

Cadent | Gas Pension
Scheme.

TCFD Report.

1 April 2023 – 31 March 2024



Overview.

Trustee statement.

Chair’s statement on behalf of the Trustee on climate risks and opportunities

We recognise Environmental, Social and Governance (ESG) considerations as a material and dynamic source of risks and opportunities. Climate change is expected to affect our members, financial markets, our investments and society at unprecedented levels, and we recognise managing the associated risks and opportunities forms part of our fiduciary duty to members. We have taken steps to ensure climate considerations are fully integrated across our processes and procedures as part of our oversight framework to manage these risks and capture opportunities over time as the Scheme works to meet its objectives.

We demonstrate our efforts to manage climate-related risks, including decarbonisation, with aims to achieve our 2050 net-zero emissions ambition and interim target to 2030.

Over the year, we reviewed the 2030 target. However, given discussions around potential changes to the investment arrangements, it was agreed to retain the target. Employing climate modelling and climate-related data analysis, we capture climate-related risks and opportunities across various assets and across multiple timeframes, acting on behalf of our members. As part of this exercise, we assess stranded assets and physical risks, which involves evaluating the potential financial losses from devalued investments due to environmental changes and regulatory shifts, as well as the direct impacts of climate-related events on infrastructure and operations. This follows engagements with all our main investment managers to improve their climate-related capabilities across the portfolio. We are also making portfolio changes to better integrate climate-related investment opportunities.

Due to the nature of the Cadent business, climate change and related impacts on the energy market and UK regulation could materially impact the Scheme’s sponsoring employer and pose a key risk to the longer-term covenant. The impact of climate risks and opportunities on the employer covenant will depend on decisions around natural gas and hydrogen as sources of energy in the UK and the level of covenant reliance at any given time. This is being regularly monitored by the Scheme’s covenant adviser and helps to inform the Scheme’s long-term funding strategy.

However, given the Scheme’s relatively low-risk investment strategy and strong funding position, the potential impact is expected to be relatively modest.

In line with our 2023 objectives, our priorities for 2024 continue to build on our established ESG framework. We aim to further engage with our investment managers to enhance data quality and availability across climate metrics, and to deepen the integration of ESG-related considerations, including climate, into our credit portfolios. The Scheme’s journey plan will be updated this year, and the ESG and climate strategy will evolve accordingly.

Large UK occupational pension schemes are required by law to comply with the framework under the Pension Schemes Act 2021.

The TCFD Framework encompasses four key elements:

Governance: Governance around climate-related risks and opportunities

Strategy: Actual and potential impacts of climate-related risks and opportunities

Risk management: How the Trustee identifies, assesses and manages climate-related risks

Metrics and targets: Disclosure of key metrics and targets



Climate importance.

Why is climate change important for our members?

Planning for a different future

We know the future will look very different as a result of climate change. This is because climate change presents a systemic risk for the planet and therefore the global economy and financial system. Climate change therefore needs to be at the forefront of how we govern the Scheme.

This climate-altered future presents both risks and opportunities for the Scheme. Low-carbon transition risks result from decarbonisation action, whilst physical risks result from decarbonisation inaction. This means that whatever comes next, we will face climate-related risks which we need to appropriately manage.

Meanwhile, as the world continues to grapple with rising emissions, we recognise global changes are required to stabilise and reduce global emissions in order to keep global average temperature rises within safe limits. Surpassing these safe limits could mean unprecedented impacts on our global society and economy. This is the worst possible future that we want to avoid. Global collective action is required. The Trustee has set an ambitious decarbonisation target for the Scheme (aligned with the latest climate science thinking) to facilitate the pathway to net-zero – more on the [next page](#). The Trustee remains dedicated to the net-zero decarbonisation ambition set for the Scheme in 2023, aiming for achievement by 2050.

Global efforts to reduce carbon emissions and the potential wider impact of climate change will also bring about many opportunities. From renewables and low-carbon transport, to drought-resistant crops and flooding infrastructure, these are just some of the many opportunities that we should be increasingly aware of when making investment decisions. These opportunities are not only good for the planet but also can help to safeguard returns over the long term.

Climate science in a nutshell

Greenhouse gas (GHG) emissions arise from the burning of fossil fuels, e.g. for transport or power purposes. Emissions released into the atmosphere cause warming. As global average temperatures rise (versus pre-industrial times), the entire fabric of the climate system changes.

State of climate change

Global governments agreed the Paris Agreement to limit global average temperature rises to well below 2°C, with ambitions towards 1.5°C. Following the COP28 UN Climate Change Conference held in Dubai, December 2023, record commitments were made including agreement to transition away from fossil fuels. However, as ever, we need to see transparency and accountability for implementing these agreements.

The low-carbon transition

To decarbonise the global economy, policies, technologies and market preferences are expected to shift in favour of low-carbon solutions. This transition can either be orderly (a steady-state of decarbonisation efforts from today) or disorderly (delayed decarbonisation action resulting in delay and late efforts to meet the Paris Agreement goals).

Physical risks from climate change

Physical risks increase with rising emissions and global average temperatures. These include ongoing risks (such as shifting weather patterns and associated changes in resource availability) as well as more sudden risks (including natural disasters such as wildfires or flooding).

Key facts.

Our third TCFD report



This is the Scheme's third TCFD report.

Last year, the Trustee agreed on a net-zero ambition for 2050 and implemented Investment Management Agreement (IMA) amendments to specifically integrate ESG considerations and a decarbonisation target into the Buy & Maintain credit portfolios' guidelines. This year we analysed and reported the metrics as at 30 September 2023, increased our coverage of reporting on Scope 1, 2 & 3 emissions, assessed metrics to track the stranded asset and physical risks, set Stewardship Priorities including Climate Action and assessed our investments against this. In addition to this, we reviewed how the liquid credit managers assess and engage with the top CO₂ emitters. You can find further details about these activities in this report.

Going forward, we will continue to look at ways we can integrate ESG in our strategy and produce annual reporting to map our progress.

Our climate commitment

We are cognisant of scientists, governments and corporations collectively aiming for net-zero emissions by 2050.

By net zero, we mean that the level of emissions taken back out of the atmosphere (e.g. via trees absorbing the emissions from the atmosphere, or man-made technologies) are balanced out by those emissions emitted into the the atmosphere (e.g. via the operations of companies the Scheme invests in or their assets).

The Trustee has an aspiration to target net zero by 2050 to support the UK government's climate change ambitions. To help achieve this, the interim climate target remains at 38% decarbonisation* across the liquid credit portfolios by 2030, based on emissions as at 31 December 2021. The Scheme's liquid credit portfolios have achieved a significant reduction (c.35%) in carbon intensity and are therefore close to reaching the 2030 target. Further details on metrics and targets are included later in this report.

According to scientific guidance, these targets are in alignment with a 1.5°C scenario, which is the strongest temperature objective of the Paris Agreement, agreed by global governments in 2015.



Exploring portfolio opportunities

Climate change is not just a risk but also an opportunity.

Over the year, the Scheme capital was drawn to invest in renewable energy projects in a renewable infrastructure fund (the Fund). This has led to a net capacity addition of c.681 MW** of renewable energy globally through the Fund's investments in 36 renewables projects, of which CGPS owns a material proportion (c.20.7%** of the Fund).



* Scope 1 & 2 only. More detail in the [Appendix](#).

** Source: Manager, Isio calculations.

TCFD overview.

This section provides a high level summary of our climate report, and further detail is set out later in the report.

Governance

Governance around climate-related risks and opportunities

Trustee – We, the Trustee, hold ultimate responsibility for managing the Scheme. This includes setting the Scheme’s ESG strategy, for which climate change plays a vital role. The ESG policy was last updated in June 2023. To ensure the risks and opportunities presented by climate change are sufficiently identified, assessed and managed, the following climate governance framework has been implemented.

Integrated Risk Management Committee (IRMC) – The Trustee delegates the identification, assessment and management of climate-related risks to a subset of Trustee Directors, the IRMC. The IRMC meets at least four times a year, and ESG and climate considerations have been key priorities for the IRMC as the Trustee adopts a fully integrated framework.

Cadent Pensions Team (CPT) & investment consultant – The CPT and Scheme’s investment consultant provide climate-related advice to the IRMC, undertake day-to-day operations to manage the Scheme, and regularly engage with the Scheme’s investment managers.

Other advisers – The Scheme’s legal adviser, covenant adviser and actuary provide advice to the Trustee and the IRMC on climate-related risks and opportunities.

Investment managers – The Trustee has delegated responsibility to the Scheme’s investment managers for managing the Scheme’s assets in line with the agreed mandate.

Strategy

Actual and potential impacts of climate risks and opportunities

The IRMC, on behalf of the Trustee, has identified the key time horizons relevant to the Scheme (short – 3 years, medium – 8 years and long – 16 years). These have been determined by a blended view of the climate outlook and the Scheme’s membership demographics.

The IRMC has evaluated the potential risks and opportunities over these timeframes, including analysis of the Scheme’s position under three climate scenarios, two shown below*. This follows a Red, Amber, Green rating to illustrate the likely magnitude of the potential impacts from a climate transition or climate inaction on the Scheme’s funding position.

Scenario	Assets	Liabilities	Covenant
Orderly Transition	Orange	Red	Red
Hothouse	Orange	Green	Orange

* The directional impacts under a Disorderly Transition scenario are likely to be similar to an Orderly scenario, albeit the magnitude and timing is expected to be delayed and uncertain.

Note: The above analysis was included in the 2022 TCFD report, but since there have only been minor changes in asset allocation, the Trustee concluded this analysis remains relevant (ratings are unchanged).

Risk management

How the Scheme identifies, assesses and manages climate-related risks

The Trustee uses a risk management framework to ensure risks are managed holistically. This includes analysis of climate at the Scheme level and ensuring the Scheme's investment managers are carrying out their duty as fiduciary managers of the Scheme's assets.

Scheme level

The Trustee and IRMC regularly review their respective risk registers, which explicitly include climate risk, across:

- Covenant: sponsoring employer
- Investment: strategy
- Investment: asset and investment manager allocations
- Funding: funding level

In addition to the risk register, the Trustee and the IRMC receive regular advice from their advisers on climate considerations at least annually.

Underlying investment portfolios

The IRMC regularly reviews the Scheme's principal investment portfolios, and the investment consultant provides an ESG review, including climate, of all portfolios annually.

Metrics and targets

Disclosure of key metrics and targets

The IRMC, on behalf of the Trustee, has gathered, assessed and presented three climate metrics in the table below. Due to the nature of the Scheme's investment strategy, with a material allocation to illiquid assets and private markets, coverage of climate metrics is currently limited. The Trustee, CPT and the Scheme's investment consultant have continued to engage with the Scheme's investment managers to improve the availability of such data which is a key focus for the Trustee. Limited reporting of Scope 3 emissions, where available, is included in the body of the report.

Asset class	Total GHG emissions (Scope 1 & 2)*		Carbon footprint (Scope 1 & 2)		Implied temperature alignment	
	Metric*	Coverage	Metric*	Coverage	Metric*	Coverage
LDI Portfolio**	162,066	197%	71	197%	N/A	N/A
Illiquid Portfolio	1,817	56%	25	56%	1.5	50%
Liquid Credit Portfolio	74,384	51%	60	51%	3	54%

The IRMC, on behalf of the Trustee, has set a target to achieve a 38% reduction in carbon emissions (as measured by carbon footprint) by 2030 for its liquid credit portfolio, in line with the Science Based Targets initiative. The liquid credit portfolio accounts for 32% of the total portfolio. The Trustee will monitor and assess progress against this target at least annually. Additional detail on the target is included in the report.

Carbon footprint Scope 1 & Scope 2 (versus baseline)	Baseline* 31/12/2021	Current 30/09/2023	2030 Target
Liquid Credit Portfolio	92	60 (-35%)	57 (-38%)

Note: Detail on metrics and units can be found in the [Appendix](#).

*Scope 1 & 2 are direct and indirect emissions from company-owned or controlled sources and from purchased energy.

**LDI coverage is over 100% due to the derivatives exposure.

What's next?

Considering strategy and journey planning

We have been working through identifying climate-related risks and opportunities in the portfolio in conjunction with a wide range of other factors to ensure the Scheme's strategy and funding are robust. The Scheme's liquid credit mandates have experienced a significant reduction in carbon intensity and have largely achieved the 2030 target of 38% reduction in carbon intensity.

Improving data

We continue to engage with our investment managers to collaborate on improving the quality and availability of climate data. Current data coverage is poor and, to ensure sound investment decision making, we are working with our managers to understand what climate metrics can be measured and monitored in the future. We will continue to review the extent to which our monitoring framework will cover a spectrum of considerations across Environment, Social and Governance issues as different regulations and industry frameworks arise.

Understanding the risk to our sponsor

Our sponsoring employer is in an industry that will play a vital role in the success or failure of the low-carbon transition. We are continuously working with our sponsoring employer and advisers to better understand the future direction of the business and the potential risks and opportunities this may bring, and we will continue to monitor the possible impact of these on the covenant and how this could impact the Scheme's strategy. As the Scheme's funding level improves and reliance on the employer covenant reduces, the impact of climate risks and opportunities on the covenant will become less important to the Scheme.



TCFD Recommendations.

Governance

Describe the Trustee Board’s oversight of climate-related risks and opportunities

Climate-related beliefs

The Trustee maintains an ESG policy, available on request, that aims to ensure oversight of climate-related risks and opportunities. This document sets out the governance structure for ESG and climate considerations, which is summarised on the right. The Trustee believes climate considerations form part of a holistic integrated risk management framework, and have devoted significant time and resource to ensure the framework is adequate for proper oversight of climate-related risks and opportunities. The ESG policy contains the Trustee’s ESG beliefs and processes; an example belief is shown below.

Risk Management Belief III: Climate change poses significant investment risks which could become incrementally more severe over time. Management of climate change risks and opportunities will be considered, alongside other investment risks, at all stages of the investment journey.

Oversight responsibilities of the Trustee Board

Ultimate responsibility for ESG considerations (including climate-related) lies at the Board level, which looks after and discharges the Trustee’s governance. The Board meets at least four times a year, with ESG and climate change regular topics of discussion.

Responsibility for the identification, assessment and management of ESG-related risks is delegated to the IRMC. The IRMC members attended the two-day Trustee ESG training session in 2021. The IRMC meets at least four times a year, with ESG (including climate change) considerations a topic regularly discussed at meetings. The Scheme actuary, investment consultant, legal counsel and covenant adviser all support the IRMC, which provides regular updates to the Trustee at Board meetings.

The minutes of each IRMC meeting, decisions and recommendations are provided at each Board meeting.

Climate-related training

The Board ensures it remains informed on the latest investment topics. The IRMC and CPT attended training on stranded asset risk and physical risks, including ongoing ESG initiatives in March 2024. Further training for the Board is planned over 2024.

The sponsoring employer presented its climate strategy to the Trustee in 2022, and the Trustee subsequently took advice from its covenant adviser. This is reviewed annually.

Governance Structure for ESG considerations		
<u>Oversight – Trustee Board</u>		
Governance		
Approve Statement of Investment Principles, ESG policy (including ESG beliefs) and responsibilities.	Ultimate responsibility to ensure the identification, assessment and management of climate-related risks and opportunities.	
<u>Management – Integrated Risk Management Committee (IRMC)</u>		
Strategy, Risk Management & Monitoring		
Assess climate impact on assets, covenant, funding and members.	Monitor climate metrics and progress against targets.	Consider strategy implications and scenario analysis.
<u>Executive – Cadent Pensions Team & Trustee Advisers</u>		
Delivery		
Oversee delivery of climate workstreams including liaising with other advisers.	Gather and report climate metrics to the IRMC.	Provide strategy and risk-related advice to the IRMC.

Governance

Describe management’s role in assessing and managing climate-related risks and opportunities

Trustee

The Trustee and its advisers have their responsibilities clearly defined in a Climate Delegation Proposal, adopted in 2022 and reviewed in 2023. The advisers delivered governance-related advice through formal meetings. This provided opportunity for the Trustee to consider, discuss, and where it was appropriate, challenge the information provided.

Cadent Pensions Team (CPT) and external advisers

The day-to-day oversight of the underlying portfolio managers and the extent to which they manage climate risks and opportunities is undertaken by the CPT with support from the Scheme’s advisers. The CPT and the investment consultant provide extensive monitoring reports to the IRMC on a quarterly basis and attend the IRMC meetings. The CPT also attend training sessions provided to the Trustee.

The Scheme actuary, legal adviser and covenant adviser all support the CPT. The advisers undertake regular training to provide the necessary advice. The Trustee and IRMC reviews its investment consultant against strategic consultant objectives annually, and includes ESG and climate considerations.

From 2024, the Trustee will also assess how its actuarial and covenant advisers advise on climate-related risks and opportunities.

Investment managers

Given assets are managed by external investment managers, the ongoing assessment and management of climate-related risks and opportunities is largely delegated to them.

This is through a combination of pooled investment vehicles and segregated portfolios. Where the Trustee invests in pooled vehicles, extensive due diligence is carried out prior to investment, with explicit consideration given to how managers approach climate risk.

When investing via segregated portfolios, the Trustee has significantly higher ability to influence the management of ESG risks.

This may be reflected in the investment management agreements (IMAs) where appropriate, for example the Trustee is implementing a decarbonisation objective within the IMAs of the liquid credit mandates.

The investment consultant reviews all portfolios with respect to ESG integration on a regular basis, typically annually. The Trustee recognises that one size may not fit all and that different approaches to climate considerations may be appropriate, particularly when across different classes and investment styles.

	Roles and responsibility of advisers
Investment consultant	<p>Advises on the inclusion of climate considerations in the Scheme’s governance arrangements, investment strategy, risk management and monitoring, working with the IRMC, Trustee and the other advisers, as appropriate.</p> <p>Provides training and advising on climate-related risks and opportunities over the short, medium and long term at least annually.</p> <p>Assists the IRMC in the selection, calculation and monitoring of appropriate climate-related metrics and targets annually.</p>
Scheme actuary	<p>Helps the Trustee to assess climate-related risks and opportunities in relation to the Scheme’s funding position over the short, medium and long term and the implications for the Scheme’s funding and long-term objectives, including a review of the TCFD report.</p>
Legal adviser	<p>Provides training to the Trustee on climate-related legal matters, including ensuring the Trustee is aware of its climate-related statutory and fiduciary obligations, and a review of the TCFD report.</p>
Covenant adviser	<p>Carries out periodic reviews, at least annually, of the extent to which climate-related risks and opportunities might affect the Scheme’s sponsoring employer over the short, medium and long term, informed by section and sustainability expertise. This analysis is reported to the Trustee Board and/or IRMC and is used to help inform the Scheme’s longer-term strategy and complete the Trustee’s annual TCFD report.</p>

Strategy

Describe the climate-related risks and opportunities the Trustee has identified over the short, medium and long term

Timeframes of risks

There are a number of material climate-related risks and opportunities that the Trustee is aware of. The IRMC has identified the following timeframes, which have been determined by a blended view of the climate outlook, membership demographics, funding position, objective and ability to pay benefits. The Trustee will review the chosen timeframes at least triennially and assess the extent to which it believes the Scheme will have sufficient assets to meet expected future payments over its journey.

Opportunities

Opportunities will arise to support sustainable growth, development and investment across industries as part of a move towards net-zero economies. For example, companies that proactively adapt to the following risks or develop solutions that work to address these risks are likely to outperform in the long term relative to companies who are less able to adapt to these risks.

Risks

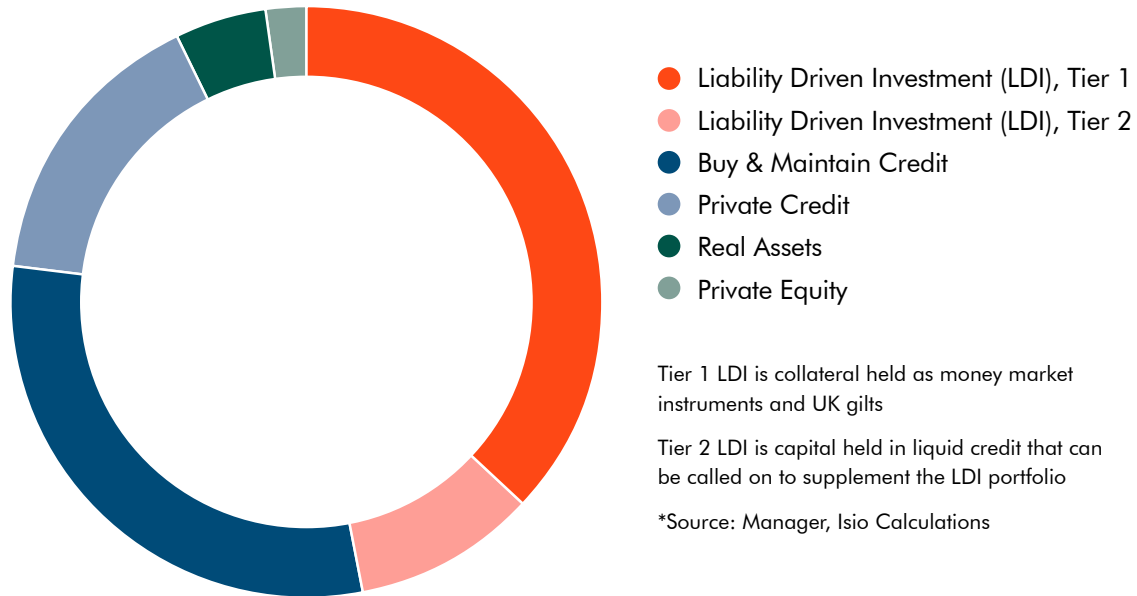
- Transition risks that arise from taking the necessary steps to transition to a low-carbon economy. These may arise from regulatory actions, technological developments, reputational damage or market forces.
- Physical risks that arise directly from changing climate conditions. These can be acute, episodic risks such as tornadoes, flooding, typhoons and wildfires, or chronic, ongoing risks such as rising sea levels, scarcity of freshwater and supply chain disruption.

Timeframe	Investment horizon		Climate horizon		Risks to assets	Risks to liabilities	Risks to sponsor
Short term (3 years)	Actuarial review cycle	Strategy implementation	UN PRI Inevitable Policy Response	Improvement in data quality	Transition risks such as carbon pricing and regulation	Changes to yields (as per assets) and longevity expectations due to rising physical risks or changing provision and quality of healthcare	Transition risks, particularly in scenarios where reliance on natural gas is reduced. Physical risks to sponsor assets and supply chain. More extreme weather patterns may also impact consumer demand
Medium term (8 years)	Scheme's Long-Term Objective		Interim 2030 targets	Alignment with UN sustainable development goals			
Long term (16 years)	Liability duration		Transition becomes increasingly difficult		Physical risks such as extreme weather events and sea-level rises		
Very long term (25 years)	Scheme run-off		Investors and organisations' net-zero targets	Physical risks may become dominant			

Investment opportunities

The Trustee has identified and implemented two areas for climate-related opportunities:

- As noted in the 2022 TCFD report, the Scheme committed to invest £205m in a diversified portfolio across wind, solar and biomass, and a small allocation to new renewables technologies. The renewables infrastructure fund has globally installed net 681 MW* of renewable energy capacity, of which CGPS owns a material proportion (c.20.7%* of the fund).
- Further, the Trustee reviewed its stranded asset and physical risks for the liquid credit mandates and further engaged with managers to understand how these risks are managed.



Over the year, no significant strategic changes were implemented. The Trustee is reviewing its long-term strategic arrangements. The Trustee has received an overview of the Taskforce on Nature-related Financial Disclosures (TNFD) and Taskforce on Social Factors (TSF) and in the next 12 months, with its investment consultant, will scrutinise the measures that investment managers are adopting in response to TNFD and TSF.

Liabilities

As well as changes to the value of investments and other economic variables, the Scheme’s actuary identified changes in how long members are expected to live and draw their pensions from the Scheme (‘longevity risk’) as a potentially material source of risks and opportunities to the funding level of the Scheme.

The actuary monitors the potential impacts of longevity on a regular basis and provided an assessment of longevity risk under different climate scenarios as part of the Scheme’s climate strategy review. The actuary will refresh this analysis each time the Trustee undertakes climate scenario analysis. The Trustee has access to investments that can help mitigate or reduce longevity risk, and will on occasion assess the potential implications of these investments with advice from the Scheme actuary and investment consultant.

Transition

Healthier lifestyles and slightly milder winters could outstrip the impact of any additional deaths from other aspects of climate change, leading to members generally living longer than expected.

Hot house

Economic pressures on the healthcare system and additional deaths from other adverse effects of climate change may lead to slower improvements in life expectancies.

Sponsor

When assessing and monitoring the employer covenant, the covenant adviser carries out a qualitative assessment of the impact of climate risks and opportunities (physical and transition) on covenant strength over the short, medium and long term with reference to different climate scenarios (defined on [page 12](#)). This is used to inform views of the resilience of the Scheme's investment and funding strategy.

As the Scheme's funding level increases over time, its dependency on the covenant to underwrite risk decreases. The Scheme's funding level means its reliance on the covenant is currently low, but some reliance is expected to remain over the short to medium term.

The sponsor's exposure to risks and opportunities is likely to vary depending on what scenario we consider. Given the nature of the business, the most material risk identified, which the Scheme's covenant adviser will continue to

monitor, is the role of carbon-based gas in the UK's future energy mix, particularly in relation to domestic heating. If policy retains natural gas as a key source of energy for the UK and encourages the use of hydrogen as an alternative energy source, there is some upside opportunity for the sponsor in a transition scenario. However, a transition away from gas that doesn't favour hydrogen is a material risk to the longer-term operations of the sponsor and could have shorter-term impacts, for example on regulatory frameworks and financing.

A summary of climate-related risks and opportunities is provided below. The risks are consistent with those identified by the sponsor (per its latest annual report and climate change adaptation report) and the Trustee notes there are sponsor risk-management procedures in place to mitigate the impact of these risks. The Scheme's covenant adviser independently monitors these risks and reports formally at least annually with regular dialogue throughout the year with the Trustee and the sponsor.

Transition scenario

Climate-related risks and opportunities	Covenant implications
<p>Transition risks under an orderly and disorderly transition scenario (short, medium and long term with expected impact increasing over time)</p> <ul style="list-style-type: none">Political/regulatory policy away from gas to other energy sources (not hydrogen)Cost of transition to net zero, including regulatory approach to funding and access to capitalSuccessful delivery of transition strategy with reputation risk if don't achieve targetsCarbon taxes on sponsor emissions	<ul style="list-style-type: none">In extremis, a move away from gas (and not towards hydrogen) could materially impact operations, reducing usage of network assets and in the long term gives rise to the risk of stranded assets (noting regulatory protections and policy to date indicating slow managed transition)The financial burden of transition costs could be minimised if an agreement is reached to allow these costs to be passed through to consumers via the pricing mechanism set by Ofgem. This could potentially result in some financial benefits for the CompanyWhilst risks would be similar in an orderly and disorderly transition, the size of the impact would likely be more significant in a disorderly transition scenario, given the required speed to execute change
<p>Opportunities (medium to long term)</p> <ul style="list-style-type: none">Government policy supports hydrogen and/or gas as a key future source of energy	<ul style="list-style-type: none">There may be significant investment required, but if costs are agreed with Ofgem, there is some upside potential, including investment in the sponsor, regulatory asset value (RAV) growth and extending the economic life of assetsImproved long-term prospects for the sponsor
<p>Physical risks (medium to long term)</p> <ul style="list-style-type: none">More severe winters and hotter summers leading to surges in energy demandsNetwork damage from flooding, erosion, wildfires, etc.More extreme weather impacting the supply chain	<ul style="list-style-type: none">Reputation impact if operations cannot meet demand or public safety impactedIncreased cost, though the cost could be passed through, subject to Ofgem agreement and impact on network reliability

Hothouse scenario

Strategy

Describe the impact of climate-related risks and opportunities on the Scheme’s investment and funding strategies

Materiality of climate-related risks and opportunities

The IRMC, in conjunction with its advisers, has used a red, amber, green rating scale to illustrate the likely magnitude of the potential impacts of climate-related risks and opportunities across the different time horizons agreed. There have been no changes to the ratings over the year.

Assets – The Scheme’s assets are diversified and are expected to react differently to various climate scenarios.

Liabilities – The liabilities are well hedged and significantly protected from adverse changes to yields and inflation. Adverse changes in longevity assumptions are a material risk.

Covenant – Due to the nature of the Sponsor’s business area, it is expected to be highly exposed to an energy transition over the longer term.

		Index-linked Gilts	Public Credit	Private Credit	Real Assets	Liabilities	Sponsor
Transitional (orderly scenario*)	Short term (3)	Low	Low	Low	Average	High	Low
	Medium term (8)	Low	Average	Average	Average	High	Average
	Long term (16)	Low	Average	Average	Average	High	High
Physical (hothouse scenario)	Short term (3)	Low	Low	Low	Low	Low	Low
	Medium term (8)	Low	Average	Average	Average	Low	Average
	Long term (16)	Low	Average	High	High	Low	Average
Expected allocation change		↑	↔	↓	↓		

Low
 Average
 High

Expected allocation change reflects the expected change in asset mix as the Scheme’s funding position improves and membership matures. By 2030 the Trustee expects to hold very few private credit or real assets c.0%.

* The directional impacts under a Disorderly Transition scenario are likely to be similar to an Orderly Transition scenario, albeit the magnitude and timing is expected to be delayed and uncertain.

Note: Whilst these colour-coded ratings are based on scenario analysis results, there are also additional qualitative overlays that have resulted in the final matrix.

Strategy

Describe the resilience of the Scheme's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

The IRMC has assessed the potential impacts on the Scheme's assets and liabilities under three different climate scenarios defined by the Network for Greening the Financial System (NGFS), interpreted and modelled by Moody's Analytics, and explicitly referenced in the Department for Work and Pensions TCFD guidance. The IRMC, in conjunction with its investment consultant, chose these scenarios to provide a balanced set of hypothetical constructs with which to analyse the potential risks and opportunities across the Scheme's portfolios. We live in a world of uncertainty and these scenarios help to examine different possible outcomes in terms of emissions, global average temperatures, and associated transition and physical risks, for example. In this section of the report, the results of the analysis are shown.

Orderly Transition

- Paris-aligned scenario – eventual temperature increase kept below 2°C through immediate and constant reduction in emissions
- Policy is implemented quickly and uniformly
- Easy and cheap availability of offsetting technology, which leads to relatively low mitigation costs
- Worst effects of physical damage are avoided

Disorderly Transition

- Paris-aligned scenario – eventual temperature increase kept below 2°C
- Policy implementation and emissions reduction is delayed and as a result has to be implemented within a short timeframe, requiring rapid GHG reductions across the economy
- Offsetting technology is less widely available and more expensive, which leads to higher mitigation costs
- Physical damage is more material but worst effects avoided

Hothouse

- Emissions continue to rise during the 21st century and no carbon transition occurs
- No abatement costs as there is no transition
- Physical damage is significant due to a global mean temperature rise of just over 5°C in 2100 (or a c.3.8°C rise over the next 50 years)

Governments are likely to pursue a range of policies, such as carbon taxes or carbon allowances, as temperatures increase under each scenario. These measures will differ across regions and when such measures are adopted. The NGFS scenarios reflect this by varying emissions price trajectories; this also includes the impact of new technologies and the extent to which they are deployed.

Limitations

The Trustee acknowledges the constraints in the scenario analysis results due to inherent limitations and assumptions in the climate model. The Trustee therefore uses the scenario analysis for comparative purposes rather than analysing the absolute magnitude of the results. Further detail can be found in the [Appendix](#).

Note: Isio's climate model has been developed in partnership with Moody Analytics and based on NGFS scenarios. Commentary is Isio's interpretation of results.

The below Scenario Analysis was included in the 2022 TCFD report, but since there have only been minor changes in asset allocation (<3% per asset class) and the strategic allocations remain unimpacted, the Trustee concluded this analysis still remains relevant.

Potential impacts on assets and funding level relative to Baseline scenario

Under each climate scenario, the Scheme’s assets are expected to perform worse compared to Baseline – where there are no expected physical or transitional costs from climate change. The Scheme’s deficit at the time of modelling was £440m on the Long-Term Objective basis.

Over the short to medium term, the expected impact on the Scheme’s funding position is expected to be relatively modest relative to wider investment risks, and it is not expected additional cash funding would be required from the sponsor.

Due to the complexity of the model, the Scheme’s asset allocation was assumed to remain static; however, the Trustee analysed asset class-specific impacts (see next page) to understand how the portfolio’s climate risk might evolve. The IRMC recognises this modelling is based on assumptions, and more detail is provided in the Appendix. The Trustee has discussed how modelling is likely to underestimate the potential impacts of high physical damages over the longer term and expects to increase the magnitude of these impacts in future iterations.

Scenario	Expected annual asset return drag compared to Baseline scenario (1 = 0.01%)			Expected change in real funding position (excluding longevity) compared to Baseline scenario		
	8 years	16 years	25 years	8 years	16 years	25 years
Orderly Transition	-4	-4	-6	-£10m	-£20m	-£38m
Disorderly Transition	-4	-2	-11	-£9m	-£22m	-£70m
Hothouse world	N/A	-8	-14	-£20m	-£43m	-£88m

Source: Investment consultant.

Note: Additional detail on scenario analysis can be found in the Appendix.

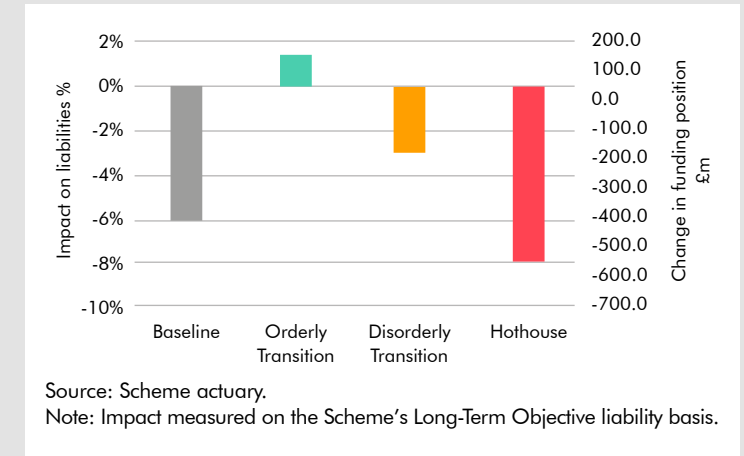
Data not provided for Hothouse at 8 years, given the costs of this scenario are expected to materialise over long time horizons.

Potential impacts on present value of the Scheme liabilities (due to changes in member longevity)

The Trustee recognises that potential changes to how long members are expected to live on average pose a material risk to the Scheme’s funding level. The extent to which longevity may benefit or be detrimental to the funding level is largely dependent on the identified scenario. The Trustee receives advice from its actuary and investment consultant when considering whether to accept or manage longevity risk.

The below analysis was included in the 2022 TCFD report which showed an orderly transition may result in increased liabilities as members may be expected to live longer.

The scenario analysis is expected to be updated in Q1 2025; however, the Trustee is comfortable the existing analysis remains appropriate.

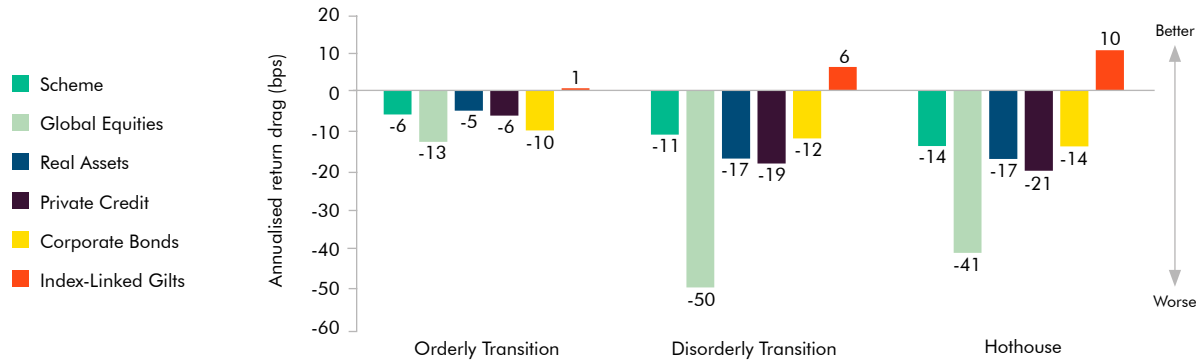


Source: Scheme actuary.

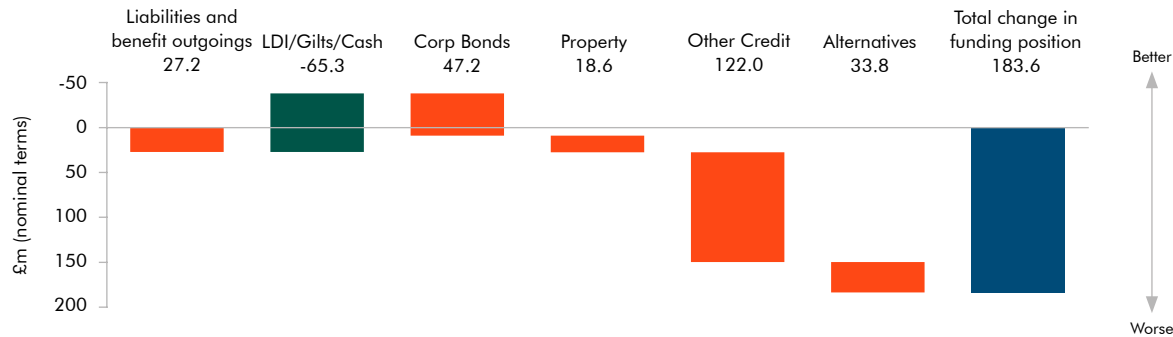
Note: Impact measured on the Scheme’s Long-Term Objective liability basis.

Climate scenario analysis: asset classes

Return drag relative to Baseline scenario - 25 years



Reduction in median funding position for Hothouse relative to Baseline at year 25



Source: Investment consultant.

Note: Additional detail on scenario analysis can be found in the [Appendix](#).

The IRMC considered the isolated impact on different assets to understand which allocations might contribute to the Scheme's climate risk and how this might evolve over time. This analysis, also featured in the previous TCFD report, encompasses all asset classes in the Scheme's portfolio.

On a relative basis, equities are expected to experience first-wave impacts from climate change. In the near term this will be dominated by the risk of a transition to a low-carbon economy, creating a drag on markets. However, as the Scheme has no allocation to public equities, this risk is reduced for the Scheme.

Private credit, on an absolute basis, is exposed to a disproportionate level of risk. As the Scheme's funding level improves, the allocation to private credit is expected to decrease.

The Trustee has adopted a hedging strategy that targets a 94% hedge of interest and inflation rate exposure and therefore the Scheme's Liability Driven Investment (LDI) portfolio is expected to largely mirror any potential changes in the Scheme's liabilities from these variables.

Sponsoring employer

The Trustee's covenant adviser continues to monitor climate-related risks and opportunities for the Scheme's sponsor to inform the Scheme's investment and funding strategy. The timing of any impact from policy decisions is being considered in relation to long-term funding targets so that the reliance on the covenant should continue to reduce as the covenant outlook becomes more uncertain.

The most material risk arises from a transition scenario and relates to Government policy decision around the future of energy. If the UK transitions to significant use of and distribution of hydrogen, there is upside opportunity for the sponsor. However, a transition away from gas that doesn't favour hydrogen is a material risk to the longer-term operations of the sponsor. More information is available on [page 14](#), however, due to low reliance on the sponsor, this risk is not expected to materially impact members' pensions.

Risk management

Describe the Trustee's processes for identifying, assessing and managing climate-related risks

Identification, assessment and management of climate-related risks

On this page we set out the approach to climate-related risk management; identifying the most material risks for the Scheme and developing controls and processes to manage such risks. This analysis remains relevant from the last year's TCFD report.

Scheme level

The Trustee and IRMC review the climate-related considerations in their risk registers annually; the details of this are noted later in this section. The IRMC received advice from the Scheme's advisers covering the identification, assessment and management of climate-related risks across the following subjects: investment, actuarial, legal and covenant. The advice from the Scheme's advisers will, where relevant, be considered across transitional and physical risks and opportunities.

The IRMC has gathered, calculated and reported its third iteration of climate metrics to help identify and measure climate-related risks. This includes the addition of Scope 3 emissions and data quality (the extent to which Scope 1 & 2 carbon emissions data is verified, reported, estimated or unavailable). These metrics are shown in the [Metrics & Targets section](#) of this report.

The Trustee undertakes climate scenario analysis on an ad hoc basis (at least triennial). This report includes the latest set of results (also included in the 2022 TCFD report, given the strategy remains broadly similar). The scenario analysis results and Scheme's expected direction of travel are consistent with the Trustee's risk appetite over time.

The Scheme's advisers will provide advice to the Trustee on any emerging climate risks. This year, the Trustee, with advice from its investment consultant, assessed stranded assets risks and physical risks in the liquid credit portfolio, which involves evaluating the potential financial losses from devalued investments due to environmental changes and regulatory shifts, as well as direct impacts of climate-related events on infrastructure and operations.

Covenant

Climate-related risks are fundamental to the consideration of the sponsoring employer, particularly in the medium to longer term, given the nature of the employer's business. Ensuring sufficient oversight of employer-related risks is a key priority for the Trustee. However, exposure to climate risks is somewhat mitigated by the Scheme's reduced reliance on covenant resulting from its strong funding position, Scheme protections in place and relatively low-risk investment strategy.

As part of its covenant assessments, the Scheme's covenant adviser identifies climate risks and considers the materiality and timing of these risks relative to the Scheme's journey plan to inform Scheme strategy. The covenant adviser monitors risk using regulatory and policy announcements and company information, reporting formally at least annually, with regular dialogue throughout the year with the Trustee and the sponsoring employer.

Actuarial

The Scheme's actuary advises the Trustee on the identification, assessment and management of climate-related risks that are material to the Scheme's liabilities.

For instance, the scenario analysis undertaken in March 2022 (mentioned earlier in this report) provides the Trustee with a holistic overview of the ways in which climate change may affect the Scheme's funding position. This included consideration of the impact on the Scheme's liabilities of changes in future yields and inflation, as well as changes in expectations of how long members may live on average.

Investment managers

Whilst the Trustee retains overall responsibility, the Trustee delegates day-to-day management of the investments to investment managers, and the Trustee expects the managers to be identifying, assessing and managing climate-related risks on an ongoing basis on the Trustee's behalf. The IRMC meets with the Scheme's principal managers on an ongoing basis, and the Trustee's investment consultant holds a quarterly review with each manager.

The IRMC receives an annual report from its investment consultant that assesses each of the underlying managers with regard to the level of ESG integration for each portfolio. This assessment has a strong focus on climate-related risks. Example criteria for this assessment are shown on the right.

Each portfolio is assessed across five key areas: investment approach, risk management, voting & engagement, reporting and collaboration. At a high level, all of the Scheme's managers were rated as either amber or green, with explicit engagements targeted at portfolios with an Amber rating. The IRMC expect its investment consultant to evolve and adapt its assessment as climate-related considerations develop.

The IRMC has expanded this assessment to consider each portfolio explicitly with regard to managers' climate-related capabilities across the five key assessment categories.

In March 2024, the IRMC reviewed how the liquid credit managers assess and engage with the top CO₂ emitters and the potential impacts of physical risks on these portfolios.

Assessment category	Example evaluation criteria
Investment approach	Are the fund's climate objectives quantifiable with interim targets set?
Risk management	Does the manager have a dedicated individual within the ESG team with responsibility for oversight of the climate change policy?
Voting & engagement	Can the manager provide a case-study example demonstrating effective engagement on climate-related issues?
Reporting	Does the manager undertake forward-looking climate scenario modelling and is this published in quarterly reports?
Collaboration	Is the manager a member of the UN Net Zero Asset Owner Alliance? If not, is there a valid reason why?

Stewardship activity

The Trustee recognises the importance of stewardship in the role asset owners have in relation to driving change and aiding the transition to a lower-carbon economy.

The Trustee delegates stewardship responsibilities (voting & engagement) to its investment managers, and the managers should engage and vote on all issues, including climate, in the best interests of the Scheme's members. Notable stewardship activity is published in the Scheme's annual Implementation Statement. Voting & engagement is a specific area of focus of the investment consultant when assessing managers, and these results are reported to the Trustee annually.

The Trustee set its stewardship priorities in June 2023, based on the four UN sustainable development goals (SDGs) it believes best align to its investment beliefs – UN SDG 7 Affordable and Clean Energy, UN SDG 8 Decent Work and Economic Growth, UN SDG 9 Industry, Innovations and Infrastructure and UN SDG 13 Climate Action. Climate Action is the current focus, and the Trustee has also assessed the extent to which managers are aligned and rated managers green, amber or red accordingly. The Trustee will report on this in its Implementation Statement.

Risk management

Describe how processes for identifying, assessing and managing climate-related risks are integrated into the Trustee’s overall risk management

Risk management framework

Climate-related risks and opportunities are fully considered and integrated into the investment process by the IRMC. Here we outline some of the material climate-related risks that the Trustee considers within the risk management framework.

Both the Trustee and IRMC have climate-related considerations included in their respective risk registers (see right). To develop and maintain these processes, the risk registers are reviewed annually and were refined further in 2022 and 2023. The risk registers include actions the Trustee has taken in mitigating climate-related risks, such as manager monitoring and regular reviews with the sponsoring employer.

In 2023, the IRMC and the Scheme’s advisers built a sophisticated IRM (integrated risk management) dashboard to further enhance its risk management processes with a set of metrics and KPIs that are assessed regularly.

This includes climate considerations (to the extent the Trustee considers climate a material risk versus other considerations) and, given the industry in which the sponsoring employer operates, will explicitly focus on the strength of the sponsor.

	Potential issues:	Mitigating actions:
Covenant: Sponsoring employer	<ul style="list-style-type: none"> Worsening covenant position associated with the impacts of climate change (transitional and physical). Transition away from gas for future energy provision in the UK. Damage to reputation and/or legal challenge due to poor or inconsistent climate practices. 	<ul style="list-style-type: none"> Covenant formally considered by covenant adviser on an ongoing basis. Monitor Government energy consultations, regulatory environment and broader commentary around the future of energy. Regular review with sponsoring employer. Scheme protections would take effect in a downside scenario.
Investment: Strategy	<ul style="list-style-type: none"> Asset mis-pricing due to the impacts of climate change and the transition to low-carbon economy and/or physical impacts of climate change. 	<ul style="list-style-type: none"> Professional advice from investment consultant. Continued monitoring of investments against the Trustee’s ESG policy and climate target(s), and regular (at least triennial) climate scenario modelling. Ongoing Trustee training.
Investment: Asset and investment manager allocations	<ul style="list-style-type: none"> Investment managers do not adequately integrate financially material ESG factors (including climate risks) into their risk management framework. Investment managers do not adopt effective stewardship, e.g. to improve management of climate factors. Investment managers do not consider potential investment opportunities. 	<ul style="list-style-type: none"> Investment consultant monitors investment managers and reports to the Trustee. This may include, but is not limited to, monitoring managers and asset classes on the risks and opportunities that arise from climate change and how these are managed on an ongoing basis.
Funding: Funding level	<ul style="list-style-type: none"> Funding target is increased at future actuarial valuations due to climate-related reasons. Cost of longevity insurance increases due to climate change. 	<ul style="list-style-type: none"> Actuary, sponsoring employer, investment consultant and covenant adviser all involved in ongoing funding level assessment and IRM. Training and advice on potential funding impact using climate scenario analysis. Allowance for a prudent margin in the assessment of life expectancies for funding purposes and regular funding updates from the Scheme actuary.

Metrics & targets

Disclose the metrics used by the Trustee to assess climate-related risks and opportunities in line with its strategy and risk management process

Metrics

The Trustee monitored four climate-related metrics over the year. The choice of metrics was determined by their potential to add value to the Trustee's decision-making processes and availability of data. The investment consultant gathered this data, as far as able*, from the investment managers on behalf of the IRMC. The IRMC assesses these metrics at least annually to monitor climate-related risks, and as a tool to engage with its underlying investment managers. The IRMC monitors a selection of the metrics quarterly through a risk dashboard.

Greenhouse gas (GHG) emissions are a key factor to consider in the context of climate change. There are a number of economic activities that result in the release of GHGs into the atmosphere, primarily as a result of burning fossil fuels for energy, travel and manufacturing. These GHGs are heat-trapping in nature and result in a 'greenhouse effect' where the Sun's energy is trapped, causing the Earth to warm. Reducing the amount of GHGs within the atmosphere is important for controlling global warming and the corresponding physical impacts of climate change.

* As far as able represents the extent to which the Trustee, with aid from its investment consultant, has been able to obtain these metrics within reasonable and proportionate time and cost.

- **Absolute emissions metric: Total greenhouse gas emissions (Scope 1 & 2 and Scope 3)**
Total amount of GHG emissions emitted by the underlying portfolio companies, attributed to the investor based on the total investment in each company.
- **Emissions intensity-based metric: Carbon footprint (Scope 1 & 2 and Scope 3)**
Carbon footprint is an intensity measure of emissions that assesses the level of GHG emissions figure arising from £1 million investment in a company.
- **Portfolio alignment metric: Implied temperature alignment**
Measures the temperature pathway the portfolio aligns to, expressed as a projected increase in global average temperatures this century (vs pre-industrial times) and reported in °C.
- **Additional climate change metric: Data quality**
The proportion of the portfolio for which Scope 1 & 2 emissions are verified, reported, estimated or unavailable.

Metrics & targets

Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks

Gathering the metrics

The Trustee has gathered climate metrics for its portfolio as at 31 December 2021 (the baseline) and 30 September 2023. This section shows the latest metrics gathered for the Scheme's investment portfolios as well as an aggregated view for the liquid and illiquid portions of the portfolio. The Trustee reports, where available, on Scope 1 and Scope 2 emissions (the direct and indirect emissions from company-owned or controlled sources and from purchased energy) and, separately, Scope 3 emissions (emissions associated with the value chain). However, the Trustee notes that the reporting of Scope 3 emissions relies heavily on estimates and is less confident in the accuracy of these figures. The Trustee also measures, monitors and reports a data quality metric to provide additional information on the underlying carbon data sources, and implied temperature rise, to provide a forward-looking assessment of its mandates. The Trustee, in conjunction with its investment consultant, has not made any additional assumptions beyond the data provided from managers and is investigating alternative sources (such as external data providers) to fill various data gaps.



Data coverage

For some asset classes, such as private credit, data availability is currently poor and there is a material proportion of the portfolio without any data (c.19%). Following engagements with the Scheme's LDI manager, the manager was able to provide estimated carbon data for its gilt holdings (within the LDI mandate). This has significantly increased the Scheme's carbon data coverage. Poor data coverage and low data quality remains a material hurdle to the Trustee in the identification and assessment of climate-related risks. The IRMC and Scheme's investment consultant have pressed the Scheme's principal investment managers to improve the availability of climate metrics. Further, the Scheme's investment consultant leads a workstream with the UK Investment Consultants Sustainability Working Group (ICSWG) to help focus investment managers' efforts on a list of essential ESG metrics and improve industry-wide data coverage and quality. Whilst data availability remains low, it has significantly improved over the last two years and now covers c.51% of Scheme assets as at 30 September 2023. Data coverage and quality in private markets is gradually improving. Increasing the allocation to some assets, such as ABS, may worsen visibility over the Scheme's carbon emissions given the nature of these assets. The Trustee and the investment consultant continue to engage with the investment managers (including ABS) to collaborate on improving the quality and availability of climate data.



Metrics & targets

Disclosure of Scope 1, Scope 2 and Scope 3 greenhouse gas (GHG) emissions (as at 30 September 2023)

Manager	Portfolio allocation %	Total GHG emissions Scope 1 & 2 (tGHG of CO ₂ e)		Carbon footprint Scope 1 & 2 (tGHG/£1m)		Data Quality (Scope 1 & 2)			
		Metric	Coverage	Metric	Coverage	Verified	Reported	Estimated	Unavailable
LDI portfolio*	26%	162,066	197%	71	197%	-	-	99%	1%
Illiquid portfolios	13%	1,817	56%	25	56%	-	100%	-	-
Liquid credit portfolios	32%	74,384	51%	60	51%	11%	31%	5%	54%
Remaining portfolios with no coverage	28%								

Manager	Portfolio allocation %	Total GHG emissions Scope 3 (tGHG of CO ₂ e)		Carbon footprint Scope 3 (tGHG/£1m)		Implied temperature alignment (°C)	
		Metric	Coverage	Metric	Coverage	Metric	Coverage
LDI portfolio	26%	-	0%	-	0%	-	0%
Illiquid portfolios	13%	58,478	54%	1,216	54%	1.5	50%
Liquid credit portfolios	32%	94,827	27%	76	27%	2.3	54%
Remaining portfolios with no coverage	28%						

Source and notes in the [Appendix](#).

*LDI coverage is over 100% due to the derivatives exposure.

Metrics & targets

Describe the targets used by the Trustee to manage climate-related risks and opportunities and performance against targets

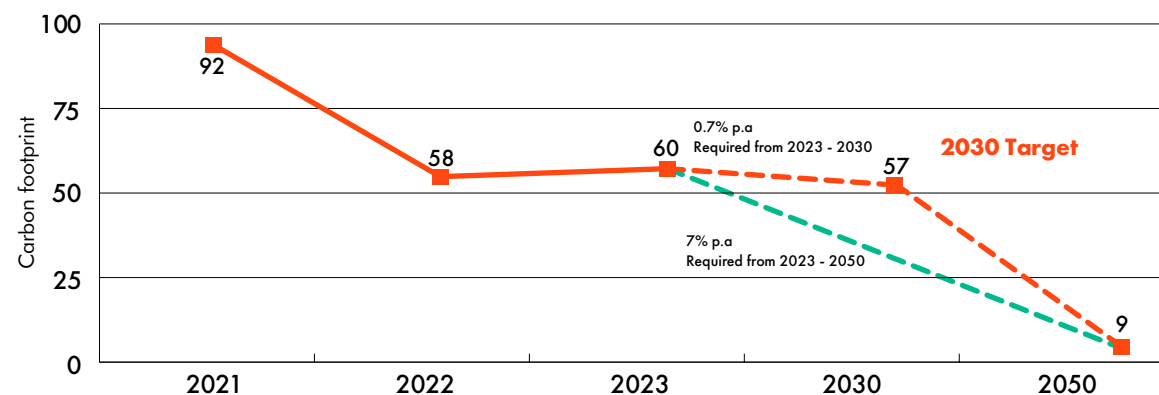
	Baseline year	Decarbonisation target (Target year)	Net-zero year
SBTi 1.5°C scenario	2021	38% (2030)	2050
Scheme	2021	38% (2030)	2050 Ambition

The Trustee has set the target to achieve a 38% reduction in the Scheme’s carbon footprint (Scope 1 and Scope 2) by 2030 on the liquid credit portfolio.

The Trustee recognises the Science Based Targets initiative (SBTi) as a leading partnership that aims to drive climate action in the private sector by enabling organisations to set science-based emissions reduction targets. According to the SBTi, alignment with a 1.5°C scenario can be achieved by a 38% reduction in global carbon emissions by 2030 (compared to 2021). The Trustee has also set its target to achieve a 38% reduction in Scope 1 and Scope 2 carbon footprint (compared to 2021) by 2030. The Trustee has taken its first step in setting a 2030 target and has set a longer-term 2050 ambition as part of its wider climate strategy. The target will be measured using the formula as shown in the [Appendix](#) on a pro-rata basis across its liquid credit managers. The Trustee has not made any additional estimates beyond the data that has been provided by the managers.

Due to the nature of the Scheme’s assets, coverage and quality of carbon emissions data is currently limited, therefore the Trustee has set the target on Scope 1 and Scope 2 of its liquid corporate credit portfolio only where the Trustee deems coverage is suitable. If coverage reaches a suitable level, the Trustee may expand the target to other asset classes. The net-zero ambition applies across all of the Scheme’s assets but significant data gaps exist.

Targets are important to ensure that the Scheme makes progress against the established baseline. To achieve this target, the Trustee intends to engage with the underlying investment managers, both directly and via its investment consultant. Given the Scheme invests via segregated portfolios in liquid credit, the Trustee has introduced climate emissions reduction targets within agreements in place with the managers. The Trustee has made significant progress towards its target over a short period. The appropriateness of the target was reviewed in March 2024, with the Trustee agreeing to leave it unchanged. It will be reviewed again later in 2024 as part of a wider review of the metrics.



In the two years since the base year in 2021, the Scheme has made significant progress in its liquid credit portfolio, achieving a 35% reduction in the Scope 1 and Scope 2 carbon footprint, relative to the target of a 38% reduction by 2030.

The Trustee has an aspiration to target net zero by 2050 to support the UK Government’s climate change ambitions. To help achieve this, the interim climate target is to achieve a 38% decarbonisation within the liquid credit portfolio by 2030 relative to emissions as of 31 December 2021. Over the year, the IRMC reviewed the 2030 target and considered whether it should be amended. However, given discussions around potential changes to the investment arrangements, the IRMC agreed to retain the target.

According to scientific guidance, these targets are in alignment with a 1.5°C scenario, which is the strongest temperature objective of the Paris Agreement, agreed by global governments in 2015.

Carbon footprint	Baseline 31/12/2021	30/9/2023	2030 Target (versus baseline)
Liquid credit portfolios	92	60 (-35%)	57 (-38%)

Note: Methodology of metrics can be found in the [Appendix](#).

Appendix.

Strategy

Scenario analysis appendix

Modelling principles

Modelling was undertaken by the Scheme's investment consultant, Isio. SOFIA is Isio's proprietary investment model. SOFIA is a stochastic model that simulates a large number of possible future economic outcomes, in which financial conditions develop in a number of different ways, defined by assumptions for average outcomes, range of variability and inter-dependency between different markets. The results shown in this report are based on the median results.

The high-level market scenarios are generated by a third-party Economic Scenario Generator (ESG) provided by Moody's Analytics. The ESG is an industry-standard tool that is widely used by financial institutions (e.g. insurers, asset managers and investment banks). Both the climate scenarios and the underlying economic impacts are provided by Moody's Analytics.

Based on the scenarios generated by the ESG, SOFIA simulates asset class returns calibrated to Isio's asset class assumptions.

SOFIA takes the initial starting position of the assets and projects these values forward under the simulated scenarios, taking into account any relevant inflows and outflows.

Different investment strategies are modelled in order to illustrate the effects of different allocations. In each case, SOFIA assumes that the strategy remains constant over the full projection period, and assets are annually rebalanced back to the original allocations. We can model alternative future strategic asset allocations being explored.

The potential impact on life expectancy under each scenario was provided by the Scheme actuary.

Modelling limitations

The models are based on assumptions and simplifications across both the climate-related impacts and the investment implications – they are not intended to be a perfect prediction of the future but rather provide the Trustee with hypothetical constructs.

No guarantee can be offered that actual outcomes will fall within the range of simulated results. Actual outcomes may be better than the simulated 95th percentile or worse than the simulated 5th percentile.

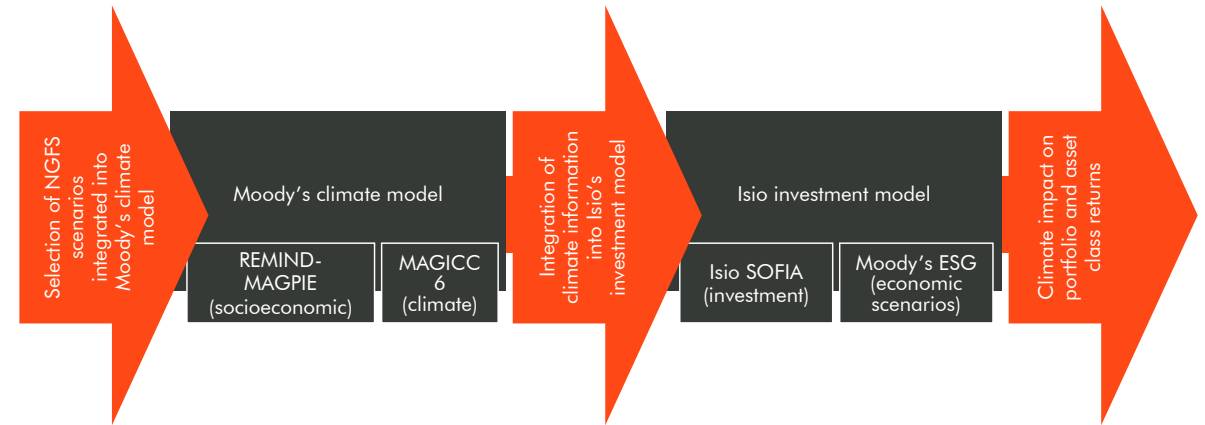
The only risk factors considered in the modelling are those that affect the values of pension schemes' assets. The modelling results should be viewed alongside other qualitative considerations, including portfolio complexity, governance burden and liquidity risk.

The model's projections are sensitive to the starting position and the econometric assumptions. Changes to the assumptions can have a material impact upon the output. There can be no guarantee that any particular asset class or investment manager will behave in accordance with the assumptions. Newer asset classes can be harder to calibrate due to the lack of a long-term history.

Climate scenario analysis

The Scheme's investment consultant, Isio, partnered with Moody's to deliver a climate change model. Please see below an overview:

- Selection of climate scenarios from the Network for Greening the Financial System. The interpretation and implementation of these scenarios are detailed below, across these building blocks.
- Inclusion of climate scenarios within Moody's climate model, composed of two building blocks: a socioeconomic REMIND-MAGPIE general equilibrium model, modelling macroeconomic growth and energy systems. This assumes that markets are efficient and sets out traditional economic assumptions around the evolution of economic markets. This is combined with the MAGICC 6 climate model, modelling climate and weather. The model runs 600 climate scenario projections and takes the median outcome for each climate scenario: Baseline, Orderly, Disorderly and Hothouse. There is interplay between these models.
- The investment model is Isio's SOFIA model. This determines how different asset classes will react under the different climate change scenarios analysed, and across time. It is also composed of two building blocks: Moody's Economic Scenario Generator, modelling economic pathways, and the Isio proprietary investment model, which models the impact on investments.
- The output is an understanding of the potential impacts on investment strategy and asset class outcomes, as well as the funding position. In particular, the impacts of rising transitional and physical costs associated with climate change are assessed.



Disclosure of Scope 1 and Scope 2 greenhouse gas (GHG) emissions (as at 30 September 2023)

Manager	Portfolio allocation %	Total GHG emissions Scope 1 & 2 (tGHG of CO ₂ e)		Carbon footprint Scope 1 & 2 (tGHG/£1m)		Data Quality (Scope 1 & 2)			
		Metric	Coverage	Metric	Coverage	Verified	Reported	Estimated	Unavailable
Gilts and Index-linked gilts	50%	162,031	100%	73	100%	-	-	100%	-
Gilts and ILG funding	-26%	-	-	-	-	-	-	-	100%
Cash	2%	35	61%	0	61%	-	-	61%	39%
Other	0%	-	-	-	-	-	-	-	-
LDI portfolio*	26%	162,066	197%	71	197%	-	-	99%	1%
Property Manager 1	7%	50	100%	0	100%	-	100%	-	-
Diversified Private Credit Manager	7%	1,767	12%	50	12%	-	100%	-	-
Illiquid portfolios	13%	1,817	56%	25	56%	-	100%	-	-
Credit Mandate 1	10%	13,306	71%	44	71%	34%	8%	15%	43%
Credit Mandate 2	7%	14,589	68%	56	68%	-	68%	-	32%
Credit Mandate 3	3%	9,524	68%	92	63%	-	63%	-	37%
Credit Mandate 4	2%	3,754	78%	62	78%	-	78%	-	22%
Credit Mandate 5	11%	33,211	14%	68	14%	-	14%	-	86%
Liquid credit portfolios	32%	74,384	51%	60	51%	11%	31%	5%	54%
Remaining portfolios with no coverage	28%								

*LDI coverage is over 100% due to the derivatives exposure.

Disclosure of Scope 3 greenhouse gas (GHG) emissions and other metrics (as at 30 September 2023)

Manager	Portfolio allocation %	Total GHG emissions Scope 3 (tGHG of CO ₂ e)		Carbon footprint Scope 3 (tGHG/£1m)		Implied temperature alignment (°C)	
		Metric	Coverage	Metric	Coverage	Metric	Coverage
Property Manager 1	7%	3,810	100%	13	100%	1.5	100%
Diversified Private Credit Manager	7%	54,668	8%	2,403	8%	-	-
Illiquid portfolios	13%	58,478	54%	1,216	54%	1.5	50%
Credit Manager 1	10%	28,817	71%	95	71%	2.0	72%
Credit Manager 2	7%	-	-	-	-	2.0	68%
Credit Manager 3	3%	-	-	-	-	2.6	57%
Credit Manager 4	2%	-	-	-	-	2.5	83%
Credit Manager 5	11%	66,010	14%	136	14%	2.7	24%
Liquid credit portfolios	32%	94,827	27%	76	27%	2.3	54%
Remaining portfolios with no coverage	28%						

Metrics

Metrics notes

Source:

Investment managers, custodian, investment consultant calculations.

Notes:

Metric & Coverage: denotes the % of each fund where emissions and carbon footprint data is available.

Figures rounded to nearest whole number or percentage.

Property Manager 1 uses tonnes of carbon per £m of GAV.

Carbon footprint is tonnes CO₂e per £1 million of EVIC.

For credit mandates 2-5, all emissions data where available is assumed as reported.

Property Manager 1 classifies Scope 1 and Scope 2 emissions for the properties held as landlord data only. Any tenant data is provided under Scope 3 emissions. Property Manager 1 considers the temperature pathway of properties as 1.5 degrees given assets are managed in line with the net-zero pathway set by investors, to which the Cadent portfolio is aligned.

For the LDI mandate, carbon footprint coverage includes leverage, whilst total GHG emissions and data quality exclude leverage.

For cash in the LDI mandate, carbon footprint is scaled up to reflect there isn't 100% coverage.

For LDI mandate, all coverage is assumed estimated.

Glossary.

Metric	Description	Formula for corporate holdings
Absolute Emissions Metric: Total GHG emissions (Scope 1 & 2)	Total amount of greenhouse gas emissions (as mandated by the Kyoto Protocol) emitted by the underlying portfolio companies, attributed to the investors based on the total investment in each company	$\sum_n^i \left(\frac{\text{Current value of investment } i}{\text{Investee company enterprise value } i} \right) \times \text{investee company's Scope 1 \& 2 emissions } i$
Emissions Intensity Metric: Carbon footprint (Scope 1 & 2)	An intensity measure of emissions that assesses the level of greenhouse gas emissions (as mandated by the Kyoto Protocol) arising from £1 million investment (based on Enterprise Value Including Cash) in a company	$\frac{\sum_n^i \left(\frac{\text{Current value of investment } i}{\text{Investee company enterprise value } i} \right) \times \text{investee company's Scope 1 \& 2 emissions } i}{\text{Current value of all investments (\pounds millions)}}$
Implied temperature alignment	A forward-looking view of carbon exposure that can be translated into a projected increase in global average temperature (°C) above pre-industrial levels that would occur if all companies had the same carbon intensity	

Source: DWP – Governance and reporting of climate change risk: guidance for trustees of occupational schemes.

All metrics were provided by the investment managers, who are closest to the underlying assets, and consolidated by the Scheme’s investment consultant.

Glossary.

GHG emissions from a particular company can be split across three levels, as shown in the diagram.

- Scope 1 is direct emissions from company-owned or controlled sources – this includes heating/cooling of offices/factories and fleet vehicles.
- Scope 2 is indirect emissions from purchased energy – emissions are created during the production of the energy which is eventually used by the company.
- Scope 3 is all indirect emissions that occur in the value chain – this includes emissions from the production of purchased goods and services and the use of sold products. There are currently industry-wide issues with reporting Scope 3 emissions.

