. The elements in italics complement or support the criteria formulated in the 'Guidance for Infrastructure Assets'.

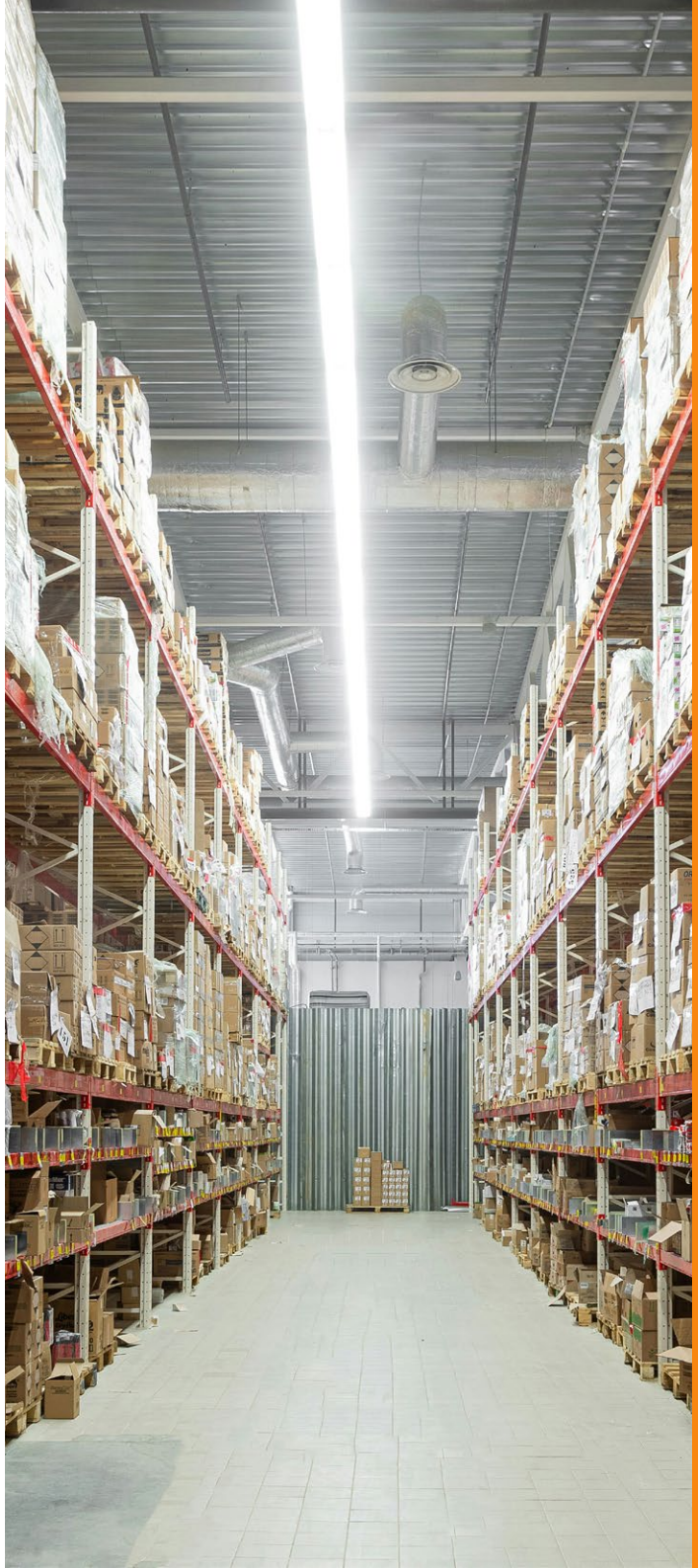
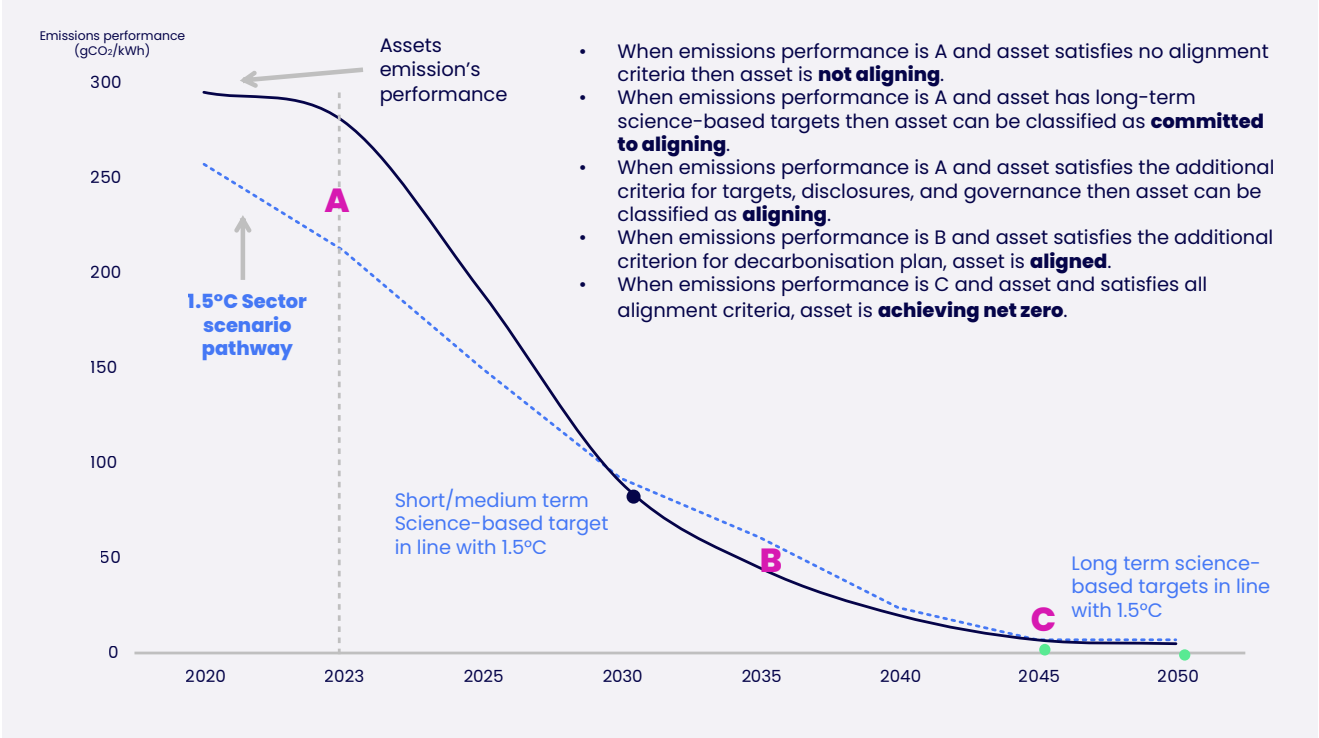


Table 2: **NZIF maturity scale alignment criteria for brownfield assets – *support for investors***

Category	Criteria	Committed to Aligning	Aligning	Aligned	Achieving Net Zero
Ambition	**Long-term goal for the asset to be net zero emissions by 2050 or sooner.** Additional considerations: The asset's board should formally acknowledge the importance of the company taking action toward a net zero future and encourage the company to begin exploring the 'Aligning' and 'Aligned' criteria. Formal acknowledgment may include the preparation of board papers for shareholder voting, including specific resolutions. Shareholder support is preferred, given the level of resources that may be necessary to produce the required deliverables, as well as the scale of business change and investment that may be needed to transition the business along the maturity pathway.	✓	✓	✓	Asset with emission intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance.
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.** Additional considerations: In some infrastructure sectors, scope 3 is the most significant in terms of emissions. A sector-by-sector materiality assessment of the most important scopes and categories of scope 3 is recommended. Regarding the importance of considering scope 3, refer to IIGCC Supplementary guidance: Scope 3 emissions of investments[3].		✓	✓	
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.** Additional considerations: The target horizon can vary and should be adjusted, as much as possible, to match the specific characteristics of the sector's emissions profile. The SBTi Corporate Standard uses 5-10 years from baseline as the reference point for near-term targets. Meanwhile, CA100+ sets short-term targets at 2 years and medium-term targets at 8 years. The scopes 1, 2, and material scope 3 should be covered. Guidance on conducting a materiality assessment for scope 3 emissions of investments is set out in IIGCC's Supplementary Guidance on scope 3 emissions and investors can also refer to the Greenhouse Gas Protocol's Value Chain Standard and sectoral guidance.		✓	✓	
Governance	**Governance/management responsibility for targets and decarbonisation plan.** Additional considerations: Several governance elements can be considered, depending on the size of the asset, these may include board oversight for climate risk, climate-related responsibilities of senior management, or incentives provided for managing climate-related issues.		✓	✓	
Decarbonisation plan	**Development and implementation of a quantified plan setting out a decarbonisation strategy for scope 1, 2, and material scope 3.** Additional considerations: As decarbonisation trajectory profiles vary across sectors, an asset-specific decarbonisation plan is expected, in line with its geographical setting, sector, and position in the value chain. The plan should include quantification of CAPEX and OPEX based on a list of envisaged decarbonisation solutions. Investors are recommended to be attentive to several archetypal elements of credible decarbonisation plans, including analyses of technological maturity and feasibility of decarbonisation solutions, leveraging sector-specific reference guidance. An example of a Net Zero Transition Plan framework includes the UK Transition Plan Taskforce framework[4].			✓	
Emission performance	**Current and forecast emissions performance (scope 1, 2 and material scope 3) relative to target or 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.**			✓	

[3] IIGCC, Supplementary guidance: Scope 3 emissions of investments, July 2024.
[4] Transition Plan Taskforce, About [accessed November 2024].

Figure 3: Mapping quantitative alignment criteria against NZIF maturity scale categories



2.1.2 Treatment of 'climate solutions' infrastructure assets

In NZIF, Climate Solutions are subject to a portfolio-level objective, akin to the Portfolio Decarbonisation Reference Objective and distinct from the Asset Alignment Target. The assessment of Climate Solutions is being addressed in a series of dedicated publications by IIGCC[5]. These climate solutions can be central to investors' strategies, either by supporting the decarbonisation of other assets or by being at the heart of the fund's investment thesis.

Climate Solutions should be analysed in the same way as other assets, by screening them against the maturity scale criteria. Although these assets directly contribute to the transition, it is essential to assess how they are addressing their own emissions.

Some Climate Solutions may automatically be categorised as "Achieving Net Zero" criteria if (i) emissions are being disclosed, (ii) they already have emissions performance at least equal to what is required for its sector or regional pathway for the year 2050, and (iii) that this emissions performance is expected to continue. This may be the case for solar or wind power generation assets, whose operational performance is superior to that of fossil fuel-based electricity production.

The criteria for decarbonisation plans and targets remain important for Climate Solutions, as inherently 'green' assets, particularly as their deployment is expected and required to accelerate. Investors are encouraged to stay engaged in reducing associated emissions, for example, by considering facility maintenance or the embodied emissions of these climate solutions. Additionally, when analysing these Climate Solutions and their operational performance, it may be relevant to reference the Technical Screening Criteria of the European Taxonomy, specifically the conditions for Substantial Contribution to Climate Change Mitigation.

[5] IIGCC, Investing in climate solutions: listed equity and corporate fixed income, November 2023.

2.2 Analysing greenfield asset alignment

In NZIF, greenfield assets are assessed on the same maturity scale as brownfield assets but cannot achieve higher than the 'Aligning' category. In addition to the operational criteria, they must also meet two additional criteria relating to construction and ensure that a management strategy is in place to minimise emissions in the construction phase.

Table 3 presents the maturity scale for greenfield assets.

Table 3: NZIF maturity scale alignment criteria for greenfield assets – *support for investors*

Category	Criteria	Aligning
Design	**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** Additional considerations: The design should not lead to highly emissive processes that are not in line with a net zero pathway. The emissions considered should encompass not only the use phase of the infrastructure but also the construction phase (including raw material extraction) and renovations up until the end of life of the asset.	✓
Construction strategy	**Decarbonisation or management strategy to minimise emissions in the construction phase** Additional considerations: The decarbonisation strategy should be sector specific. The asset should quantify its carbon emission reductions during the construction phase. The plan should include quantification of CAPEX and OPEX based on a list of envisaged decarbonisation solutions. Asset managers are recommended to be attentive to several archetypal elements of credible decarbonisation plans, including analyses of technological maturity and feasibility of decarbonisation solutions, and should also consider leveraging sector-specific reference guidance.	✓
Governance	**Governance/management responsibility for targets and decarbonisation plan** Additional considerations: Several governance elements can be considered, depending on the size of the asset, these may include board oversight for climate risk, climate-related responsibilities of management, or incentives provided for managing climate-related issues.	✓
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.** Additional considerations: This criterion can be adapted to the asset manager's specific context and may include various approaches, such as absolute reduction by X% compared to the first year of construction, the use of Y% renewable energy, or the use of recycled materials with Z% lower emissions, to achieve emissions reductions compared to the baseline of constructing a similar asset using traditional methods.	✓
Ambition	**Long-term goal for the asset to be net zero emissions by 2050 or sooner** Additional considerations: The asset board should acknowledge the importance of the company taking action toward a net zero future and encourage the company to begin exploring the pursuit of 'Aligned' criteria.	✓

2.3 Science-based target assessment

2.3.1 Assessing alignment of multi-activity assets and SPVs

Evaluating the 1.5°C alignment of portfolio companies' targets ("Targets" criteria in the maturity scale) is a crucial aspect of analysing alignment. The analysis should always be conducted using the most applicable pathway (see table 4).

A key challenge for asset managers arises when a portfolio company has multiple activities, each with different targets. Infrastructure investments can also be made through special purpose vehicles (SPVs), where the availability of information might differ from that of corporate entities. **Figure 4** depicts the different levels of infrastructure investment organisations.

Figure 4: The levels at which the analysis is carried out in the layers of the portfolio

Single activity

An SPV or corporate investment may have only one activity. In such cases, the target will inherently cover the sole activity being performed, making the asset level and activity level identical.

Example

A railway project sets a target of -40% of absolute carbon emissions by 2030. The target covers the sole activity and can be compared to railway pathways.

Multi-activity

Corporate entities and some SPVs may have multiple activities, requiring analysis to be conducted at the most granular level possible. Different activities can be classified at various levels of the maturity scale, depending on their characteristics.

The first step of the assessment is to determine the level at which the target and assessment can be performed: should it be at the activity mix level or at the activity level?

Figure 4 depicts the different scenarios and the good practices for each case. As mentioned previously, whenever possible, the assessment should be performed at activity level and aggregated upwards. Activity-level targets enable a more precise analysis by accounting for sectoral emissions profiles and the underlying assumptions used to develop decarbonisation pathways. However, in some cases it may be that no target exists at this level of granularity and the assessment can only be performed at activity mix level.

Example

A transport company has both a road transport activity and a railway activity.

Case 1: The company has one target, -50% of absolute carbon emissions by 2030 versus 2019 at company level.

The alignment assessment must be performed at group level since there are no activity level targets. The target will be compared to a general transport pathway. The historic emissions data analysed must cover both activities.

Case 2: The company has three separate targets, -50% of carbon emissions by 2030 at group level, a carbon intensity of 10 gCO_2/passenger km for the road activities by 2025 and a carbon intensity of 5 gCO_2/passenger km for rail activities by 2030.

Activity-level targets are available. The analysis should be performed at activity level. The target covering the road activity should be compared to a road transport pathway and the target covering the rail activity should be compared to a rail transport pathway.

Special Purpose Vehicles (SPVs)

In the case of SPVs, the analysis of the maturity scale criteria should be adjusted and interpreted by the asset managers according to the type of project and available information such as existing targets. SPVs that publish all the necessary information (targets, decarbonisation plan, etc.) can be assessed on the maturity scale like any other asset.

When information is missing, criteria can be indirectly analysed by considering available data from the parent company or even its shareholders. Targets that are not set at the SPV level may be found at the parent company or shareholder level. To satisfy the maturity scale requirements, any targets and decarbonisation plans established at the parent company or shareholder level must be applicable to the asset.

SPV structures and emission profiles may differ from those of traditional corporate entities. In some specific cases, SPV operations are carried out by sub-contractors rather than the SPV directly, which potentially implies a differentiated analysis in terms of emission scopes or targets at sub-contractor level.

Example

A fund has invested in an SPV, such as a fibre network project. The SPV does not have a target itself, but the company that holds the majority of the SPV has a target applying to the whole group. This target then applies to the SPV.

Figure 5: **Asset analysis depending on available targets**

One activity

The target covers the only activity.

➔ **The analysis is de facto performed at activity level.**

Example:

A corporate is focused on fibre network infrastructure and has a target. The target applies to this single activity.

Multiple activity

Activity level targets

All material activities are covered by a target

All material activities are covered by a specific target.

➔ **Analysis is performed at activity level. The results are then aggregated at asset level.**

Example:

A utility company has two activities: waste & water treatment and heat production. The company has separate targets for its waste & water treatment activity and its heat production activity. The assessment can be performed separately for each activity.

Not all material activities are covered by a target

At least one material activity is not covered by a specific target. The analysis of material activities is therefore impossible.

➔ **There is a global target in addition to the activity level targets.**

➔ **There is no global target. The asset cannot be classified as aligning.**

Example:

A utilities company has three activities: electricity production, heat production and electricity distribution. The company has set a target covering its electricity production and distribution activities. No target exist for the heat production activity, a material activity. The assessment cannot be performed at activity level.

Activity mix

The target covers all the activities at once and there is no further granularity.

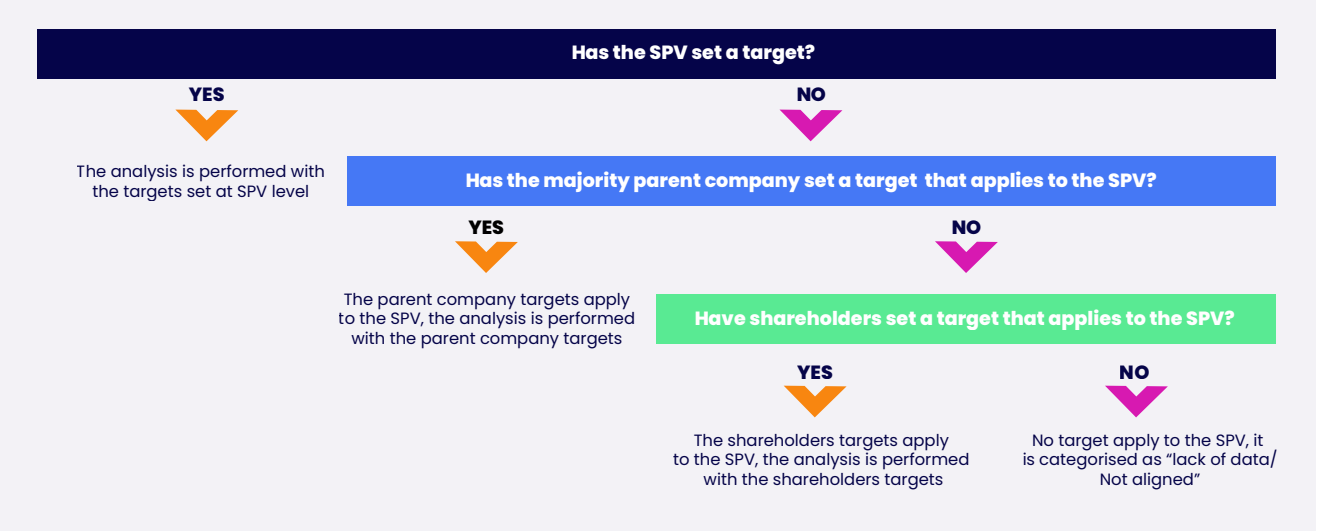
➔ **Analysis is performed at activity mix level.**

Example:

A company has two activities: motorways and railways. The company has one target (expressed in absolute emissions) at group level but no specific target for each activity. The assessment can be performed at a group and global level.

Figure 6: Indicative decision tree for assessing the target criteria applied to a SPV

The decision tree presents possibilities to choose which target can apply to the SPV assessed, depending on the available targets and data. The target selected should ideally be the closest to the SPV operations and the most granular possible in terms of activity.



2.3.2 Addressing infrastructure assets with no sector specific emissions pathway

The evaluation of an activity's targets and emissions performance is conducted in relation to a net zero emissions pathway. The most recognised pathways include the illustrated pathways with limited or no overshoot found within the IPCC 1.5°C Special Report, IEA NZE, the UTS OECM, and the NGFS [6,7,8,9]. The utilisation of these pathways is guided by alignment principles and methodologies, including sector-specific guidance from SBTi and TPI.

Selecting the appropriate emissions pathway for the activity requires analysis of the emission scopes included in the pathway and those covered by the target set by the asset, to ensure they are compatible. Finding an appropriate sector-specific pathway can be challenging and, in such instances, it is possible to select global pathways, though this carries the risk of deviating from the actual emissions profile of the activity and undermining the achievement of decarbonisation targets.

Not all infrastructure sectors are covered by the existing pathways and frameworks. The case of infrastructure is specific because the asset typology is varied, including production assets with well-defined 1.5°C pathways (e.g. electricity generation) or pure essential infrastructure assets (e.g. roads, ports, airports, etc.). The latter have the dual challenge of potentially high embodied emissions and significant material scope 3 emissions, often linked to the usage phase of equipment (e.g., cars, boats, planes). In these cases, while pathways are well-defined for the modes of transport, there is no clear and specific pathway for the infrastructure itself. The levers available to asset managers, whether as owners of the infrastructure or as debt providers, are mostly indirect (scope 3) and limited.

Table 4 lists, for each sector and sub-sector within the infrastructure asset class: the 1.5°C scenario pathway, material emissions to consider, and potential challenges in aligning assets within these sectors. As an approach to these challenges, we recommend asset managers adopt methods and develop evaluation tools that align with the main principles of the NZIF.

NZIF highlights the development of investor relevant decarbonisation pathways as an important advocacy area. The OECD published a report in 2023 benchmarking the existing transition scenarios used by financial institutions[10]. Its recommendations for institutions developing these climate scenarios include improving the transparency, comprehensiveness, and sectoral granularity to make them more actionable and help financial actors better guide their investment decisions. Beyond these reference institution scenarios, asset managers can refer to specific industry scenarios (e.g. International Maritime Organisation) or national scenarios, which are often granular and aligned with the country's targets.

6 IPCC, Special Report on Global Warming of 1.5°C, 2018.
7 IEA, Net Zero Emissions by 2050 Scenario (NZE), 2024.
8 UTS, One Earth Climate Model, 2017.
9 Central Banks and Supervisors Network for Greening the Financial System, 2024.
10 OECD, Climate change mitigation scenarios for financial sector target setting and alignment assessment, September 2023.

Table 4: Pathway and decarbonisation levers available for infrastructure sectors

Macro sector	Sector	Pathways available	Scenario	Typical material Scope 3 categories	Potential methodological and sectoral challenges
Energy	**Power generation**	Defined sector-specific pathway	IEA NZE, UTS OECM, NGFS	Based and adapted from CDP[11,12] • Category 11: Use of sold products • Category 3: Fuel-and-energy-related activities • Category 15: Investments • Category 1: Purchased goods and services • Category 4: Upstream Transportation and Distribution • Category 2: Capital Goods	• **Operational perimeter of emissions:** Upstream emissions can be included into the emission intensity metric, beyond fuel combustion (resource extraction, processing, fuel transportation, etc.)
	Heat generation	No clear pathway	NA		• **Value chain complexity:** Heat generation typically integrated in broader energy systems (i.e. Combined heat and power) • **Pathways available:** Heat-specific pathways are challenging to establish due to their strong dependency on electricity pathways. Power trajectory can be used, as recommended by SBTi[13]). The OECM scenario, moreover, provides heat pathways based on certain end-uses, such as residential and commercial buildings. • **Operational perimeter of emissions:** Upstream emissions can be included into the emission intensity metric, beyond fuel combustion (resource extraction, processing, fuel transportation, etc.)
	Energy Transmission and Distribution/Power network	No clear pathway	NA		• **Pathways available:** There is no specific pathway for electricity distribution and transmission. The alignment of these assets can be assessed through the carbon intensity of the electricity transported, which is produced upstream. These assets can also be viewed as climate solutions, given the significant global demand to support the electrification of processes ("Transmission and distribution of electricity" activity in the European Taxonomy) • **Embodied emissions:** Power networks can have high embodied emissions due to the energy-intensive production of materials, the construction and installation processes. There is a need to adopt cleaner production methods and use sustainable materials to minimise the overall carbon footprint of electrical networks
	Energy from Waste	No clear pathway	NA		• **Value chain complexity:** Incineration emissions are influenced by both the type of fuel used and the waste mix being processed. While waste management prioritises reduction, reuse, and recycling, with energy recovery as a last resort, a company highly committed to reuse and recycling efforts might still see an increase in incineration emissions. This is due to variations in the residual waste composition, highlighting a complex relationship between sustainable waste practices and emission outcomes. • **Pathways available:** It is challenging to establish pathways for energy from waste due to the complex nature of its value chain. Integrated approaches that consider emission reduction pathways through improved fuel mix, reuse, recycling, landfill diversion, or Carbon Capture Storage and Utilisation (CCUS) can be valuable in highlighting the transition efforts of these activities.
	Gas network	Defined sector-specific pathway	IEA NZE, UTS OECM, NGFS		• **Pathways available:** The decarbonisation challenge is centred on the carbon intensity of fossil gas within the networks. While the role of fossil gas in the energy transition is complex, scenarios typically anticipate a reduction in its share, replaced by renewable gases such as biomethane and green hydrogen, potentially involving retrofit initiatives. Asset managers can leverage pathways focused on the integration of renewable gases into these networks (e.g. UTS OECM). • **Embodied emissions:** Gas networks can have high embodied emissions due to the energy-intensive production of materials, the construction of pipelines and installation processes. There is a need to adopt cleaner production methods and use sustainable materials to minimise the overall carbon footprint of gas networks.

[11] CDP, Technical Note: Relevance of Scope 3 Categories by Sector, June 2024.
[12] Listed in order of % share of total Scope 3.
[13] "The resulting pathway is directly applicable to companies that generate electricity or electricity and commercial heat", SBTi, 2020.

Macro sector	Sector		Pathways available	Scenario	Typical material Scope 3 categories	Potential methodological and sectoral challenges
Transport	Road transport	**Fleet operators**	Defined sector-specific pathway	IEA NZE, IEA ETP, UTS OECM	Based on CDP[12,13] Category 4: Fuel and energy-related activities Category 3: Upstream transportation and distribution Category 1: Purchased goods and services	• **Pathways available:** Pathways related to road transport are generally well-documented in scenarios and primarily focus on increasing the proportion of low-carbon vehicles. The methodological challenge lies in identifying the appropriate level of granularity to provide distinct pathways for different types of vehicles, such as cars, buses, and trucks. The highly granular scenario commonly used by SBTi is derived from the IEA ETP 2017[14] and is a beyond 2°C scenario, not strictly aligned with 1.5°C.
		Pure infrastructure related to transport	No clear pathway	NA		• **Embodied emissions:** The materials and energy used for vehicles during road construction or maintenance phases can be significant, as can the climate impact of land artificialisation. Additionally, asset managers should remain mindful that while expansion or development projects may help alleviate congestion, they can result in a rebound effect with increased traffic. • **Indirect action levers:** The most significant source of emissions comes from internal combustion vehicles using the highway. Although the levers of action available to highway operators are indirect, they do exist and involve transforming the infrastructure into a facilitator of low-carbon mobility. Several solutions are available: installing electric vehicle charging stations, offering preferential toll rates for carpooling, dedicating lanes to public transport. Beyond their own emissions, this infrastructure can enable the deployment of renewable energy sources, such as solar PV.
	Aviation	**Aviation**	Defined sector-specific pathway	Aviation scenario (IEA NZE, OECM, NGFS)		• **Pathways available:** While several 1.5°C pathways have been established for the aviation sector, they are challenging and involve the rapid deployment of technologies that are still relatively immature in the market (such as hydrogen or electric aviation), the large-scale adoption of alternative fuels that are not yet widely used (like Sustainable Aviation Fuel), or simply a reduction in air traffic. • **Value chain complexity:** Scaling up Sustainable Aviation Fuels (SAF) will require a significant volume of biomass, raising concerns about resource availability and competition between different uses, particularly with food production.
		Airports	No clear pathway	NA		• **Pathways available:** Airports have several significant sources of direct emissions, primarily related to the activities they host, vehicles and the buildings they encompass. Each of these activities can have its own specific pathways. However, the most substantial emissions stem from aircraft fuel combustion. It should be noted that several airports have had their SBTi 1.5°C targets validated according to the corporate standard without having to include airport emissions. Several asset managers also incorporate the Airport Carbon Accreditation (ACA) and the 7 levels of accreditation[15] in their analysis, a scheme recognised in carbon management for airports, including target setting. • **Indirect action levers:** Similar to road infrastructure, airports can implement solutions to foster cooperation among stakeholders and prepare to accommodate new low-carbon technologies, including the availability of SAF and other innovations.
	Railway	**Locomotives and wagons fleet operators / ROSCO**[16]	No clear pathway	IEA ETP, UTS OECM		• **Pathways available:** Identifying 1.5°C specific pathways for railways in transition scenarios is challenging: the most granular scenario from this perspective, used by SBTi, is derived from the IEA ETP 2017[12] and "below 2 degrees". It includes Well-to-Wheel (WtW) emissions, expressed in absolute or in intensity (gCO_2/passenger or CO_2/tonne-kilometre). The UTS OECM, in turn, provides a technology benchmark and tracks the evolution of motorisation/fuel types used for rail, which can serve as a reference point for target setting. As with road transport, aligning with a percentage of low-carbon technologies used by locomotives versus fossil fuels can be a relevant metric. Asset managers can also focus on factors such as the country's energy mix, and the national targets regarding rail transport where the company operates. Moreover, the rail sector can broadly be seen as a lower-carbon alternative to road and air transport: the European Taxonomy includes activities such as "Freight rail transport" and "Passenger interurban rail transport".
		Pure rail infrastructure	No clear pathway	NA		• **Embodied emissions:** Similar to road transport, the materials and energy used by vehicles for the construction of transport infrastructure can be significant contributors to emissions. It should be noted that electrified rail infrastructure is a direct contributor to the transition and the European Taxonomy includes the activity "Infrastructure for Rail Transport."
	Ports	**Shipping operators**	Defined sector-specific pathway	Shipping scenario (IEA NZE, UTS OECM, NGFS)		• **Pathways available:** Similar to the aviation sector, the 1.5°C pathways for the maritime sector rely on the deployment of new technologies and the large-scale adoption of biofuels, which may present challenges related to availability and competition for biomass use.
		Pure port infrastructure	No clear pathway	NA		• **Indirect action levers:** Given that the most significant emissions come from the ships themselves, ports can position themselves as hubs for green innovation, fostering cooperation among various industrial stakeholders. They can invest in electrification infrastructure, renewable energy sources, or contribute to the overall environmental transition by investing in carbon capture and transport infrastructure.

[14] IEA, Energy Technology Perspective 2017, June 2018.
[15] Airport Carbon Accreditation, 7 levels of accreditation.
[16] ROSCO = Rolling Stock Companies.

Macro sector	Sector	Pathways available	Scenario	Typical material Scope 3 categories	Potential methodological and sectoral challenges
Waste & Water	**Water utilities**	Defined sector-specific pathway	IEA NZE, UTS OECM	• Category 11: Use of sold products • Category 3: Fuel-and-energy-related activities • Category 15: Investments • Category 1: Purchased goods and services • Category 4: Upstream Transportation and Distribution	• **Heterogeneity of activities:** The water sector is highly heterogeneous due to the diverse range of activities it encompasses, including water extraction, treatment, distribution, wastewater management, and desalination. Each of these activities involves different technologies, infrastructure, and operational processes, often tailored to regional needs, environmental conditions, and regulatory requirements. This variability creates a complex landscape with distinct energy use, emission profiles, and sustainability challenges. Beyond generic target setting, asset managers can aim to break down company activities in a granular way to better reflect industrial realities. This can be done by adopting specific pathways for vehicles, heat usage, and waste treatment, for example.
	Waste	No clear pathway	IEA NZE (bioenergy and waste), NGFS	• Category 11: Use of sold products • Category 3: Fuel-and-energy-related activities • Category 15: Investments • Category 1: Purchased goods and services • Category 4: Upstream Transportation and Distribution • Category 12: End of life treatment and sold products • Category 4: Upstream transportation and distribution	• **Heterogeneity of activities:** Industrial players in the waste sector often encompass a wide range of activities across the value chain, with diverse infrastructures such as collection, transport, storage, and waste treatment. This variety of activities may necessitate segmenting these operations to establish differentiated pathways. • **Value chain complexity:** The waste sector, much like the energy-from-waste sector, operates within a complex value chain where infrastructure often lacks control over the type and quality of waste streams they process, making it challenging to directly manage emissions. These emissions are partly influenced by external factors such as regional economic activity and the composition of incoming waste, which can vary significantly. An increase in emissions does not necessarily reflect inefficiency but can indicate that a region's economic waste is being systematically managed and treated, preventing potential environmental impacts from unprocessed waste. Addressing these challenges requires collaboration across the value chain to optimise waste sorting, improve treatment technologies, and reduce the carbon footprint of waste management processes. • **Pathways available:** Similar to the Energy from waste activity, it is challenging to establish pathways for the waste sector due to the complex nature of its value chain. Integrated approaches that consider emission reduction pathways through improved fuel mix, reuse, recycling, and landfill diversion can be valuable in highlighting the transition efforts of these activities. National targets regarding the waste treatment hierarchy can serve as relevant indicators.
Telecommunication	**Data centres**	Defined sector-specific pathway	SBTi guidance	Based on SBTi ICT[17]: • Category 1: Purchased goods and services • Category 2: Capital goods	• **Pathways available:** SBTi proposes 1.5°C 2030 pathways for the Information and Communication Technology (ICT) sector. This includes specific trajectories for the data centre operators, the mobile network operators and the fixed network operators. SBTi provides absolute emissions reduction trajectories, explaining how the typical intensity approach ultimately leads to an absolute reduction in the case of ICT applications, due to its close correlation with the carbon footprint of the electricity consumed (see Annex B). SBTi ICT proposes three levers to be implemented simultaneously. First the continued implementation of energy efficiency plans, then the switch to renewable / low carbon electricity supply, and finally the encouragement of carbon consciousness among end-users. • **Embodied emissions:** The SBTi sector emissions trajectories include embodied emissions while the operator specific trajectories exclude embodied emissions.
	Fixed networks	Defined sector-specific pathway	SBTi guidance		
	Mobile networks	Defined sector-specific pathway	SBTi guidance		

[17] SBTI, Information and Communication Technology sector, 2020.

3 Putting the guidance into practice – setting net zero targets

3.1 NZIF target setting for Infrastructure

NZIF provides specific guidance for objective setting at portfolio-level that covers infrastructure as an asset class, including both equity and debt[18].

Figure 7 adapts some aspects of the NZIF Component for the Private Equity Industry for the infrastructure asset class. The alterations have been made to better reflect the diversity of the sectors within infrastructure investments.

Portfolio Decarbonisation Reference Objective (optional)

For different infrastructure types, the emissions profiles and decarbonisation levers can vary significantly and are too heterogeneous to provide a relevant and aggregated view of the portfolio's carbon performance. Depending on investment strategies, the decarbonisation reference targets may vary and comparison may be difficult.

The decarbonisation reference objective facilitates *"internal accountability, understanding of why changes have occurred, and assessment of the efficacy of net zero strategies in reducing portfolio emissions"*[19]. It also provides an aggregated view from the portfolio point of view. However, this decarbonisation reference should not be used as an investment decision-making or a target-setting tool to reduce financed emissions.

[18] IIGCC, NZIF Component for the Private Debt Industry, May 2024; IIGCC, NZIF Component for the Private Equity Industry, May 2023.

[19] IIGCC, Updated Net Zero Investment Framework, the most widely used net zero guidance by investors, published as 'NZIF 2.0', June 2024.

Figure 7: Commitments across the Infrastructure industry

Alignment targets

For infrastructure, NZIF recommends targets based on the type of investment and investment objectives (as depicted in **Figure 7.1**). Some recommendations are applicable at fund or portfolio level and more specific target guidelines are proposed for certain infrastructure assets, depending on factors such as the type of control or year of acquisition.

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.

Appendix 2 translates these commitments using the same format as the Private Equity and Private Debt guidance[20].

Allocation to Climate Solutions objective

Investment strategies in infrastructure vary widely and may include investment in climate solutions or focus on transitioning assets, among other approaches. For some investors, the share of climate solutions may represent the majority of the portfolio and will play an important role in supporting the transition.

In November 2024, IIGCC published Investing in Climate Solutions: Renewable energy generation infrastructure. As IIGCC's first infrastructure specific climate solutions guidance, it supports investors to quantify their contribution to scaling renewable energy generation within the infrastructure asset class. Beyond this piece of work, we aim to continue to build out supplementary guidance for our members on climate solutions, including on the need for transmission, distribution and storage systems to support the renewable generation assets.

Figure 7.1: Targets for infrastructure GPs and LPs

NB: For fund of funds, the asset owner or asset managers shall aim, by 2030 at that latest, to only invest with firms or fund managers who themselves are setting portfolio coverage targets.

Meaningful or control influence is defined as a shareholding of 25 per cent or more and board representation.

[20] IIGCC, NZIF Component for the Private Debt Industry, May 2024; IIGCC, NZIF Component for the Private Equity Industry, May 2023.

3.2 Modelling portfolios to set targets

Setting targets is a strategic exercise requiring several steps which may impact the investment process. In this context, asset managers can model their portfolios according to various factors to refine their projections. **Figure 8** depicts various possible steps, components and hypotheses to take into account when modelling a portfolio. A simplified model example is also presented in **Appendix 4**.

The first step is to establish the baseline by analysing each asset in the current portfolio or fund. This step does not apply to new funds.

The second step involves modelling the portfolio based on hypotheses. Three types of hypotheses can be considered: (i) expected asset progress on the maturity scale over time, (ii) portfolio renewal and (iii) growth. By varying these hypotheses and projecting AuM in each category of the maturity scale over time, a portfolio target can be determined. This projection is carried out according to recommendations provided by the NZIF (see **Figure 7** above).

The way the portfolio is modelled can impact how new investments are analysed. Specifically, the asset manager can **align due diligence with the Net Zero strategy** to determine to what extent, and within what time frame, the analysed company can reach the desired level on the maturity scale.

The impact on the investment process: due diligence

Pre due diligence and due diligence

Asset managers are recommended to integrate a focus on decarbonisation plans into their pre-due diligence and due diligence processes, ensuring alignment with their Net Zero ambitions. This will enable them to determine to what extent and within what time frame targeted companies can achieve the maturity scale categories aligned with their Net Zero targets.

Example of detailed decarbonisation strategy including the efforts developed, time horizon and ambitions

Decarbonisation levers for a utilities company

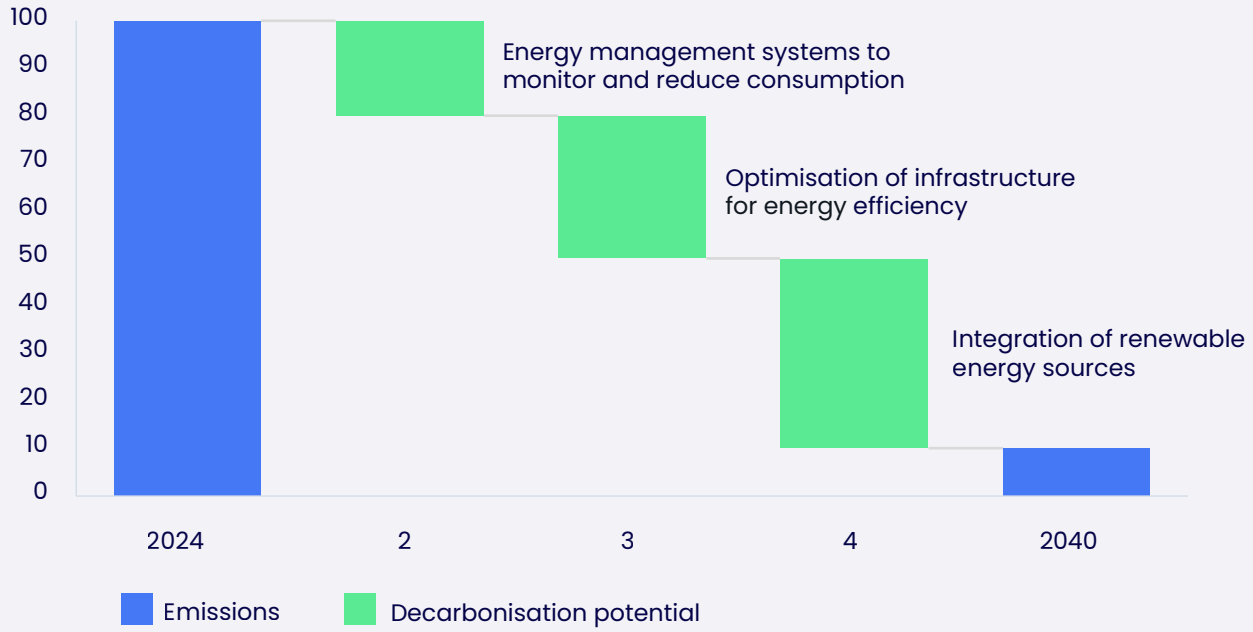
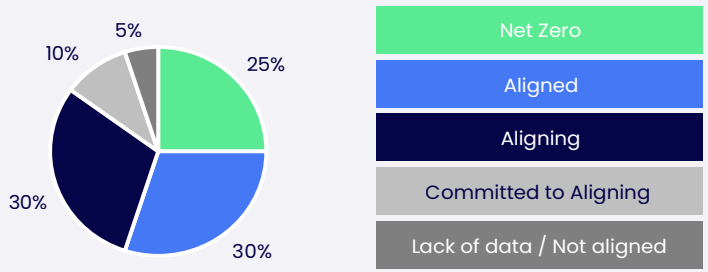


Figure 8: Steps and considerations for portfolio modelling[21]

1. Baseline modelling

First step: analyse the fund or portfolio to set a baseline for the target. The portfolio is expressed as AuM percentage for each category of the maturity scale.

Example:



2. Hypothesis setting

Second step: set the fund or portfolio evolution hypothesis. Since the hypotheses are prospective, it is recommended to build at least a conservative, a probable and an ambitious scenario. The hypotheses can include:

A Assets progress on the maturity scale

We consider the potential progress of an asset on the maturity scale over a given time horizon. Sector-by-sector hypotheses can be considered, and an asset-by-asset review of the existing portfolio provides greater precision.

Example: Hypothesis on progress for each asset in the energy sector

Committed to aligning	Aligning	Aligned	Net Zero
1 year after deal close	2 years after deal close	4 years after deal close	Case by case

B Portfolio renewal

To accurately model the fund or portfolio, the lifespan of each asset within it must be considered. Any asset that exits the fund or portfolio before the target deadline will not be factored into the target.

Example: Asset A, which is "**Aligned**", will exit the portfolio in 2 years. The first target deadline is in 5 years.

Asset A will no longer be part of the portfolio by then and will not be part of the potential "**Aligned**" share of the portfolio in 5 years.

Similarly, new assets will enter with a certain level of maturity. Screening these new assets can be the focus of dedicated strategies, whether it's investing in assets that already have a certain level of maturity or, conversely, supporting assets that are still at the early stages of their transition journey.

Example of strategies:

Targeting assets that are at least "Aligning"	Targeting assets that are at least "Committed to Aligning"	Not applying any specific filter
More limited investment universe		Broad investment universe
Lower risk of not achieving target		Higher risk of not achieving target
Efforts on decarbonisation plan	Efforts on target setting	Efforts on data collection

Additionally, for all assets that will exit the portfolio before the portfolio-level target horizon, the asset manager can communicate the efforts and progress made by the asset in advancing its maturity during the portfolio holding period.

[21] This diagram has been adapted from the NZIF.

C **Portfolio renewal**

The overall growth of the portfolio must also be incorporated into the modelling. Asset managers can specifically consider strategic directions regarding sectors. Since sectors vary in terms of maturity when it comes to data collection and engagement in the transition, these differences can be analysed in detail.

Examples of relevant questions related to fund/portfolio growth

- What is the projected annual growth rate?
- Are new sectors being targeted?
- Will new geographies (with different regulations regarding environmental transition) be covered?
- Will the AuM amounts per investment opportunity increase?
- How does growth influence the engagement strategies with portfolio companies?

3.3 Target Re-baselining

Recalculating portfolio baseline year emissions, or 're-baselining', is a practice that investors may want to undertake to ensure consistency and relevance of reported GHG data over time and to reliably track progress against the portfolio decarbonisation reference objective[22].

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

Substantial changes to data coverage, availability, or quality

Improvements in data coverage, availability, or quality can significantly alter the baseline. As more comprehensive data becomes available, investments previously categorised as 'Lack of Data' may progress to 'Aligning' or 'Aligned' categories. This shift could result in a revision of the baseline to reflect the new data landscape and more accurately assess the portfolio.

Example

An infrastructure fund initially considers scopes 1 and 2 in its targets and aims at having 70% of its AuM categorised as "Achieving Net Zero," "Aligned," or "Aligning" by 2028. Because data becomes available, the asset manager decides to include material scope 3 as well. With the new portfolio analysis, assets that were initially included in the "Achieving Net Zero," "Aligned," or "Aligning" categories are now differently categorised. The fund now aims for 60% of its assets to be in the first three categories by 2028.

Significant shifts in sectoral or industry exposure

Changes in the portfolio's exposure to different sectors or industries can impact the baseline. For instance, increasing investments in sectors with lower emissions or divesting from high-emission sectors will shift the overall emissions profile. These shifts should be reflected in the baseline to ensure that targets remain relevant and achievable given the new industry exposure.

Example

An infrastructure fund initially focused on renewables and energy production had an interim target of having 90% of its AuM categorised as "Achieving Net Zero," "Aligned," or "Aligning" by 2028. However, a strategic shift and the company's expansion now expose it to entirely new sectors, including waste management, which is expected to make up one-third of its activity by 2030. Given the challenges in accessing data in the waste sector, the fund has decided to maintain its targets for assets in its traditional sectors while incorporating the new sectors into its 2030 goals. It now aims for 55% of its assets to be in the first three categories.

[22] IIGCC – NZIF2.0 : Implementation Guidance for Objectives and Targets – September 2024.

New money or portfolio growth (for absolute targets), requiring attribution for targets

New investments and portfolio growth, especially relevant for absolute targets, can alter the baseline. As new capital is deployed, the mix of assets in the portfolio will change, affecting the baseline's composition. Proper attribution of these changes is essential to maintain the accuracy and relevance of the set targets.

Example

An asset manager has established its baseline and has committed to having 70% of its AuM categorised as "Achieving Net Zero," "Aligned," or "Aligning" by 2028. The asset manager acquires a smaller infrastructure asset manager, who was previously not managing its assets within a transition strategy. Because of the new assets entering the portfolio, the baseline is modified. The fund adapts its target and commits to have 65% of its AuM categorised as "Achieving Net Zero," "Aligned," or "Aligning" by 2028.

4 Putting the guidance into practice – case studies

The case studies presented below are intended to demonstrate how asset managers can analyse assets during the due diligence phase or engage with them to drive progress during the asset management phase. These materials were prepared and authorised by the case study subjects and have been anonymised.

4.1 Case study #1
Co-shareholder Engagement and "Net Zero Board Paper"

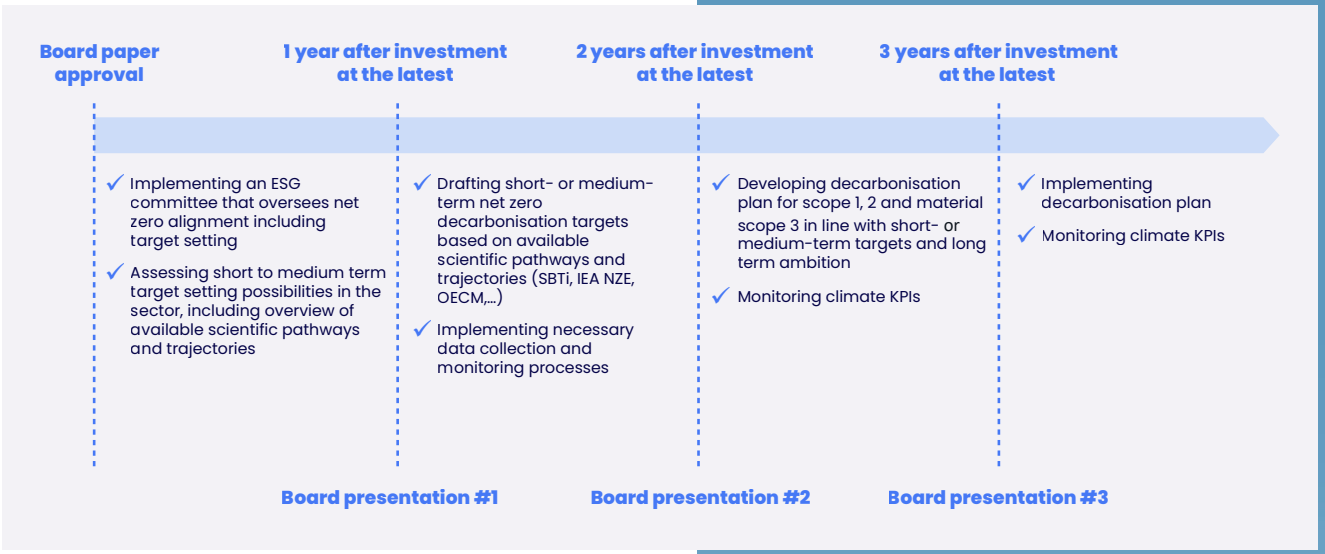
Challenge: A key challenge for asset managers in pursuing their net zero ambitions lies in aligning co-shareholders on the necessity, terms and timelines required to facilitate the asset's transition at the point of investment. This alignment is crucial for the success of the commitment. Furthermore, given the scale of resourcing and potential business transformation which will be required to transition certain assets, a unanimous and fully aligned board commitment is preferred.

Arjun Infrastructure Partners, an equity investor specialising in private mid-market infrastructure, has developed an initiative with practicality, simplicity and adherence to the NZIF framework at its core.

Arjun Infrastructure Partners introduced a "Net Zero Board Paper" designed to align co-shareholders on a net zero objective and a phased programme of work ranging from initial baselining, through to developing a Net Zero Transition Plan for board review and approval.

The Board Paper is structured into several key sections, including:

- An introduction, explaining key definitions (such as "net zero" and "science-based") and the financial rationale for a net zero strategy at the asset level. In particular, the paper explains that the transition to net zero is an important factor in the long-term success of the business and the paper is presented with the intent of being value accretive.
- Characteristics of a net zero commitment: outlining the maturity scale and providing technical details on science-based target setting.
- Characteristics of a robust Net Zero Transition Plan (with a focus on the UK Transition Plan Taskforce).
- Board paper resolutions, detailing the implementation of reporting, target setting, and the execution of a transition plan, as outlined in the simplified diagram below. Regular reporting to the board and approval of key milestone deliverables is an important part of the approach. Board approval and regular oversight is viewed as essential prior to entering into binding net zero commitments, additional steps include legitimising the management resourcing and expenditures necessary to robustly establish decarbonisation targets and develop the subsequent transition plan.



This approach has proven effective for several reasons:

It provides a clear, detailed framework that swiftly brings the issue to the forefront. This Board Paper systematises the process, saving valuable time for co-shareholders, regardless of their current net zero commitments.

The paper is designed to set deadlines that are not only feasible within the infrastructure asset class but also stringent enough to ensure accountability.

The paper takes into account potential methodological challenges in target setting, and includes recommendations to leverage specialised expertise as needed.

Finally, it frames the net zero transition as a comprehensive strategy—beyond target setting—requiring a well-structured industrial transition plan that is cohesive and aligned, while also serving as a safeguard for asset value preservation.

4.2 Case study #2
Energy Utility

Please note that these case study materials have been prepared and authored by the case study subject.

GENERAL INFORMATION

Sector: Heat and electricity production (Cogeneration plants and boilers)

Investment type: *Majority equity*

Size: ~100GWh, €18M in revenue

Location: Italy

CURRENT ASSET MATURITY

Emissions performance ✓	Net Zero
Decarbonisation plan ✓	Aligned
Governance ✓	Aligning
Disclosure ✓	Committed to Aligning
Targets ✓	Lack of data / Not aligned
Ambition ✓	

Asset description

The asset is based in Italy and provides services to one hospital and the district heating. It consists of three steam generators, four boilers, five cogeneration plants.

The asset produces 125 GWh of energy in total, with its activities broken down as follows:

- **Electricity generation:** 30 GWh
- **Heating and cooling generation:** 95 GWh

Asset current category on maturity scale

The asset has disclosed its scope 1 and 2 emissions both in absolute, and intensity, terms. For this asset, Scope 3 emissions have been considered negligible, as the material emissions stem from fuel combustion and are included in scope 1.

The asset's emissions have lowered between 2021 and 2023. Based on its current emissions, the asset has set a long term goal of being net-zero by 2040 and short-term targets at asset level of -230 gCO_2/kWh by 2030 in line with the IEA NZE pathway.

To support these targets, the asset has implemented a robust decarbonisation strategy, including a CAPEX plan to transition from natural gas to biomethane, which has a low carbon footprint. This plan is accompanied by governance measures, including board compensation linked to target achievement.

The decarbonisation strategy is a continuous discussion with the operator to ensure it is implemented at the right pace, meeting the targets while maintaining long-term alignment.

Investment context

The asset is majority-owned by the fund and operated by an industrial player. The fund itself proactively financed a transition strategy consultancy to build the roadmap.

The decision to set 1.5°C targets at the entity level was made when the deal was signed, and an initial action plan was refined after the first 100 days. Progress is monitored annually, and a committee has been set up within the company's management to oversee that progress.

Decarbonisation plan [1/2] ✓

	Decarbonisation levers	Carbon abatement potential	Costs	Benefits cost savings, value chain, ...	NPV
1	BioLNG purchase	Up to 100% Emission factor: 0.82 gCO_2/kWh (99% reduction vs. natural gas)	CAPEX: €600k-800k OPEX: €20k/yr + €120/MWh	Increased resilience in a context of energy crisis	**Positive** regarding EU ETS context
2	Biomethane Purchase Agreement	Up to 100% Not calculated – low CO_2 intensity	CAPEX: None OPEX: €1.7M-3M/yr	Traceability, no CAPEX required, Amounts can be modulated	**Positive** regarding EU ETS context
3	Heat pumps	-10% Saving of 12 750 MWh of natural gas/yr	CAPEX: €25M OPEX: €900k-4M/yr	Strong decarbonisation possible with renewable electricity sourcing	N/A
4	On-site solar PV	-30% Saving of 27 780 MWh of natural gas/yr	CAPEX: €35M OPEX: €1.4-1.5M	Visibility on production and associated costs	N/A

The asset has chosen mature solutions to reduce emissions, with all relevant KPIs calculated to validate the effectiveness of this plan (see table above). To achieve its objectives, the asset has decided to switch from natural gas to renewable gas, specifically biomethane, which has a low CO_2 footprint. To further reduce on-site energy consumption, the asset will implement heat pumps and on-site solar PV.

Decarbonisation plan

1. BioLNG purchase

The asset is setting a bioLNG contract with a supplier for the provision of biomethane supplied on-site. The CAPEX for this solution has been calculated to be between €600k and €800k. This includes the deployment of a storage and regasification unit. This technology is mature and ensures significant carbon emissions reduction (up to 99%).

2. Biomethane Purchase Agreement

The Biomethane Purchase Agreement (BPA) offers two main advantages: Firstly, if the unit does not receive public funding, the use of guarantees of origin can reduce EU-ETS emissions, leading to potential cost savings. Secondly, the quantities of biomethane can be adjusted to cover a variable portion of the plant's natural gas consumption, further reducing its remaining emissions.

3. Heat-pumps

Heat pumps are mature decarbonisation levers designed with robust construction and minimal moving parts, resulting in low maintenance requirements.

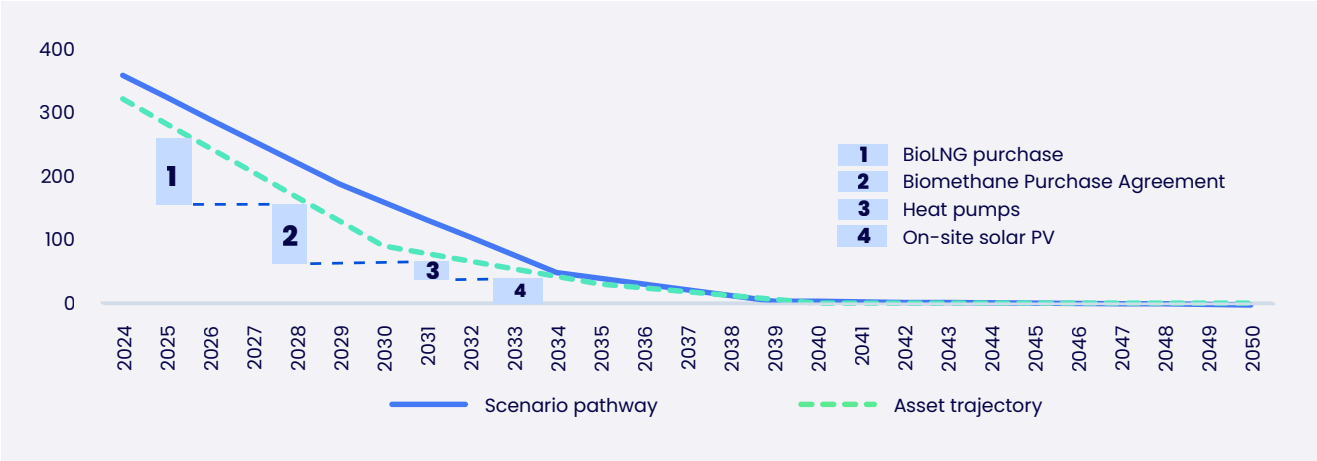
4. On-site solar PV

The asset plans to source electricity from the grid or enter into a Power Purchase Agreement (PPA) for solar energy production. While some local solar energy production near the plant is possible, it may not meet all energy needs. Therefore, this approach could be combined with a PPA to fully satisfy the asset's energy requirements

Decarbonisation plan [2/2] ✓

The four complementary actions each have associated quantitative decarbonisation potential, enabling the asset to meet its set targets.

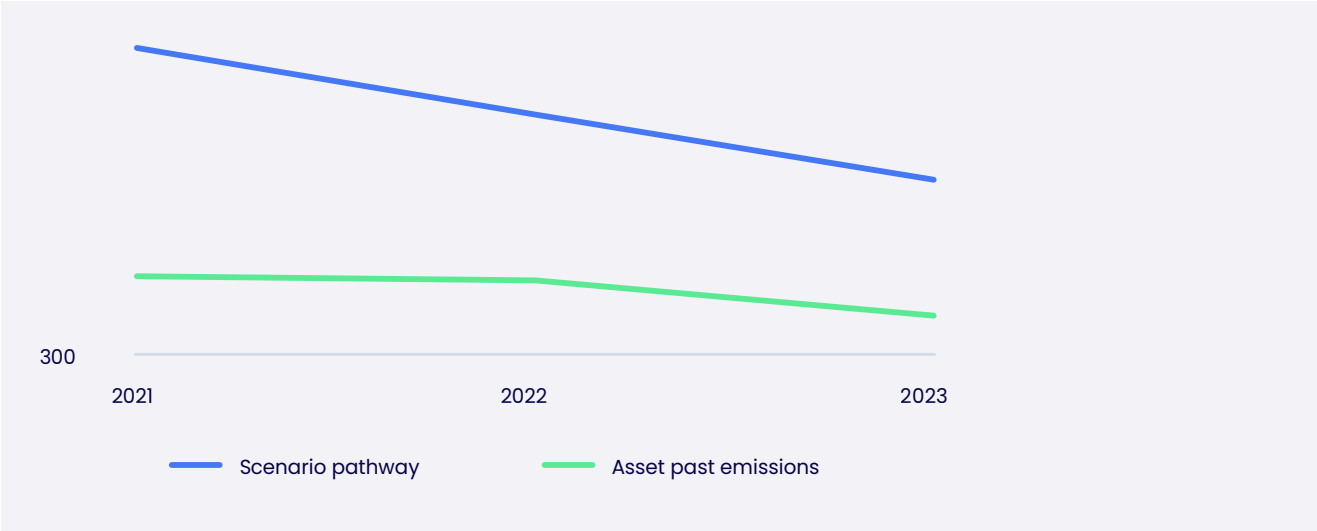
The first two actions focus on the gas generation activities of the asset, allowing for complete decarbonisation of these processes, while the last two actions target the remaining emissions.



Emission performance ✓

The asset began reporting its emissions in 2021, with reductions observed in 2022 and 2023. Emissions reported in 2023 were 339 gCO_2/kWh, already below the scenario pathway.

Emissions further decreased to 320 gCO_2/kWh between 2022 and 2023, ensuring compliance with the criteria. The asset will need to continue reducing its emissions in the coming years to maintain compliance with these standards.



4.3 Case study #3
Biogas

Please note that these case study materials have been prepared and authored by the case study subject.

GENERAL INFORMATION

Sector: Biogas

Investment type: *Majority equity*

Size: ~20GWh/year

Location: France

CURRENT ASSET MATURITY

Emissions performance	✓
Decarbonisation plan	–
Governance	✓
Disclosure	✓
Targets	–
Ambition	–

- Net Zero
- Aligned
- Aligning
- Committed to Aligning
- Lack of data / Not aligned

Asset description

The asset is a methanisation unit producing biogas, along with an upgrading plant where biomethane is used as fuel for the transport sector. The plant produces 20 GWh of biomethane per year, uses biowaste and residual feed crops as input and complies with the European RED III directive.

Asset's current category on maturity scale

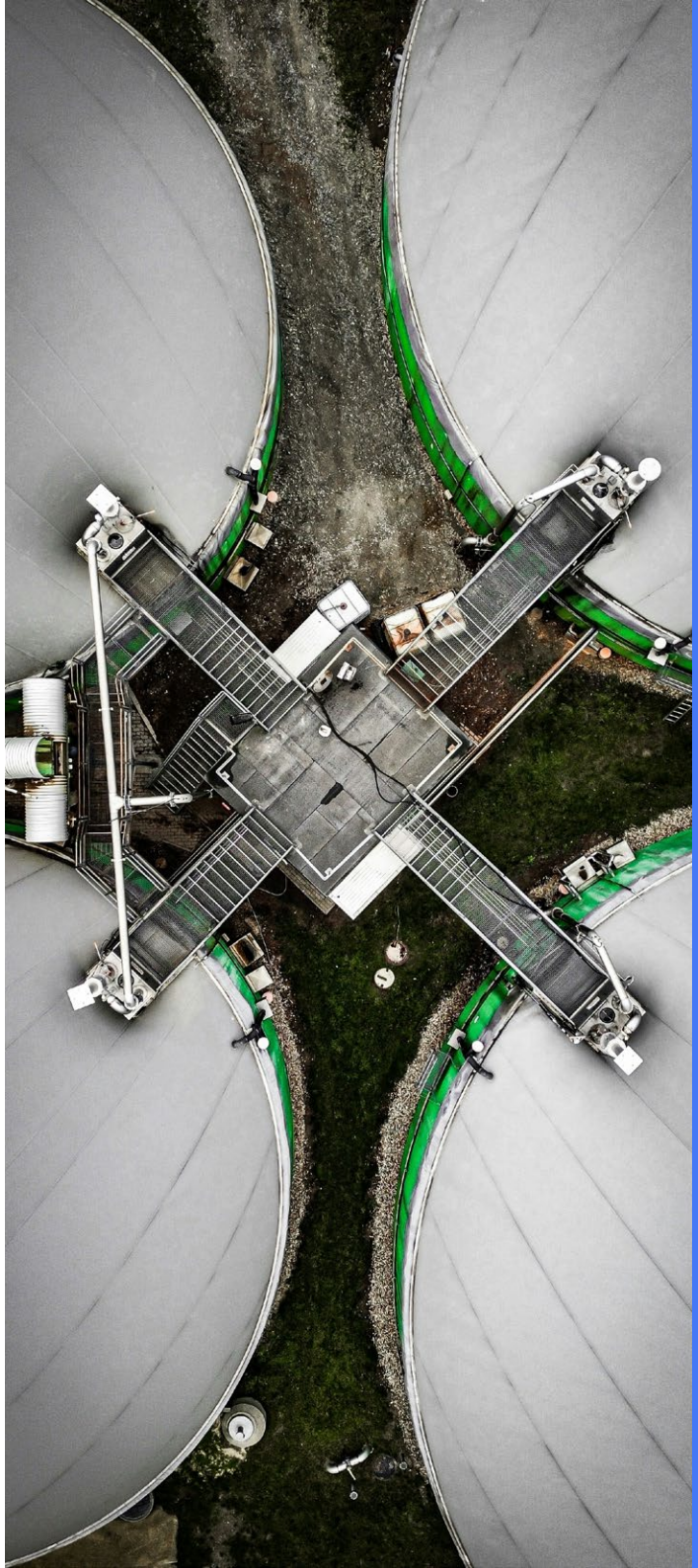
The asset is fully aligned with the European Taxonomy and the European RED II. With emissions of 44.5 gCO_2/kWh, which are below the 2050 levels for gas pathways and with operational performance that is closely monitored, the asset is classified as Achieving Net Zero.

To further enhance the positive impact, monitoring could include additional aspects such as the inputs used and their yield, the impact on surrounding water bodies and the valorisation of digestate.

Investment context

The asset is majority-owned by the fund and operated by an industrial player.

Progress is monitored annually, and a sustainability committee has been set up within the company.



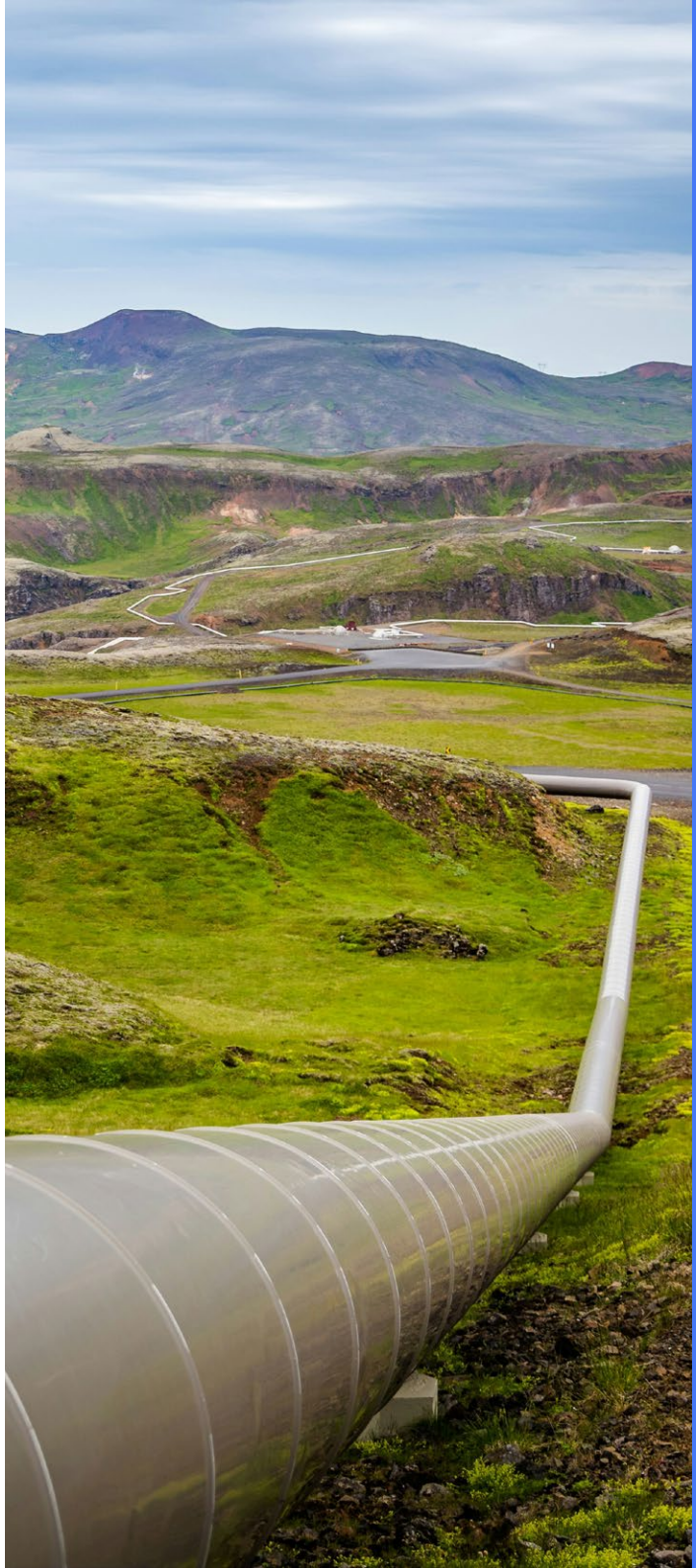
Comments on "Achieving net zero"

Material emissions in the gas sector primarily stem from extraction and combustion. Biomethane, however, has a significantly lower emissions intensity (44.5 gCO_2/kWh) compared to the sector average of 300 gCO_2/kWh. European requirements, such as the European Taxonomy and RED II, to which the asset is compliant, have been considered stringent enough to classify compliant assets as 'Achieving Net Zero.'

European Taxonomy alignment

The asset is fully eligible and aligned with the European Taxonomy across 100% of its activities with the activity "Manufacture of biogas and biofuels for use in transport and of bioliquids". The Taxonomy sets specific conditions for biogas activities, including criteria on the biomass used (criteria 1), emission reductions compared to the sector (criteria 2), digestate production (criteria 3), and capture of remaining CO_2 (criteria 4). The asset meets all these requirements and also complies with the 'Do No Significant Harm' criteria, including climate adaptation, water, pollution prevention, biodiversity, and Minimum Social Safeguards. The EU Taxonomy does not set criteria regarding the circular economy for this activity.

Substantial Contribution Criteria	✓
1. Agricultural biomass used for the manufacture of biogas or biofuels for use in transport and for the manufacture of bioliquids complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001.	✓
Forest biomass used for the manufacture of biogas or biofuels for use in transport and for the manufacture of bioliquids complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.	N/A
Food-and feed crops are not used for the manufacture of biofuels for use in transport and for the manufacture of bioliquids.	✓
2. The greenhouse gas emission savings from the manufacture of biofuels and biogas for use in transport and from the manufacture of bioliquids are at least 65 % in relation to the GHG saving methodology and the relative fossil fuel comparator set out in Annex V to Directive (EU) 2018/2001.	✓
3. Where the manufacture of biogas relies on anaerobic digestion of organic material, the production of the digestate meets the criteria in Sections 5.6 and criteria 1 and 2 of Section 5.7 of this Annex, as applicable.	✓
4. Where the CO_2 that otherwise would be emitted from the manufacturing process is captured for the purpose of underground storage, the CO_2 is transported and stored underground in accordance with the technical screening criteria set out in Sections 5.11 and 5.12 of this Annex.	✓
Does No Significant Harm	✓
Minimum Social Safeguards	✓



Comments on "Achieving net zero"

The first substantial contribution criteria set out for the 'Manufacture of biogas and biofuels for use in transport and of bioliquids activity' in the European Taxonomy refers to Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001, which was amended by Directive EU 2023/2413, more commonly referred to as RED III. Article 29 focuses on the durability requirements of the feedstock.

RED III

The European Directive RED III imposes criteria that must be met to ensure eligibility, promoting good operational performance which can be considered in line with 'Achieving Net Zero' requirements.

Emissions requirements

To comply with RED II, the asset faces strict greenhouse gas saving requirements. The asset's reported emissions are 44.5 gCO_2/kWh. This represents emissions reductions of 87% compared to the fossil fuel comparator of 338.5 gCO_2/kWh (94 g CO_2eq/MJ in the table) for the transport biofuels end-use for assets that have started their operations after January 2021, in line with the 65% required by the directive.

Input requirements

Inputs used must be renewable resources, such as biowaste or specific energy crops, excluding those from high-value land. The biomass primarily sourced from agri-waste used by the asset meets this criterion. Inputs from high-value lands in terms of biodiversity, protected areas, or primary forests are not compliant with RED II.

Traceability and transparency requirements

RED II requires audits to ensure compliance with its various criteria. The asset has scheduled annual audits of its activities, including a review of all RED II criteria. It also ensures traceability of all inputs through guarantees of origin, regular audits, and specific documentation related to input sourcing. The asset reports on its emissions assessments, the origin of its inputs, and its energy efficiency measures.

Start operation date	Transport biofuels	Transport renewable fuels of non-biological origin	Electricity, heating and cooling
Before Oct. 2015	50%	-	-
After Oct. 2015	60%	-	-
After Jan. 2021	65%	70%	70%
After Jan. 2026	65%	80%	80%
Fossil fuel comparator	94 g CO_2eq/MJ	183 g CO_2eq/MJ	80 g CO_2eq/MJ

Ambition -	*Not applicable for Achieving Net Zero assets, as the asset's emission intensity already meets the levels required by the sectoral pathway for 2050*
Targets -	*Not applicable for Achieving Net Zero assets, as the asset's emission intensity already meets the levels required by the sectoral pathway for 2050*

Disclosure

✓

The asset discloses its scope 1 and 2 emissions. Material scope 3 emissions could include waste treatment or upstream emissions; however, these are not considered the most significant and may be excluded from the current analysis. When all data becomes available, all emissions should be included in the analysis

Asset emissions reported for the year 2023

Scope 1 & 2	Scope 3
44.5gCO_2/kWh	n.d.

Governance

✓

The board oversight for the asset includes a dedicated sustainability committee responsible for guiding environmental strategy, ensuring compliance with EU Taxonomy and RED II standards.

Decarbonisation plan

-

Not applicable for Achieving Net Zero assets, as the asset's emission intensity already meets the levels required by the sectoral pathway for 2050

Emissions performance

✓

The biogas asset has disclosed its emissions from its first year of operations, including scope 1 and scope 2 emissions, which have remained stable and have not increased since the beginning of its operations.

Additional comments

Biogas units can monitor sustainability KPIs beyond those outlined in the NZIF to ensure a positive impact throughout their supply chain. Given their varied operational processes, biogas assets influence multiple levels of their supply chain, such as enhancing the resilience of surrounding farms, improving waste management, and reducing energy dependency. Key material aspects to monitor include the types of feedstock used, water management practices, digestate valorisation, and carbon emissions, all of which are critical to maintaining the sustainability and virtuous nature of their operations.

4.4 Case study #4
Greenfield road

Please note that these case study materials have been prepared and authored by the case study subject.

GENERAL INFORMATION

Sector: Road transportation

Investment type: *Minority equity*

Size: ~100km

Location: Australia

CURRENT ASSET MATURITY

Emissions performance ✓	Net Zero
Decarbonisation plan ✓	Aligned
Governance ✓	Aligning
Disclosure ✓	Committed to Aligning
Targets ✓	Lack of data / Not aligned
Ambition ✓	

Asset description

The asset is a transportation infrastructure project in Australia, consisting of highways and tunnels, aimed at improving connectivity and easing traffic flow in underdeveloped areas. The infrastructure is currently under construction and expected to be operational by 2028.

Asset's current category on maturity scale

Since the asset meets all the required criteria, it is currently classified as 'Aligning,' the highest category attainable for a greenfield asset.

The project has been designed with a focus on sustainability, particularly in terms of the construction strategy, including the transportation of workers and materials, the lighting used in tunnels, and the energy used for ventilation systems. The impact of these low-carbon solutions has been quantified against an official baseline

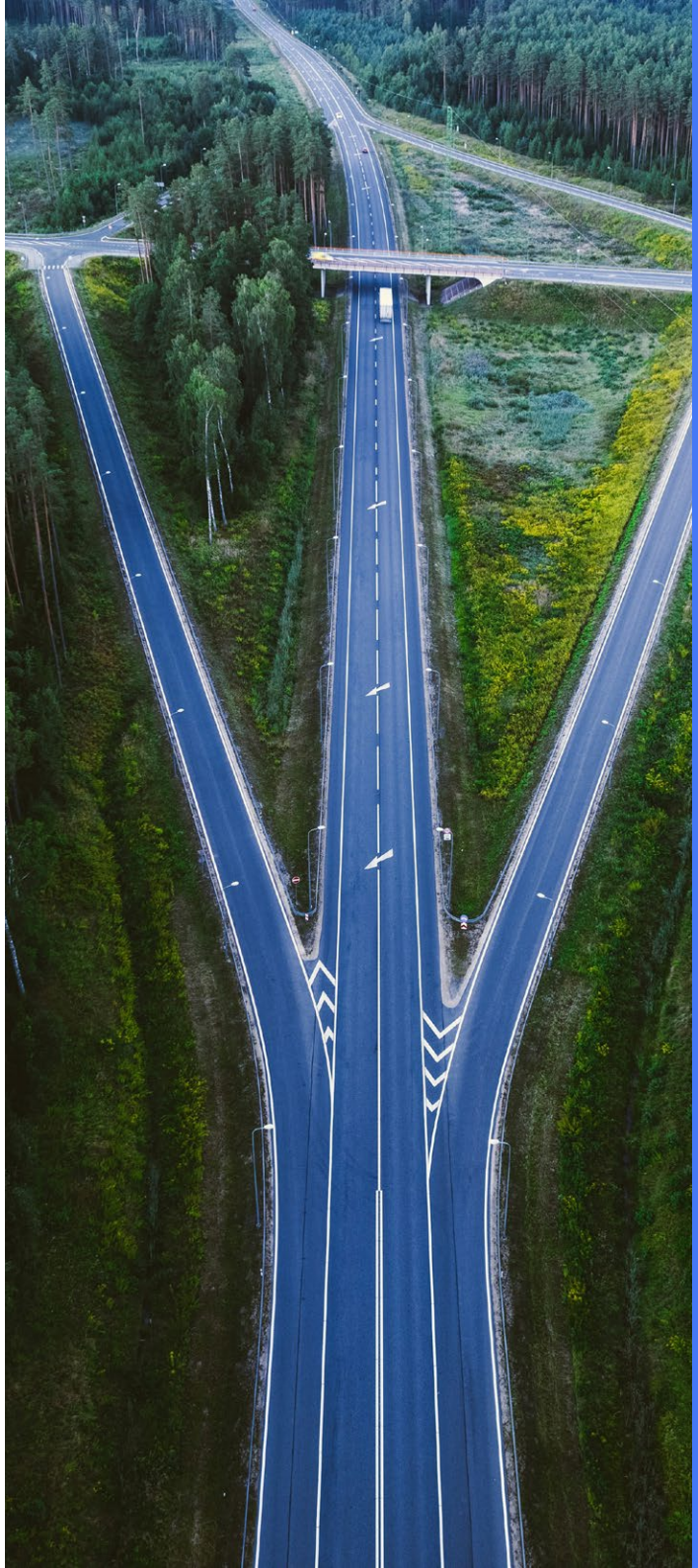
The assessment will need to be re-evaluated once the asset becomes operational, following the evaluation criteria for brownfield assets.

Investment context

The project is led by a consortium of international industrial and financial partners.

The project is being developed under an ambitious Public-Private Partnership (PPP) agreement, where risks and benefits are shared among stakeholders.

The consortium is responsible for the construction and commissioning of the motorways and tunnels and the long-term operation and maintenance over a 20-year contract.



Ambition ✓

The asset has publicly disclosed its ambition to reach net zero emissions.

Targets ✓

The asset has set a target of being net zero from the start of its operation in 2028. It should be noted that this target does not include indirect emissions from traffic.

	2028
Asset targets	**Net Zero the start of operations**

Governance ✓

The project includes a climate change and resilience adaptation management plan aligned with the Australian standard for climate change risk assessment.

The plan is executed through design and construction mitigation measures, with the sustainability team overseeing their implementation to ensure compliance.

Construction strategy ✓

The construction strategy includes several solutions to reduce the absolute emissions of the construction phase by 30% compared to the Infrastructure Sustainability Council (ISC) verified baseline.

These solutions rely on mature technology and the asset has estimated the CAPEX and OPEX required to implement them (see table).

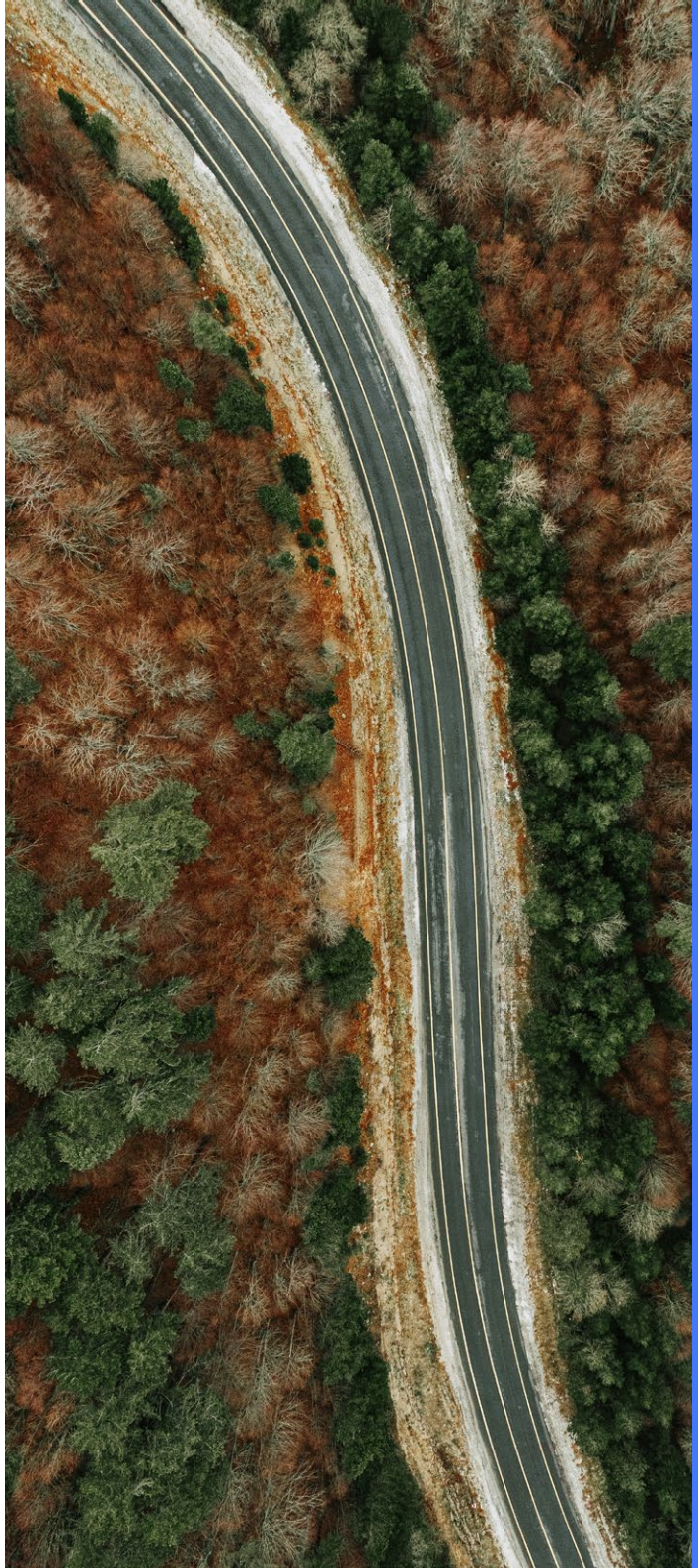
Regarding the energy required for the operation of the infrastructure, the toll operator will explore options for procuring residual green energy needed after the installation of on-site solar panels, during the construction phase.

Decarbonisation levers	Maturity	Capex/ Opex
Efficient dimmable lighting	●	Medium
Use of electric vehicles for maintenance and operation	●	High
Installation of PV solar panels to generate on-site energy	●	Medium
Steel and concrete mix design optimisation through supplier engagement	●	High

Design ✓

The asset is designed to be net zero from 2028. The approach taken is to minimise emissions as much as possible before resorting to offsets, which will be used only for the remaining residual emissions.

NB: currently, this commitment excludes emissions related to traffic, specifically those from the combustion of fossil fuels in internal combustion engine vehicles using the roads and tunnels. These indirect emissions are significant and may be addressed through specific measures, such as tariffs for low-carbon emission vehicles or carpooling, the installation of charging stations, or the reduction of speed limits.



4.5 Case study #4

Data centre

Please note that these case study materials have been prepared and authored by the case study subject.

GENERAL INFORMATION

Sector: Data centre

Investment type: *Majority equity*

Size: total critical power 120MW,

Location: France

CURRENT ASSET MATURITY

Emissions performance	✗
Decarbonisation plan	✗
Governance	✗
Disclosure	✗
Targets	✗
Ambition	✓

- Net Zero
- Aligned
- Aligning
- Committed to Aligning
- Lack of data / Not aligned

Asset description

The asset is a Tier 3 data centre located in France whose total critical power is 120MW. The site covers an area of 120m2. The major part of the computing capacity is used for storing services and with a small share of computing services.

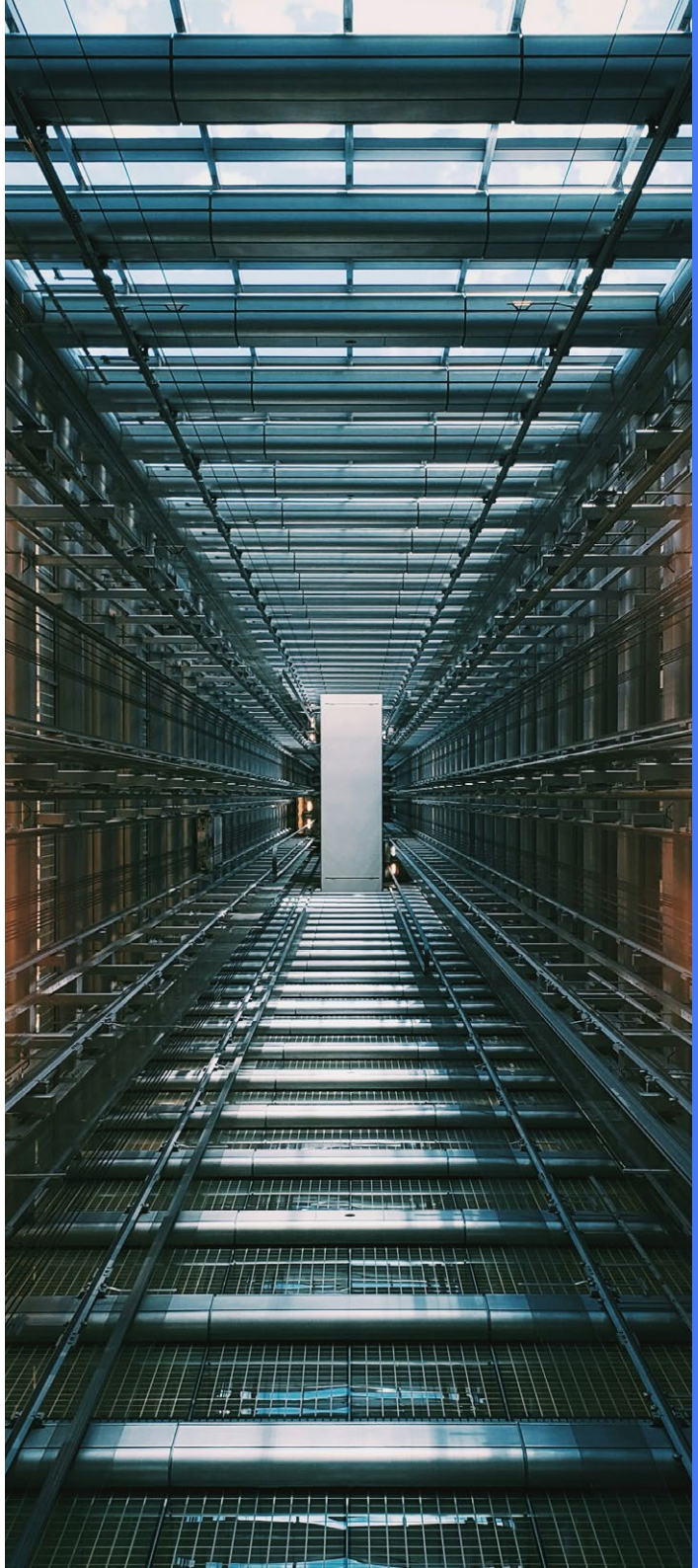
Asset's current category on maturity scale

The asset has only published long term ambitions of being net-zero by 2040. This enables the classification of the asset in the 'Committed to Aligning' category.

The asset has not yet met the criteria to move into the more advanced categories on the scale. To progress and be considered 'Aligning', it will need to disclose its scope 1, 2, and material scope 3 emissions, set short-term decarbonisation targets aligned with a science-based net zero pathway, and establish climate governance measures.

Investment context

The asset is majority-owned by the fund. The decision to set 1.5°C targets at the entity level was made when the deal was signed.



Ambition ✓	The asset has communicated an ambition of being neutral by 2040. This ambition includes the reduction of the asset's carbon emissions and the compensation of the residual emissions.
Targets ✗	*The asset has not published any short- or medium-term target.*
Disclosure ✗	*The asset has not disclosed its carbon emissions.*
Governance ✗	*The asset has not disclosed governance measures relating to an alignment strategy.*
Decarbonisation plan ✗	*The asset has not disclosed a decarbonisation plan.*
Emissions performance ✗	*The asset has not disclosed its past emissions.*
Additional comments	**KPIs to be measured** Data centres can monitor sustainability KPIs beyond those outlined in the NZIF to ensure a positive impact beyond carbon emissions. Data centres consume large quantities of energy and water to cool their installations. KPIs such as the **Power Usage Effectiveness (PUE)** that measures the energy use efficiency of the data centre, **Water Usage Effectiveness (WUE)** that measures the water use efficiency of the data centre, the **Energy Reuse Factor (ERF)** that measures the amount of energy reused outside the data centre as heat for example and the **Carbon Usage Effectiveness (CUE)** that measures the emissions of the data centre with an intensity metric can be monitored simultaneously to ensure a comprehensive view of the impact of the data centre activities.

Additional comments

KPIs to be measured [continued]

KPI calculation:

$$\text{PUE} = \frac{\text{Total energy consumed by the data centre}}{\text{Energy consumed by informatic equipment}}$$

$$\text{WUE} = \frac{\text{Total water consumed by the data centre}}{\text{Water consumed by informatic equipment}}$$

$$\text{ERF} = \frac{\text{Energy re-used}}{\text{Total energy consumed by the data centre}}$$

$$\text{CUE} = \frac{\text{Total carbon emissions emitted by the data centre}}{\text{Energy consumed by informatic equipment}}$$

These KPIs are closely related and highly dependent on one another. Typically, as energy use decreases to cool down the equipment, water use increases. In this case, the PUE lowers and improves while the WUE increases and deteriorates. Another example of the relationships between these KPIs is the correlation between the CUE and the ERF. As the ERF improves and more energy is reused outside the data centre, the carbon footprint of the data centre is reduced, improving CUE as well.

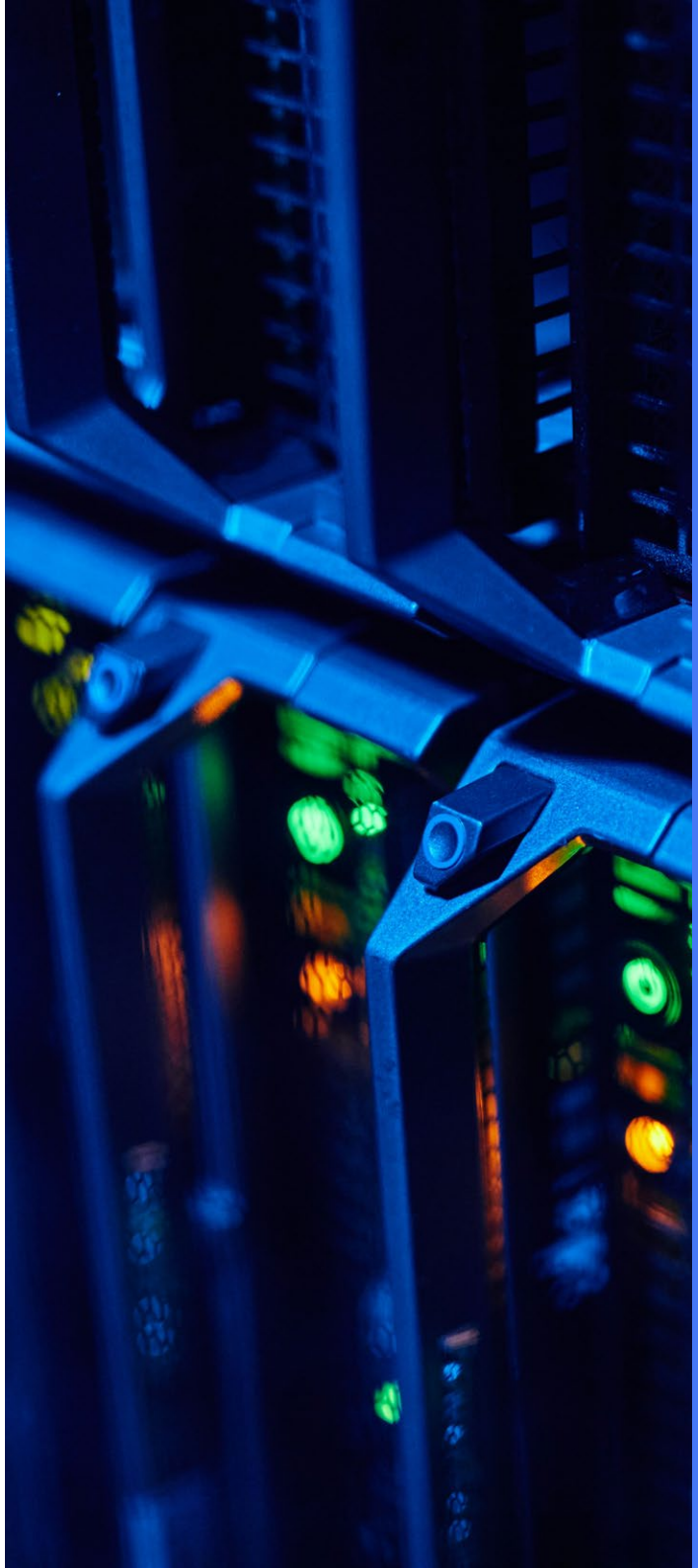
Decarbonisation levers

Several decarbonisation levers exist in the sector today. SBTi ICT guidance on decarbonisation trajectories for the data centres sector and for operators for scope 1 and 2 by 2030, highlights three levers: (i) the continued implementation of energy efficiency plans, (ii) a switch to renewable / low carbon electricity supply and (iii) the encouragement of carbon consciousness among end-users.

Three examples of **energy efficiency measures** include the reuse of heat, the development of lower energy cooling systems and the switch of backup power and generators. Because of their processes, data centres produce large amounts of heat that can be valorised for urban heating:

- In traditional data centres this production of energy is lost. While the **recovery of process heat** has great decarbonisation potential, it faces development challenges. It requires new technologies such as direct water cooling and management of heat production and demand around data centres. This solution would reduce the carbon footprint of data centres, as well as their water consumption.
- High energy consumption is one of the main challenges facing data centres today and cooling accounts for nearly half of the data centre power load, therefore data centres can focus on **developing more energy efficient cooling systems**. While increasing the water use of the data centre, the liquid cooling method seems to be the most efficient solution in comparison to traditional methods such as air-based cooling systems.

Other levers include **switching towards low carbon power supply**. This includes switching to renewable energy for operations and changing the storage solutions used in the data centre. To ensure continuity of service, data centres rely on energy storage, often powered by fossil fuels such as diesel. **Switching to hydrogen or electric battery storage** can help reduce emissions from data centres. This decarbonisation lever has a lower impact than the previous levers.



5 Appendices

Appendix 1: iCI – NZIF maturity scale correspondence

iCI	**Not started**	**Capturing Data**	**Preparing to Decarbonise**	**Aligning**	**Aligned to Net Zero**	
	Not started to **measure emissions or plan** how to **reduce** them	**Reporting emissions** data but currently no plan in place to reduce emissions	Planning to **reduce emissions** in line with an approach agreed with the GP	Committed to a decarbonisation **aligned to a transition pathway**	Delivering against a net zero plan and operations aligned to **science-based** target	
	• **Minimal or no** emissions data • **No decarbonisation plan** in place	• **Measuring** scope 1 and 2 emissions from operations, alongside **material** scope 3 emissions, and making data available to fund	• Decarbonisation **plan in place** but level of ambition **not aligned to net zero pathway**	• Committed to **near-term science-based target** aligned to a long-term net zero pathway	• Demonstrated YoY **emissions profile** in line with pathway	No correspondence
NZIF	**Lack of data / Not aligning / ...**		**Committed to Aligning**	**Aligning**	**Aligned**	**Net Zero**

Appendix 2: Target for infrastructure GPs and LPs applying to Asset Managers with meaningful influence (shareholding of 25% or more and board representation)

Fund vintage alignment milestones	Committed to Aligning	Aligning	Aligned	Net Zero
Funds launched before 2025	Not applicable	Not applicable	Not applicable	No later than 2050
Funds launched between 2025 and 2040	Not applicable	Not applicable	Within 5 years after deal close	No later than 2050
Funds launched after 2040	Not applicable	Not applicable	At investment	No later than 2050

Appendix 3: Engagement based on influence bands

Asset managers and LPs can have different levels of influence on their portfolio assets depending on the type of deal closed, leading to different levers to engage the assets to reach targets.

Tables 3 replicates and adapts the Influence Band approach defined in the NZIF Component for the Private Equity Industry and the Private Debt in the infrastructure sector[23, 24]. The tables cite possible engagement actions.

Table 3.1: Implementation of Influence Band for Infrastructure Equity

Asset classes	Band	Criteria	Influence Level	Possible engagement actions
DIRECT • GP infrastructure buyout fund • GP infrastructure growth fund • GP continuation fund	**1a**	> 50% of board voting seat appointments (usually the majority shareholder)	Strong (with assets)	Engagement directly with portfolio companies (PCs) is expected in pursuing alignment targets or portfolio reference targets

	1b	≤ 50% of board voting seat appointment (usually a significant minority shareholder)	Moderate (with assets)	• 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 net zero 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:
				  • Importance of net zero and business benefits for the company
				  • Action plan for implementation
				  • Estimates of cost and impact associated with the plan
				• 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 misalignment with the net zero commitment should be explicitly raised at the investment committee.

	1c	No board votes	Limited (with assets)	• Communicate with the largest co-owners/shareholders to share your net zero commitment and express your organisation's desire to have the portfolio company managed in alignment with net zero. • 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 misalignment with the net zero commitment should be explicitly raised at the investment committee.

[23] IIGCC, NZIF Component for the Private Debt Industry, May 2024.
[24] IIGCC, NZIF Component for the Private Equity Industry, May 2023.

<table>
<tr><th>Asset classes</th><th>Band</th><th>Criteria</th><th>Influence Level</th><th>Possible engagement actions</th></tr>
<tr><td rowspan="3">INDIRECT
LP infrastructure investment buyout, growth or continuation fund
LP infrastructure co-investment
GP infrastructure fund of funds
LP-led infrastructure secondaries</td><td>2a</td><td>Big-ticket investors[25] and/or first close investors</td><td>Strong (with GPs)</td><td rowspan="2">Universal actions after committing to net zero
Send a letter to all the following: the Chairman of the Board, the CEO, Investor Relations, and the sustainability 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.
Universal actions during fund selection
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.
Conditional actions during ownership
If you have a Limited Partner Advisory Committee (LPAC) seat:
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:
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 sustainability lead and relevant senior leader(s) at the GP to raise your concern and seek assurances the situation will be rectified.</td></tr>
<tr><td>2b</td><td>Investment made during fundraising not included in 2a; co-investment</td><td>Moderate (with GPs)</td></tr>
<tr><td>2c</td><td>Investment made through secondaries market</td><td>Limited (with GPs)</td><td>Universal actions after committing to net zero
Send a letter to all the following: the Chairman of the Board, the CEO, Investor Relations, the sustainability 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.
Universal actions during fund selection
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.
Conditional actions during ownership
If you have an LPAC seat you should:
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:
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 sustainability lead and relevant senior leader(s) at the GP to raise your concern and seek assurances the situation will be rectified.</td></tr>
</table>

[25] Investors with substantial capital commitments to a fund (typically 5 to 10% of the fund size).

Table 3.2: Implementation of Influence Band for Infrastructure Debt

Asset classes	Band	Criteria	Influence Level	Possible engagement actions
DIRECT • GP infrastructure corporate lending • GP infrastructure 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 observer seat and/or; Any form of significant equity holding in the deal	Strong (with PCs[26])	• 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. Best practice: climate-related 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 required alignment criteria, managers should (1) actively use selection as a tool to identify and/or avoid and/or select them; (2) use climate-related margin ratchets and /or covenants in related legal documentation; (3) ensure such investments have a clear path to net zero by exit from 2040. • Identify PE sponsors across debt portfolio. Engage with investment leads and/or sponsor's sustainability 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. • Notify all PE sponsors of Net Zero ambition and targets and introduce NZIF PE framework if they are not already committed to that. • Provide them with standardised data request for all deals going forward.
	1b	Significant minority holder of the debt tranche (have blocking or veto rights). Between 25-50% of the debt tranche	Moderate (with PCs)	
	1c	Small participant of tranche: less than 25%	Limited (with PCs)	
• GP infrastructure private structured credit • GP infrastructure fund/NAV financing	**1d**	Any % tranche holding where limited scope to negotiate directly with underlying company / collateral	Highly limited (with PCs)	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.
INDIRECT • GP infrastructure continuation fund across these strategies • GP infrastructure fund of funds • LP infrastructure investment across private credit (direct & indirect) • LP infrastructure co-investment • LP-led infrastructure secondaries	**2a**	Big-ticket investors[27] and/or first close investors	Strong (with GPs)	**Universal actions after committing to net zero** • Send a letter to all the following: the Chairman of the Board, the CEO, Investor Relations, and the sustainability 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. **Universal actions during fund selection** • 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. **Conditional actions** If you have an LPAC seat: • 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: • 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.
	2b	Investment made during fundraising not included in 2a; co-investment	Moderate (with GPs)	
	2c	Investment made through secondaries market	Limited (with GPs)	

[26] Influence level is relative within private credit.

[27] Investors with substantial capital commitments to a fund (typically 5 to 10% of the fund size).

Appendix 4. Target Setting at portfolio level – a simplified model example

GENERAL INFORMATION ABOUT THE ASSET MANAGER

Number of Assets: 7

Size: 10 M$ AuM

Investment type: Debt

Localisation: Europe

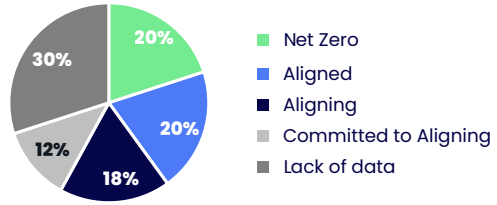
Investment strategy:
- The asset manager is looking to invest into assets engaged in their transition journey ("Brown-to-Green") as well as Climate Solutions directly contributing to the environmental transition
- The asset wants to set targets in line with the NZIF to demonstrate its commitment to its clients

1. Baseline modelling

The asset manager analyses its assets against the maturity scale criteria to set the baseline, expressed as % of AuM

	Sector	$ AuM	% AuM	Alignment assessment	In portfolio since
Asset A	**Energy utility**	$2.0bn	20%	**Aligned**	2019
Asset B	**Road**	$1.8bn	18%	**Aligning**	2020
Asset C	**Railway**	$1.2bn	12%	**Net zero**	2021
Asset D	**Solar energy**	$0.8bn	8%	**Net zero**	2022
Asset E	**Waste**	$1.2bn	12%	**Committed to aligning**	2023
Asset F	**Data centre**	$1.0bn	10%	**Lack of data**	2019
Asset G	**Data centre**	$2.0bn	20%	**Lack of data**	2021

Portfolio baseline in 2024 – % AuM



2. Hypotheses setting

The asset manager makes assumptions about the progress of each one of its assets and assessed their expected alignment level at the end of the investment period.

	Sector	$ AuM	Alignment assessment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Maturity
Asset A	**Energy utility**	$2.0bn	**Aligned**									x		2032
Asset B	**Road**	$1.8bn	**Aligning**				x							2027
Asset C	**Railway**	$1.2bn	**Net zero**								x			2031
Asset D	**Solar energy**	$0.8bn	**Net zero**											Beyond 2033
Asset E	**Waste**	$1.2bn	**Committed to aligning**											Beyond 2033
Asset F	**Data centre**	$1.0bn	**Lack of data**			x								2026
Asset G	**Data centre**	$2.0bn	**Lack of data**											Beyond 2033

$7.2 bn including:

- $2bn **"Net Zero"**
- $5.2bn **"Aligned"**

The asset manager makes assumptions about the new AuM and their progress, depending on sectors:

- a refocusing of the investment strategy on two sectors: energy and digital
- a growth of €2 billion in Assets under Management per year, with half allocated to each targeted sector
- a minimum of "Aligning" at investment for energy companies, which are considered more mature in their transition journey, with a two-year period before moving to "Aligned" status.
- a minimum of "Lack of data" at investment for digital companies, which are generally considered less mature in their transition journey, with a one-year period before moving to "Committed to Aligning", followed by one year before reaching "Aligning", and finally two years before "Aligned".
- from 2027 onwards, the asset manager expects the digital sector to be, on average, more mature and will invest in digital companies with at least "Committed to Aligning" status.

Sector	$ AuM	Alignment assessment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Energy	$0.5bn	**Aligning**										
Energy	$0.5bn	**Aligning**										
Energy	$0.5bn	**Aligning**										
Energy	$0.5bn	**Aligning**										
Energy	$0.5bn	**Aligning**										
Energy	$0.5bn	**Aligning**										
Digital	$0.5bn	**Lack of data**										
Digital	$0.5bn	**Lack of data**										
Digital	$0.5bn	**Lack of data**										
Digital	$0.5bn	**Committed to aligning**										
Digital	$0.5bn	**Committed to aligning**										
Digital	$0.5bn	**Committed to aligning**										

$6 bn including:

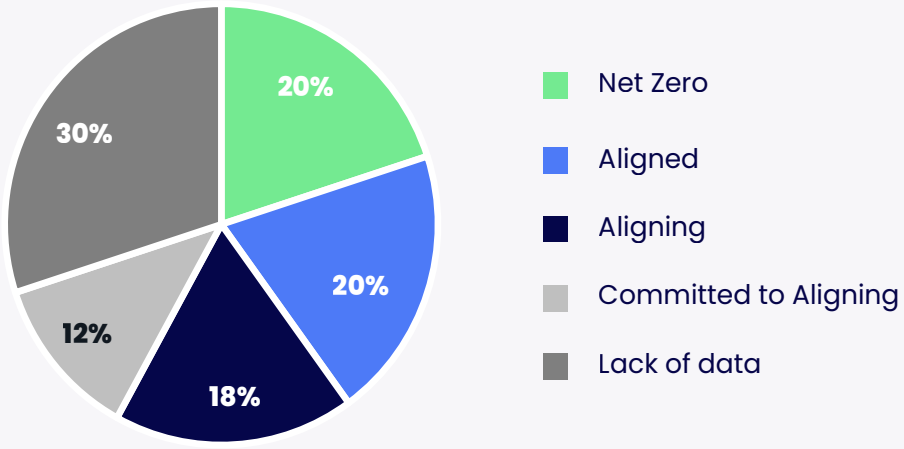
- $2.5bn **"Aligned"**
- $2.5bn **"Aligning"**
- $0.5bn **"Committed to Aligning"**

3. Target setting

The asset manager sets its interim Net Zero Target (5-year target), demonstrating progress for the "Achieving Net Zero, Aligned and Aligning" categories

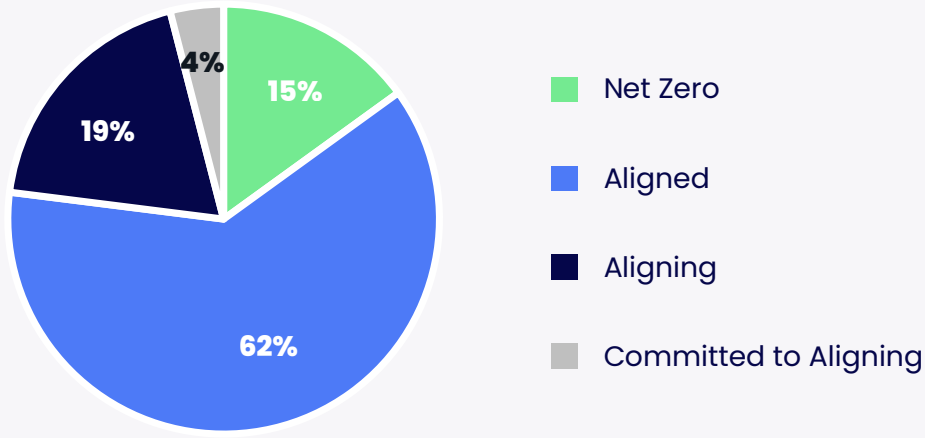
Portfolio ($10 bn)

Baseline in 2024 – % AuM



Portfolio ($13.2 bn)

Baseline in 2029 – % AuM



IIGCC