Climate change report

A report for members by the Trustee of the TotalEnergies UK Pension Plan

Plan Year to 30 June 2024

Why have we written this report?

The Trustee of the TotalEnergies UK Pension Plan (the "Plan") views climate change as a risk to society, the economy and financial system and therefore risks that could affect their members' future savings. However, it also recognises that reducing emissions throughout the economy presents opportunities. These risks and opportunities may impact the Trustee's objectives for both the DB and DC sections. The Trustee monitors this potential impact and has taken steps to reduce climate-related risks for the Plan.

This report provides members with the opportunity to find out more about the work carried out by the Trustee in relation to climate change.

It is the second climate change report by the Trustee, which describes how the Trustee has continued its work on identifying, assessing and managing climate-related risks and opportunities to the DB and DC Section during the Plan Year.

We hope you find this report helpful informative and would welcome any feedback.

Rob White

Chair of TotalEnergies Pension Trustee UK Limited

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Published alongside the Plan's annual report and accounts for the Plan year to 30 June 2024 and available online https://tcfd.pensioninfo.totalenergies.uk/

Executive Summary

This report describes how the Trustee has identified, assessed and managed climate-related risks and opportunities for the Plan over the Plan year (1 July 2023 to 30 June 2024), in accordance with the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 ("the Regulations") which applied to the Plan from 1 October 2022. The report has been prepared having regard to statutory guidance as well as the Pensions Regulator's guidance on the governance and reporting of climate-related risks and opportunities.

Overview of DB Section

The DB Section of the Plan has assets of c£2.3bn (as at 31 March 2024). The value of assets includes the value of the Section's existing buy-in policy with Pension Insurance Corporation ("PIC"). Following a consistently strong DB funding position in the last few years, the Trustee agreed to purchase a second bulk annuity policy with PIC in June 2024 to insure the remaining DB liabilities.

Conclusions specific to the Climate Disclosure Report's thematic areas are summarised below:

Governance:

The Trustee has ultimate responsibility for ensuring effective governance of climate change risks and opportunities of the DB Section.

The Trustee's delegation of certain responsibilities in respect to investment matters and climate change management to the Investment Committee ("IC") and TCFD Steering Group ("TCFDSG") have remained unchanged since the previous Plan Year.

In March 2024, the IC reviewed the Plan's climate-related investment beliefs and the Statement on Governance of Climate-Related Risks and Opportunities ("Governance Statement"). **The IC noted only limited changes were required.**

The Trustee believes that the existing Governance Statement and the climate-related investment beliefs remain appropriate even after considering the material DB Section strategy changes (ie the second bulk annuity purchase with PIC).

Strategy:

The Trustee has considered climate-related risks and opportunities over the short term, medium term and long term time horizons, which it believes are most relevant to the DB Section. The last scenario analysis undertaken was completed in 2022 using data from 31 December 2021, with a review being taken at least triennially.

At the March 2024 IC meeting, the IC decided not to conduct additional climate scenario analysis. **Subsequently, the time horizons in which the Trustee considers climate-related risks and opportunities remain unchanged over the Plan Year (ie 3 years, 8 years and 20 years).**

For your reference, we have included the summary and results of the 2022 climate scenario analysis within the strategy section of this report.

Risk Management:

Over the Plan Year, the Trustee used various processes to identify, assess and manage climate related risks. The Trustee continues to integrate climate change into the Plan's risk management processes, including a Risk Register that considers climate change management, covenant monitoring and investment manager assessments.

The Risk Register was reviewed during the reporting year with no changes.

During the reporting year, the IC assessed the DB Section's investment managers' climate credentials. Overall, the IC was satisfied that most of its managers had embedded climate considerations into their investment processes and philosophies. The outcome of the assessment was used to drive engagement with the DB Section's buy in policy provider, PIC.

As part of the insurer selection process for the bulk annuity that completed in June 2024, in March 2024, the Trustee took advice from its investment advisor on the RI credentials of the shortlisted insurers. This advice was delivered to the Joint Working Group (JWG).

The Trustee continue to uphold climate change as one of its stewardship priorities, and these were unchanged over the reporting period.

Metrics and Targets:

The Trustee monitors four climate-related metrics to help it track climate related risks and opportunities for the DB Section: an absolute emissions metric, an emissions intensity metric, a portfolio alignment metric and a data quality metric. These metrics are calculated on an annual basis.

In June 2024, the IC reviewed the Plan's climate metrics and targets based on 31 March 2024 data. Given the Plan's de-risking in the last year to the calculation date**, the DB Section of the Plan holds no physical listed equities as at the 31st of March 2024**. Due to this and the second bulk annuity policy with PIC, **the Trustee changed its existing portfolio alignment target to a data quality target: for PIC to have 90% data coverage across Scope 1 & 2 emissions by 2030.**

Post Plan Year end, the Trustee used the output of the review to drive engagement with the Plan's buy-in asset policy provider, PIC.

Overview of DC Section

The DC Section of the Plan has assets of c£437.9m (as at 31 March 2024), the majority of members and assets are invested in the default strategy which has been designed as a lifestyle strategy, with each member's asset allocation depending on their expected retirement date. While the Trustee has considered the range of funds available to members with climate-related risks in mind, the majority of the analysis conducted over the year has focused on outcomes arising from the Plan's "popular default arrangement" - the Drawdown Lifestyle Strategy (default strategy).

Conclusions specific to the Climate Disclosure Report's thematic areas are summarised below:

Governance: **The Trustee has ultimate responsibility for ensuring effective governance of climate change risks and opportunities of the DC Section.** Over the Plan year, with the support of the Plan's external advisers, the Trustee delegates certain responsibilities in respect to investment matters and climate change management to the TCFDSG and the IC. The IC was responsible for annually reviewing the DC Section's climate change management arrangements (the DC Outcomes & Governance Committee ("DCOG") took over this responsibility from the IC in June 2024). The Trustee also maintained their commitment to climate change by retaining the climate-related investment beliefs in the Plan's latest Statement of Investment Principles. The Trustee has also selected key stewardship priorities to provide focus for monitoring investment managers' engagement; one of these is "climate change".

Strategy: The actual and potential impacts of climate-related risks and opportunities have been considered in the context of the range of funds available to members and for the default strategy. Overall, the effect of the climate scenarios on the DC Section could have material impacts on the outcomes for members and is therefore an important area of focus. Climate risks are expected to have a greater impact on return-seeking assets, such as equities. **The default strategy has been designed in a way that reduces exposure to these types of assets as members approach retirement. As such, climate risks are also expected to reduce the closer a member is to retiring.**

Risk Management: The Trustee has implemented a number of processes and tools for identifying, assessing and managing climate related risks and opportunities for the Plan. This includes integrating climate change into the Plan's risk management processes, including the Risk Register and investment monitoring. The risk register has not been updated during the year covered in this report, however in the most recent Risk Register, the Trustee **lists two** climate focussed investment risks and **maintained one** reference to climate as an investment performance risk in the Risk Register. During the reporting year, the Trustee reviewed the DC Section's investment managers' climate approaches, and **the Trustee was satisfied that most of its managers had embedded climate considerations into their investment process and philosophies.** The IC continued to engage in climate-related conversations with their investment managers over the year before responsibility was handed over to the DCOG, as well as with potential new managers that were considered during the fund selection exercises carried out in April 2024. The IC discussed the shortlisted managers' climate approaches . In addition, the Plan's investment adviser conducts engagement with the managers, encouraging them to improve their practices further.

Metrics and Targets: Four key metrics have been identified to measure climate-related risks. **For the DC Section, the Trustee has set a target for 75% of physical listed equity investments to have set science-based targets by 2030.** Approximately 45% of the DC Section's current physical equity allocation had set SBT targets (31 March 2024). This is an increase from 31% from the initial assessment. These metrics and targets will be used to assess and manage relevant climate-related risks and opportunities over time. Data availability has improved since the previous year. Data quality figures are now available for Scope 3 as well as Scope 1 and 2 emissions.

Governance

How the Trustee maintains oversight of climate related risks and opportunities relevant to the Plan

In March 2024, the Trustee reviewed its climate governance statement to assess whether any changes should be made. When considering whether amendments should be made, the Trustee took into account the following factors:

1. Whether the roles and responsibilities were followed appropriately by the various entities; and

2. If the nature and frequency of the activities allow the Trustee to effectively assess the climate related risks and opportunities for the Plan.

Based on the factors above and a recommendation from its external advisers, the Trustee did not amend its current governance statement and is comfortable that the current version remains appropriate in setting out oversight of climate related risks and opportunities relevant to the Plan.

The next sub-sections highlight the governance process, roles and responsibilities of all stakeholders of the Plan over the Plan Year to 30 June 2024.

Overview of processes

The Trustee has ultimate responsibility for ensuring effective governance of climate change risks and opportunities in relation to the Plan. Identifying, assessing and managing these risks and opportunities is a strategic priority for the Plan and therefore this is undertaken by the Trustee Board. However, to leverage particular expertise, the Trustee delegates certain responsibilities in respect of investment matters for both the defined benefit ("DB") and defined contribution ("DC") sections of the Plan to the Investment Committee ("IC"), with support from the Trustee's external advisers. The Trustee delegates certain responsibilities in respect of climate change management for both the DB and DC sections of the Plan to the TCFD Steering Group ("TCFDSG"), with support from the Trustee's external advisers.

1. Establishing responsibilities

In December 2021, the TCFDSG discussed the division of responsibilities between the Trustee Board, IC, TCFDSG, investment adviser, actuarial adviser, covenant adviser, legal adviser and Investment managers. This was in order to ensure appropriate oversight of the climate-related risks and opportunities relevant to the Plan and so that the Trustee could be confident that its statutory and fiduciary obligations were being met. The final roles and division of responsibilities are outlined in this report.

2. The Trustee's role

Trustee

In broad terms, the Trustee is responsible for identifying, assessing and managing climate related risk for the Plan and takes all Plan-wide decisions. However, the Trustee has delegated some of these responsibilities to specialised sub-committees. In relation to climate risk the Trustee's responsibilities comprise of:

- ensuring the Trustee Directors have sufficient knowledge and understanding of climate change risks to fulfil their statutory and fiduciary obligations and are keeping this knowledge and understanding up to date. This will include knowledge and understanding of the principles relating to the identification, assessment and management of climate-related risks and opportunities for the Plan;
- putting in place effective climate governance arrangements;
- allowing for climate-related considerations when assessing and monitoring the strength of the sponsoring employer's covenant;
- ensuring that the Plan's actuarial, investment, and covenant advisers have clearly defined responsibilities in respect of climate change, that they have adequate expertise and resources, including time and staff, to carry these out, that they are taking adequate steps to identify and assess any climate-related risks and opportunities which are relevant to the matters on which they are advising and that they are adequately prioritising climate-related risk;
- considering and approving recommendations from the DCOG;
- review and sign off the reports that the TCFDSG and DCOG are responsible for producing.

Further trustee responsibilities have been delegated to sub-committees who will provide recommendations to address climate related risks and opportunities for the Trustee's approval. These are described below:

Investment Committee

The Investment Committee was responsible for investment matters up until the completion of the buy-in of the DB assets in June 2024. This responsibility has now been delegated to the DCOG. In relation to climate risk and opportunities its responsibilities comprise of:

- incorporating climate-related considerations into strategic decisions relating to the Plan's investments and funding arrangements;
- incorporating climate-related considerations into the Plan's investment policies;
- considering and documenting the extent to which the advisers' responsibilities are included in any agreements, such as investment adviser's strategic objectives and service agreements;
- considering and approving recommendations from the TCFDSG.

Joint Working Group

The JWG is a cross party group established by the Trustee and principal employer (TotalEnergies Pension Company UK Limited) to manage Project Balzac (the recent project to insure/buy-in the remainder of Plan liabilities, completed in June 2024) on behalf of both parties.

At its board meeting in June 2023, the Trustee delegated oversight of Project Balzac to the JWG. The JWG's responsibilities comprise of:

- ensuring insurance, indemnity, and collateral requirements are met for a potential buy-in to buy-out conversion;
- preparing a detailed project plan with specified milestones and responsibilities;
- coordinating with Trustees and Private Equity to finalize benefits, data accuracy, and contractual terms;
- selecting, conducting due diligence, and recommending the preferred insurer for Trustee approval.

TCFD Steering Group

In broad terms, the TCFDSG is responsible for climate change management, recommending formal decisions to the IC for consideration. From June 2024 they will now recommend their decisions to the DCOG. The responsibilities comprise of:

- ensuring that the Plan's investment managers are managing climate-related risks and opportunities in relation to the Plan's investments, and have appropriate processes, expertise and resources to do this effectively;
- determining short-, medium- and long-term time periods to be used when identifying climate-related risks and opportunities to the Plan;
- identifying and assessing the main climate-related risks and opportunities for the Plan and documenting the management of these;
- selecting and regularly reviewing metrics to inform its assessment and management of climate-related risks and opportunities, and setting and monitoring targets to improve these metrics over time where appropriate;
- communicating with Plan members and other stakeholders on climate change where appropriate, including public reporting in accordance with The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the Occupational and Personal Pension Schemes (Disclosure of Information) Regulations 2013 (together "Climate Disclosure reporting"") when required.

DC Outcomes & Governance Committee

The DCOG is responsible for investment matters. The DCOG took over these responsibilities from the IC in June 2024. In relation to climate risk and opportunities its responsibilities comprise of:

- incorporating climate-related considerations into strategic decisions relating to the Plan's investments and funding arrangements;
- incorporating climate-related considerations into the Plan's investment policies;
- considering and documenting the extent to which the advisers' responsibilities are included in any agreements, such as investment adviser's strategic objectives and service agreements;
- considering and approving recommendations from the TCFDSG.

Nature and frequency of monitoring

The Trustee considers a range of different information about the climate change risks and opportunities faced by the Plan to enable it to fulfil its responsibilities set out above. The Trustee considers climate change a material risk to the Plan and has dedicated specific resources to help assess and manage this risk and meet its obligations. This includes the setting up of the TCFDSG and the monitoring detailed in this section including the following.

- Annual review

At one or more TCFDSG meetings each year, the TCFDSG will review, revise where appropriate and recommend to the DCOG any changes to:

- its governance arrangements, investment beliefs and investment policies in relation to climate change;
- its draft Climate Disclosure reporting;
- the Plan's investment managers in relation to data on environmental, social and governance ("ESG") metrics and climate-related metrics and progress against any targets related to these metrics;
- whether it is appropriate to carry out scenario analysis that illustrates how the Plan's assets and liabilities might be affected under various climate change scenarios; some years this is not required because it has been carried out within the previous two years and the investment strategy is not materially different (see "Less frequent reviews" below);

- Less frequent reviews

The Trustee will consider climate-related risks and opportunities whenever the following activities are undertaken:

- actuarial valuation of the Plan's defined benefit section;
- review of the investment strategy for the Plan's defined benefit and defined contribution sections;
- assessment of the sponsoring employer's covenant.

The Trustee will also, at least every three years and following any major changes in the Plan's position, review:

- its choice of short-, medium- and long-term time periods to be used when identifying climate-related risks and opportunities to the Plan;
- the results of scenario analysis that illustrates how the Plan's assets and liabilities might be affected under various climate change scenarios, along with commentary on the potential impacts for the sponsoring employer;
- its choice of metrics to review regularly to inform its assessment and management of climate-related risks and opportunities.

Whenever it reviews its agreements with external advisers, or appoints new advisers, the Trustee will consider and document the extent to which the advisers' climate-related responsibilities are included in the agreements and/or any adviser objectives set.

Climate beliefs

At the March 2024 IC meeting, the IC agreed to maintain the below climate-related investment beliefs over the Plan year to 30 June 2024. The IC also agreed that these beliefs are to be reviewed annually or in the case of any significant changes to the Plan's strategy.

As a reminder, the Trustee holds the following climate-related investment beliefs:

1. We want to follow best practice when it comes to regulatory requirements;
2. Climate change represents a systemic risk to society, the economy and the financial system;
3. Climate change is a financially material risk for the DB and DC sections of the Plan;
4. A transition to a low carbon economy presents risks and opportunities for investment returns;
5. Our fund managers should maintain awareness of climate risks and opportunities, such as emerging technologies and green markets, when selecting investments for our investment strategies;

6. Transitioning energy investments to sustainable energy options and encouraging fossil-fuel holdings to manage the climate transition appropriately is a better way to manage climate risk than disinvesting from these holdings;

7. Engagement with our investments, as delegated to our fund managers, is an essential component in order to move to a low carbon economy.

3. Other parties' and advisers' roles

Actuarial adviser

In broad terms, the Plan's actuarial adviser is responsible, as requested by the Trustee, for:

- advising how climate-related risks and opportunities might affect the Plan's funding position over the short-, medium- and long-term and the implications for the Plan's funding strategy and long-term objectives;
- providing training and other updates to the Trustee on relevant climate-related matters;
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its investment and covenant monitoring, and communication with stakeholders as appropriate.

Investment adviser

In broad terms, the Plan's investment adviser is responsible, in respect of investment matters for both the DB and DC sections of the Plan, as requested by the Trustee, for:

- helping the Trustee to formulate its investment beliefs in relation to climate change and reflecting these in the Plan's investment policies and strategy;
- advising how climate-related risks and opportunities might affect the different asset classes in which the Plan might invest over the short-, medium- and long-term, and the implications for the Plan's investment strategy;
- advising the Trustee on the appropriateness and effectiveness of the Plan's investment managers' processes, expertise and resources for managing climate-related risks and opportunities, given the Trustee's investment objectives and beliefs;
- assisting the Trustee in identifying and monitoring suitable climate-related metrics and targets in relation to the Plan's investments, including liaising with the Plan's investment managers regarding provision of the metrics;
- leading on the preparation of the Trustee's Climate Disclosure reporting, working with the Trustee and its other advisers as appropriate.

Covenant adviser

In broad terms, the Plan's covenant adviser is responsible, as requested by the Trustee, for:

- advising how climate-related risks and opportunities might affect the Plan's sponsoring employers, guarantor and the wider TotalEnergies group over the short-, medium- and long-term. In particular, the impact on future cash generation and long-term prospects;
- leading on the inclusion of climate change in the Plan's covenant monitoring, working with the Trustee and its other advisers as appropriate to integrate covenant considerations into the overall Plan strategy;
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, and communication with stakeholders (including, but not limited to, its Climate Disclosure reporting), as appropriate.

Legal adviser

In broad terms, the Plan's legal adviser is responsible, as requested by the Trustee, for:

- ensuring the Trustee is aware of its statutory and fiduciary obligations in relation to climate change and working with the Trustee's other advisers to ensure alignment between these obligations and any Trustee formulation of its investment beliefs in relation to climate change;
- providing training and other updates to the Trustee on relevant climate-related legal matters;
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, and communication with stakeholders (including, but not limited to, its Climate Disclosure reporting) as appropriate;

- where requested, assisting in the documentation of any contractual requirements to be included in the arrangements with the Plan's investment managers with respect to the governance, management and reporting of climate-related matters.

Information provided to the Trustee

In assessing climate-related risks and opportunities for the Plan, the Trustee receives information as outlined below:

- Training (where needed) on relevant climate-related regulatory developments;
- Reviews conducted by the Plan's investment adviser comprising its own views on the managers and funds in which the Trustee invests specifically related to climate risk-management practices which is completed on a biennial basis;
- Information provided directly by the investment managers, for example voting reports outlining significant voting activity undertaken related to climate change and presentations from the Plan's investment managers to members of the DCOG.

The Trustee's will continue to assess any skills gaps and undertake training accordingly.

The Trustee discussed the following topics as part of the climate-related risks and opportunities agenda items over the year to 30 June 2024.

Note these took place before the DCOG took over responsibilities from the IC.

June 2023:
IC

This meeting was held on 28th of June 2023, (ie just before the start of the Plan Year). For continuity purposes, we have included a summary of what was discussed.

- Review of initial draft of the Year 1 (30 June 2023) TCFD report
- Review of progress made on the DWP Stewardship
- Review of Trustee's Key Objectives for 2023 which included: climate transition and the measurement of climate related risk and the DWP's Stewardship guidance

October 2023:
IC

- Review of final draft of the Year 1 TCFD report and agreed final version
- Review of Trustee's Key Objectives for 2023 which included: climate transition and the measurement of climate related risk and the DWP's Stewardship guidance
- Review of the Trustee's Key Objectives for 2024, which included: receiving update on Data Reporting for TCFD and to continue to monitor the Investment Managers for the Plan's priorities in relation to the DWP's Stewardship guidance

January 2024:
Trustee

- The Trustee signed off the final Year 1 TCFD report.

March 2024:
IC

- Review of climate activities undertaken to ensure regulatory requirements have been met and to identify any gaps
  - Assessment of investment manager's climate practices
  - Review of climate governance statement
  - **Review of climate-related investment beliefs**
  - **Review of climate scenario analysis (ie whether it should be undertaken this Plan Year for the Year 2 (30 June 2024) TCFD report)**
- Review of stewardship priorities

June 2024:
IC

- Review of the Plan's climate metrics and targets data for inclusion in the Year 2 TCFD report
  - Review if the selected target remains appropriate for both the DB

Strategy

As part of TCFD reporting requirements, the Trustee of the Plan is required to undertake a climate scenario analysis at least triennially and following significant changes in the Plan strategy.

At the IC meeting in March 2024, the Trustee, with the help of external advisers, agreed not to take additional scenario analysis during the Plan year and agreed that the climate scenario analysis shall be refreshed in the next Plan year following the purchase of the bulk annuity policy with PIC for the DB Section.

The Plan's scenario analysis was last conducted in 2022 (with data as at 31 December 2021). The 2022 climate scenario analysis' summary and results are set out in this Section.

1. Identification and assessment of climate-related risks and opportunities relevant to the Plan

The Trustee has considered climate-related risks and opportunities over various time periods which it believes are most relevant to the Plan.

The Trustee selected short-term, medium-term and long-term time horizons over which to formally consider the impact of climate related risks and opportunities for both the DB and DC sections. The Trustee agreed to different time horizons for each section reflecting differences in the membership profile and investment strategy. The Trustee has maintained these timelines in line with its intention to not avoid continuously changing time horizons. The different time horizons are outlined in the tables below, along with the Trustee's rationale for each.

Time horizons ***(based on the 2022 analysis)***	**DB Section**	**DC Section**
Short term	3 years – This is in line with the 3 year valuation cycle and likely to coincide with any considered changes to the investment strategy.	5 years – Major improvements in climate data quality are expected over this period.
Medium term	8 years – Climate transition risks will be heightened over this period, and is in line with the Plan's funding target timeline.	10 years – Key period over which policy action will determine if Paris Agreement goals are met.
Long term	20 years – To reflect the duration of the Plan's liabilities, which is relevant if the Plan's liabilities are not insured by the target date.	30 years – Many economies are targeting to be net zero by this point.

The Plan faces risks and opportunities from both the physical effects of climate change (physical risks) – for example, rising temperatures and more extreme weather events – and from the effect of transitioning to a lower carbon economy to help mitigate the impacts of climate change (transition risks and opportunities) – for example, government policies to reduce the use of fossil fuels, technological advances in renewable energy, and a rise in consumer demand for "greener" products.

Many of these climate-related risks and opportunities could affect the Plan's funding position directly through impacts on the assets and liabilities, as well as member outcomes through impact on returns. Climate-related risks and opportunities could also impact the financial strength of the Plan's sponsoring employers and guarantor and their ability to provide support to the Plan.

1. Key climate risks and opportunities facing the Plan

The Trustee has updated the key climate risks and opportunities facing the Plan within each of the time horizons.

For the DB section

Following the completion of Project Balzac to insure the remaining Plan liabilities, key risks have now been transferred to the insurer, PIC. Key opportunities are also limited as a result of the buy-in project. The key risks and opportunities for the Trustee are largely the same over the short, medium and long term timescales given the investment strategy.

Time period	Key risks	Key opportunities
Short term (next 5 years)	Climate change is a systemic risk that will undoubtedly have profound impacts on the insurance sector over the coming years. To the extent that the insurer is unprepared for these changes, climate risk increases the chance that the insurer will be unable to meet the benefit payments promised. This risk is mitigated by the collateral agreement the Trustee has with PIC and the ability to take back the assets in the event the insurer goes out of business.	The Plan has limited opportunities following the June 2024 completion of the buy-in project.
Medium term (next 10 years)		
Long term (next 30 years)		

For the DC section

Time period	Key risks	Key opportunities
Short term (next 5 years)	Older members within 10 years of retirement will be most exposed to transition risks in the short term in the event of a Disorderly Net Zero Transition scenario	Low carbon investments can mitigate the impact of market shocks due to market repricing events
Medium term (next 10 years)	Transition risks may still be heightened over the medium-term creating volatility. Market returns may be lower if disorderly transition harms economic performance	Impact investments can take advantage of the shift to a low carbon economy and may provide an enhanced source of return over this period
Long term (next 30 years)	Physical risks are most severe in the Failed Transition pathway, impacting those members 15 years or more from retirement	Engagement with investment managers to ensure they are exercising stewardship in support of net zero pathways is key to avoiding a failed transition

2. Climate scenario analysis (2022 results)

Scenario analysis is a tool for examining and evaluating different ways in which the future may unfold. At its September 2022 TCFDSG meeting, the TCFDSG used scenario analysis to consider how climate change might affect the Plan's investment and funding strategies. Further information regarding modelling approach and outcomes can be found in Appendix 2.

The TCFDSG last carried out scenario analysis as at 30 June 2022 with the support of their investment advisers, Lane Clark & Peacock ("LCP"). The analysis looked at three possible scenarios, as outlined below.

Overview of the Scenarios considered and why the TCFDSG chose them

The three climate scenarios considered were as follows:

1. Failed Transition

Under this scenario it is assumed that the Paris Agreement Goals are not met; only existing climate policies are implemented, and global temperatures rise significantly.

The TCFDSG chose to consider this scenario to explore what might happen to the Plan's finances if carbon emissions continue at current levels, resulting in significant physical risks from changes in the global climate that disrupt economic activity.

2. Orderly Net Zero Transition

Under this scenario it is assumed that the Paris Agreement Goals are met through rapid and effective climate action, with a smooth market reaction to the changes implemented, and Global Net Zero is achieved by 2050. This scenario considers a systemic shift towards cleaner energy sources and biofuel, as well as the use of Carbon Capture and Storage technologies.

The TCFDSG chose to consider this scenario to see how the Plan's finances could play out if carbon emission reduction targets are met in line with the Paris Agreement, meaning that the economy makes a material shift towards a low carbon economy by 2030.

3. Disorderly Net Zero Transition

Under this scenario the same policy, climate and emissions outcomes are assumed as the Orderly Transition, but financial markets are initially slow to react and then overreact subsequently.

The TCFDSG chose to consider this scenario to look at the potential impact on the Plan if carbon emission reduction targets are met in line with the Paris Agreement, but financial markets are volatile as they adjust to a low carbon economy.

The TCFDSG acknowledges that many alternative plausible scenarios exist but found that these were a helpful set of scenarios to explore how climate change might affect the Plan in the future.

To provide further insight, the TCFDSG also compared the outputs under each scenario to a "climate uninformed base case", that makes no allowance for either changing physical or transition risks in the future.

The scenarios showed that equity markets could be significantly impacted by climate change with lesser but still noticeable impacts in bond markets. All three scenarios envisaged, on average, lower investment returns and resulted in a worse DB funding position and lower retirement outcomes for DC members than the uninformed base case.

The key features of each scenario are summarised in the table on the next page.

Scenarios as at 31 December 2021 – key features

Scenarios:	*Failed Transition*	*Orderly Net Zero by 2050*	*Disorderly Net Zero by 2050*
Low carbon policies	Continuation of current low carbon policies and technology trends	Ambitious low carbon policies, high investment in low-carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel	
Paris Agreement outcome	Paris Agreement goals not met	Global net zero achieved by 2050; Paris Agreement goals met.	
Global warming	Average global warming is about 2°C by 2050 and 4°C by 2100, compared to pre-industrial levels	Average global warming stabilises at around 1.5°C above pre-industrial levels	
Physical impacts	Severe physical impacts	Moderate physical impacts	
Impact on GDP	Global GDP is significantly lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be 50% lower than in the climate uninformed scenario.	Global GDP is lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be about 5% lower than in the climate-uninformed scenario.	In the long term, global GDP is slightly worse than in the Orderly Net Zero scenario due to the impacts of financial markets volatility.
Financial market impacts	Physical risks priced in over the period 2026-2030. A second repricing occurs in the period 2036-2040 as investors factor in the severe physical risks	Transition and physical risks priced in smoothly over the period of 2022-2025	Abrupt repricing of assets causes financial market volatility in 2025

Source: Ortec Finance. Figures quoted are medians.

Further details on the approach and limitations of the modelling are set out in Appendix 2. The Trustee would note that whilst the average outcome of each scenario is shown, there is a funnel of doubt (a range of outcomes) for each scenario. In the event one of the above scenarios occurs, in practice the Plan's asset value could react in a very different way to the modelled output.

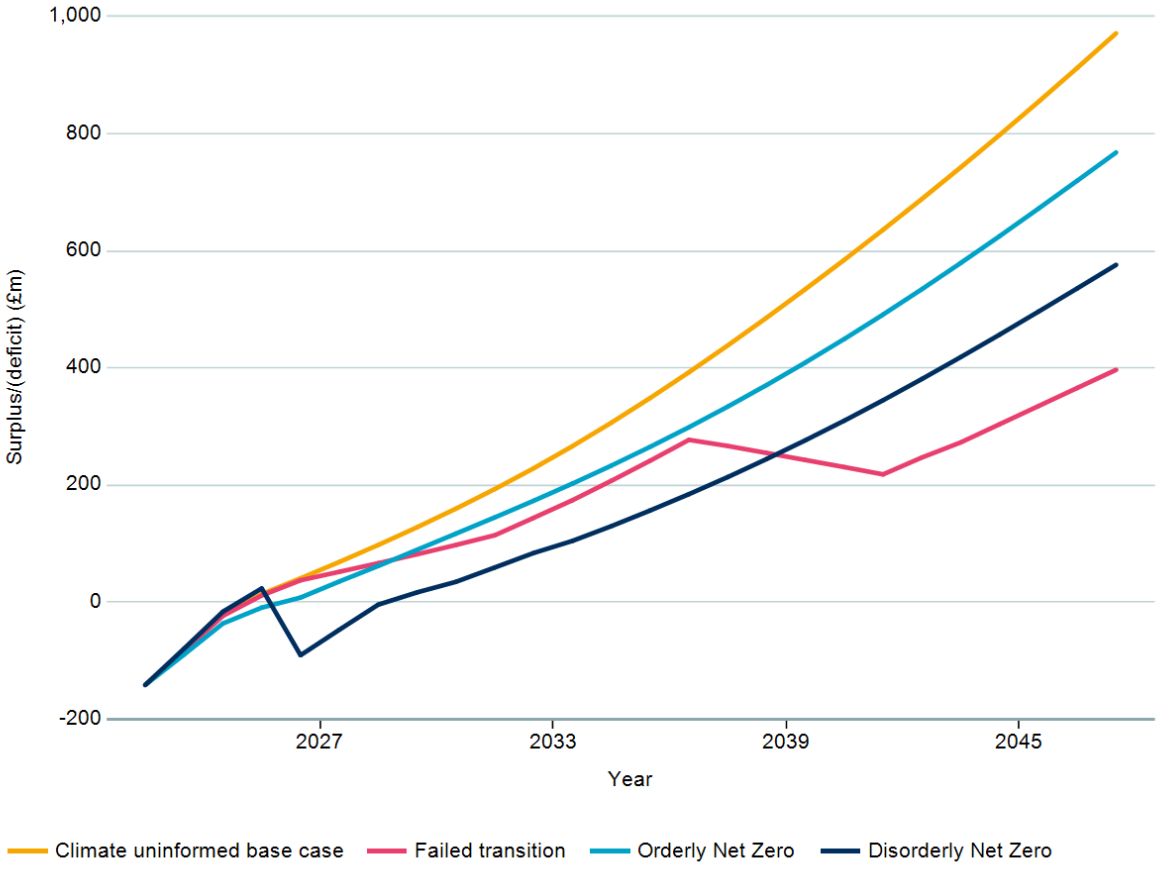
DB section: Potential impacts on the assets and liabilities identified by the scenario analysis (2022 climate scenario analysis)

The scenario analysis looked at the impact of the Plan's funding position over time on the Plan's long term funding target of full funding using a discount rate of gilts + 0.5% pa. The funding position is the ratio of the Plan's assets to its liabilities and is a measure of how the funding strategy is progressing. The chart on the next page illustrates the expected change in surplus (ie assets available in excess of the Plan's liabilities) of the DB section under each of the three scenarios considered, as well as in the "climate uninformed" base case.

The key impacts of each scenario on the DB section were as follows (based on the 2022 scenario analysis):

- Under the Orderly Net zero Transition scenario (bright blue line), the overall impact on the funding position is modest. Whilst transitional risks impact the funding position in earlier years, the resultant new climate policies and technology help to reduce physical risks in later years.

- Under the Disorderly Net Zero Transition scenario (dark blue line), there is volatility in the mid-2020s as markets react abruptly to changes in policy and technology to address climate change. In the short term this has a detrimental impact on the Plan's position. The earlier volatility in the funding position means the outcome is worse than under the Orderly Transition, however the Plan is expected to remain in a strong funding position.
- Under the Failed Transition scenario (pink line), there would be a more significant impact on the funding position, but not until after 2035. The Trustee would expect the level of risk to be reduced as the funding level improves, and consequently, this would be expected to reduce the climate risk. In practice, given the Plan's strong funding position, and expectation that this should continue to improve over time, the Plan should be in a strong position to withstand large shocks at this time and remain in surplus.



Overall, given the current strong funding position of the Plan, and relatively low risk liability aware funding and investment strategy, in the scenarios modelled the Plan's funding strategy on the DB section was shown to be resilient. The Trustee discussed the expectations with its investment adviser and questioned the appropriateness of the chosen scenarios. Whilst the outcomes are encouraging the Trustee is aware they are median expectations and actual outcomes could be much worse

The Trustee also considered the effects of reducing risk in the Plan's investment strategy. As a result of reducing risk, the dispersions of outcomes were lower across the scenarios – given the lower risk profile the Trustee would also expect a narrower range of outcomes per scenario.

DB section: Impact of climate change on life expectancy (2022 climate scenario analysis)

If a member lives longer, the Plan pays the member's DB pension for longer and therefore needs more assets to make the payments.

Like the economic impacts, the impact of climate change on life expectancy is highly uncertain. As part of the climate scenario discussions, the Trustee considered the various possible drivers for changes in mortality rates with both positive and negative impacts expected in each of the scenarios considered.

For example, in the Orderly Net Zero Transition scenario, the reduced use of fossil fuels should lead to lower air pollution, increasing life expectancy. But this effect could be countered by economic prosperity generally being lower in this scenario, and this may limit the funding available for healthcare.

Given the level of uncertainty, the Trustee noted that no specific allowance had been made in the scenario analysis, but that it would keep up to date on developments in this area and consider it further as part of future actuarial valuations.

DB section: Long-term funding target (2022 climate scenario analysis)

As at the date of the analysis, the Plan had a deficit on its long-term target (gilts + 0.5% pa). The Trustee considered how the cost of buy-out may increase as insurers allow for climate-related risks in their pricing and reserving bases. Insuring the Plan's liabilities with a buy-out could provide greater protection from climate risks for members' benefits than the Trustee continuing to run the Plan. The Trustee agreed to consider a buy-out of the Plan in the medium term, which will ensure that the longer term risks are mitigated as much as possible.

DB section: Impact on buy-in contract (2022 climate scenario analysis)

The Plan currently has an insurance contract covering a significant proportion of the DB benefits payable to pensioners. As this contract exactly matches the DB benefits payable to members, it has been excluded from the analysis. The Trustee considered qualitatively how insurance contracts might be affected by climate risk.

The existing buy-in asset has effectively transferred part of the Plan's exposure to climate risk to the insurer:

- The Plan's insured liabilities are likely to be subject to similar financial risks to those illustrated for the non-insured liabilities. However, the protection afforded by the buy-in asset means that any financial impacts will not affect the net funding position, as modelled under any of the climate scenarios already considered.
- The buy-in asset also provides full hedging for the insured liabilities against the demographic risks associated with climate change.
- Climate change is a systemic risk that will undoubtedly have profound impacts on the insurance sector over the coming years. To the extent that the insurer is unprepared for these changes, climate risk increases the chance that the insurer will be unable to meet the benefit payments promised. This risk is mitigated by the collateral agreement the Trustee has with the buy-in provider and the ability to take back the assets in the event the insurer goes out of business.
- The regulatory regime, the insurer's reserves and the financial services compensation scheme (to the extent this covers the policy) continue to protect against insurer default due to climate change as well as any other risk.

DC Section: Potential impacts on the assets identified by the scenario analysis

The scenario analysis looked at the retirement outcomes (in terms of size of their projected retirement pot) for individual members of different ages who are invested in the default strategy. The default strategy is the only "popular arrangement" within the DC Section. The analysis highlighted that DC section members will be subject to climate risk of varying degrees depending on both the scenario and the age of the member. Analysis was conducted for the default strategy for members at four different ages to reflect the different time to target retirement age (and therefore level of climate risk) at different points in the lifestyle.

Climate risks are expected to have a greater impact on return-seeking assets, such as equities. The default strategy has been designed in a way that reduces exposure to these types of assets as members approach retirement. As such, climate risks are also expected to reduce the closer a member is to retiring.

The main potential impacts under each scenario for the DC section were as follows:

- The Orderly Net Zero Transition led to the best outcome for members of all ages, as in this scenario physical climate risks are low, and transitional climate risks are well managed.
- The Disorderly Net Zero Transition includes a market shock in the short term which impacts return seeking assets the most. For younger members, whilst in a worse off position than under the Orderly Net Zero Transition scenario, there is still time for return seeking assets to recover through future investment returns and contributions. Members within 10 years of retirement hold a low and decreasing allocation to return-seeking assets so they are less impacted than younger members in this scenario.
- The failed transition has limited short term impacts of climate change, but larger long-term effects, as it assumes increasingly severe physical impacts emerge over time. This scenario therefore has a larger impact on younger members, who remain invested in the Plan for longer.

The table below shows the percentage change in the value of members' pots at retirement, relative to the climate uninformed scenario, across the three different scenarios and different starting ages.

Scenario	Member aged 25	Member aged 35	Member aged 45 (deferred)	Member aged 55
Orderly Net Zero Transition outcome	-9%	-6%	-8%	-2%
Disorderly Net Zero Transition outcome	-11%	-9%	-16%	-6%
Failed Transition outcome	-31%	-23%	-23%	-4%

The analysis confirmed the importance of managing climate related risks for members pots (which is considered in the "Risk Management" section).

The Trustee believes the assumption that members do not remain invested post-retirement is not realistic, particularly given their current expectation that a large proportion of the Plan members will choose to gradually withdraw their pension savings during retirement (i.e. drawdown). However, the current modelling capabilities does not allow the Trustee to consider members in retirement.

Potential impacts of climate change on Employer Covenant

The Plan's covenant adviser assessed the impact of climate change on the Plan's direct covenant provided by selected companies within TotalEnergies ("Group"), in their capacity as either sponsoring employers or guarantor.

Overall, the latest covenant assessment, dated November 2022, deemed the Plan's covenant to be strong (the highest of four rating bands). The factors considered in this overall rating included the trading performance and outlook for the direct covenant, and the extent it may be impacted by climate-related risks and opportunities.

The Trustee is aware that given the nature of the Group's business there is exposure to the impact of climate change on the employer covenant and wider Group, as well as opportunities as part of the transition to low-carbon energy.

The Group identifies, assesses, and manages climate related risks as shown below.

EXTRACT FROM TOTALENERGIES' RISK MAPPING

Following the recommendation of the task force on Climate-related Financial Disclosures

	Transition risks				Physical risks	
	Policy and legal risks	Technology risk	Market risk	Reputation risk	Acute risk	Chronic risk
Pace of the energy transition deployment, evolution of the demand	✓	✓	✓			
Financing of Oil & Gas reserves	✓		✓			
Operational risks related to the effects of climate change and extreme events	✓	✓			✓	✓
Risk of legal action	✓					
Reputation risk				✓		
Risks related to skills management and changes in jobs		✓	✓			

Source: TotalEnergies, Strategy, Sustainability & Climate. 20 March 2024. More information at TotalEnergies, More Energy, Less Emissions, Sustainability & Climate 2024 Progress Report, March 2024.

The Group's stated strategy recognises the balance of investment in the transition to low carbon energy while continuing to supply the energy needed by its customers, including a target of achieving worldwide gross installed capacity for renewable electricity of 35 GW by 2025 and 100GW by 2030. Notably, by the end of 2023 the Group reached a gross installed production capacity of 22 GW of renewable electricity.

The operations of the Plan's direct covenant are broadly aligned to the strategy of the Group including reducing carbon emissions and encouraging investment in low-carbon energies, recognising that the operations of most of the Plan's sponsoring employers are concentrated in the UK.

The Trustee is encouraged that the Group has interim 2025 and 2030 targets to support progression to the wider 2050 Net Zero target, with some of the 2025 and 2030 targets strengthened and the 2030 objectives monitored against the International Energy Agency Scenarios.

The Group identifies, assesses and manages climate related risks as shown below in the graphic following.
The sponsor has identified exposure to transition-related risks which are expected to materialise over the short-medium term time horizons under Orderly Net Zero Transition and Disorderly Net Zero Transition scenarios. The Group's targets for lowering the lifecycle carbon intensity of energy products sold (a 15% reduction by 2025 and a 25% reduction by 2030) put them on a trajectory close to the Announced Pledges Scenario (APS) in the International Energy Agency's ("IEA") World Energy Outlook 2023, which assumes that the States parties to the Paris Agreement fulfill all their net zero objectives.

Source: TotalEnergies, Strategy, Sustainability & Climate. 20 March 2024. More information at TotalEnergies, More Energy, Less Emissions, Sustainability & Climate 2024 Progress Report, March 2024.

The Trustee, with support from its covenant adviser, will continue to review these potential impacts and consider these alongside the overall Plan strategy.

Conclusions from the 2022 climate scenario analysis

Although financial markets and the Plan employers themselves are likely to face significant climate risks over the coming decades, the DB section's funding position is strong and projected to improve over time. The investment strategy is expected to provide a good degree of protection and enable the Plan to reach its long-term funding target within the medium-term time horizon. Given the output of the scenario analysis, the TCFDSG agreed that the current

investment and funding strategy is resilient when considering the climate risk and opportunities facing the Plan. The Trustee will continue to review the strategy, including timescales to reach the long-term funding target annually.

In practice, as the DB Section has purchased a second bulk annuity policy to cover the remaining DB liabilities, the reliance on the Plan employers is much reduced.

For the DC section there could be significant impacts on the size of retirement pots, particularly for younger members. The Trustee's decision to switch the equity allocation, within the lifestyle strategies, to a low carbon fund is expected to reduce the risk of market shocks from climate change on members investments. The Trustee has considered further changes to both the default investment strategy and other member options since, including increasing the allocation to low carbon global equities in the default in 2023, and the further fund selections for new asset classes in the default in 2024.

The scenario analysis conducted in 2022 helped the Trustee to identify the key risks and opportunities facing both sections of the Plan (see further details below). The Trustee agreed that it was important to manage these climate risks and has fed the results of the climate scenario analysis into its risk management framework for both sections through specific investment, funding and covenant focused considerations and the interactions of these. Further details of the risk management process in place are include in the "Risk Management" section of this report.

Risk Management

1. Processes and tools for identifying and assessing climate-related risks

The processes and tools for identifying and assessing the Plan's climate-related risks have remained unchanged over the Plan Year.

The Trustee continues to implement a number of processes and tools for identifying, assessing and managing climate related risks and opportunities for the Plan, including:

- attending climate related training to understand how climate-related risks might affect pension schemes and their investments in general terms (see page 10);
- conducting high-level analysis on the Plan's exposures to climate risks and areas of opportunity at an overall portfolio level;
- undertaking climate scenario analysis which shows how the Plan's assets and liabilities might be affected under a range of climate scenarios at least triennially;
- receiving advice on how the sponsoring employers and guarantor might be impacted by climate-related factors and inclusion of these factors in its regular covenant monitoring;
- reviewing its investment adviser's assessments of the Plan's current and prospective investment managers' climate practices, including how they incorporate climate-related considerations into their investment processes and how effectively they manage climate related risks;
- ensuring good stewardship practices are in place;
- monitoring a range of climate-related metrics in relation to the Plan's assets, and tracking the progress of one metric against a target which is set by the Trustee and reviewed as appropriate;
- engaging with the Plan's investment managers following a review of the climate-related metrics, to ask for clarification on the metrics provided where necessary and to highlight where the Trustee expects to see improvements in future.

In addition, the Trustee expects its investment managers to identify, assess and manage climate-related risks to the Plan's assets on a day-to-day basis. The above processes are integrated into the overall risk management of the Plan through the terms of reference, the risk register (climate focussed investments risk and investment performance risk) and regular support from its advisers.

2. Investment Manager assessments

Review of managers' approaches to climate risks and opportunities

In March 2024, the Trustee reviewed the DB and DC Section's (default strategy) investment managers' climate approaches , with the help of its investment adviser, LCP. The Trustee analysed the managers' practices for funds held during the year to 31 December 2023. The assessment was based on LCP's ongoing investment manager research and monitoring process. The investment managers are asked a series of product-specific questions on their responsible investment practices. To compare scores across all products / funds, LCP uses the same structured approach across all asset classes.

Factors assessed include:

- ESG integration
- Voting & engagement (stewardship)
- Climate risk management practices; and
- Alignment with the transition to net zero greenhouse gas emissions.

The assessment provided key information on the actions taken by the managers to integrate good climate practices into the running of their firms. **In the DB section, most managers attained "amber" (moderate) ratings , reflecting that managers can improve integration of climate-related risks and opportunities into the funds / mandates held during the year to 31 December 2023.**

Given that the Plan will have redeemed from the DB Section's invested assets by 30 June 2024 in light of anticipated bulk annuity purchase, the Trustee saw limited benefit in engaging with existing investment managers (pre-bulk annuity policy purchase). **Therefore, the Trustee was comfortable with the DB managers' scores and will aim to**

focus engagement with the insurer (PIC). Please see Metrics section of this report for further information regarding the Trustee's engagement with PIC.

In the DC section, most active funds obtained a "green" rating in the RAG rating system. **The L&G Low Carbon Transition Global Equity Index Fund also received a green rating.** The rest of the Plan's passive funds received a red rating, reflecting that for passive funds that do not take climate into account in the index design, the only way for them to address climate change is via stewardship.

Changes to investment mandates

If the TCFDSG identifies any concerns with the way one of the Plan's managers addresses climate related risks and opportunities, it will initially engage with the manager to raise concerns and seek improvements, in line with the Trustee's escalation policy that is outlined in the Trustee's Investment Policy Document. The escalation policy sets out clearly how the Trustee defines the issue, engages with the manager, agrees an improvement plan, reviews progress versus the plan and escalates the issue if necessary. If the manager does not sufficiently improve, the TCFDSG may recommend the IC switch to a different manager. **This escalation policy remains unchanged over the year and no manager changes were made due to concerns over their climate approaches in the DB Section.**

In the DC section, the Trustee undertook fund selection exercises for multiple asset classes within the default arrangement, during this process the Trustee considered the managers approaches to climate change and the funds' scores on the Plan's chosen climate metrics. In particular, the Trustee pursued the selection of an active corporate bond fund for the Plan's default in place of passive funds, as active funds can better integrate climate change considerations in the investment process. In addition to this, during the year covered by this review, the implementation of the agreed changes to the Growth Fund took place, transitioning the Fund from being 50% invested in low carbon global equities to 100% invested in low carbon global equities. This transition was completed in December 2023 and reduced the overall emissions of the equity allocation.

When implementing new mandates the Trustee incorporates its climate-related risk beliefs in the selection process for potential managers.

Engagement and other stewardship activities

The Trustee expects the Plan's investment managers to engage with investee companies on climate-related (and other) matters. The Trustee generally believes that engaging with companies is more effective at encouraging change than selling the Plan's investments in those companies.

The review of managers' climate approaches showed that all but two of the Plan's managers frequently engaged with portfolio companies on climate change. All managers provided examples of engagement on climate change within the Plan's mandates as part of LCP's ongoing manager due diligence.

The Trustee approved the stewardship priorities (climate change, human rights and business ethics) in January 2023 and communicated the agreed priorities to the investment managers. At the March 2024 meeting, the IC agreed to maintain the same priorities and hence have remained unchanged over the year to 30 June 2024.

More information on the Trustee's stewardship activities can be found in the Plan's Implementation Statement.

3. Monitoring climate-related risks to the Plan

The Trustee has integrated climate change into the Plan's risk management processes, including the Risk Register, covenant monitoring and investment monitoring.

Risk Register

The Trustee maintains a Risk Register which covers all aspects of the Plan's activities. Investment risks are reviewed in detail by the IC, and at a high level by the Trustee Board and other Committees such as the TCFDSG and the DCOG.

Each risk is rated as an uncontrolled risk and a controlled risk, both on a red, amber, green ("RAG") scale. For the avoidance of doubt green ratings have the lowest risk attributed to them. Risks are considered on a line-by-line basis at least annually, and the Trustee will give each risk a RAG rating following discussion and agreement. Risks which remain after controls are considered highest priority.

Over the Plan Year, the Trustee did not make any updates to the risk register.

Covenant monitoring

The Plan's covenant adviser, PricewaterhouseCoopers LLP, undertakes an assessment of the Plan's direct covenant from time to time, with the last assessment taking place in November 2022.

The assessment includes specific consideration of the impact and progress of the climate strategy for the sponsoring employers and guarantor, its alignment with the wider Group and any implications on the long-term covenant outlook and implications on the overall Plan strategy.

4. Investment monitoring

In addition to the review of managers' climate approaches, the IC reviews LCP's RI scores for the Plan's managers and funds, which consider climate factors, on a biennial basis or whenever a new fund is considered.

The IC aims to meet at least one of its investment managers at each IC meeting. During these meetings the IC discusses climate change with the managers to increase its understanding of the Plan's climate related risks and challenge the adequacy of the steps being taken to manage them. Given the buy-in and review of the buy-in providers, the IC only met with one of its investment managers during the year. This was in line with expectations for the year given the focus on the buy-in.

Metrics and Targets

1. Metrics

This section explains the metrics and targets the Trustee has set to help measure, manage and disclose climate-change impact.

Metrics – DB and the DC section default investment strategy

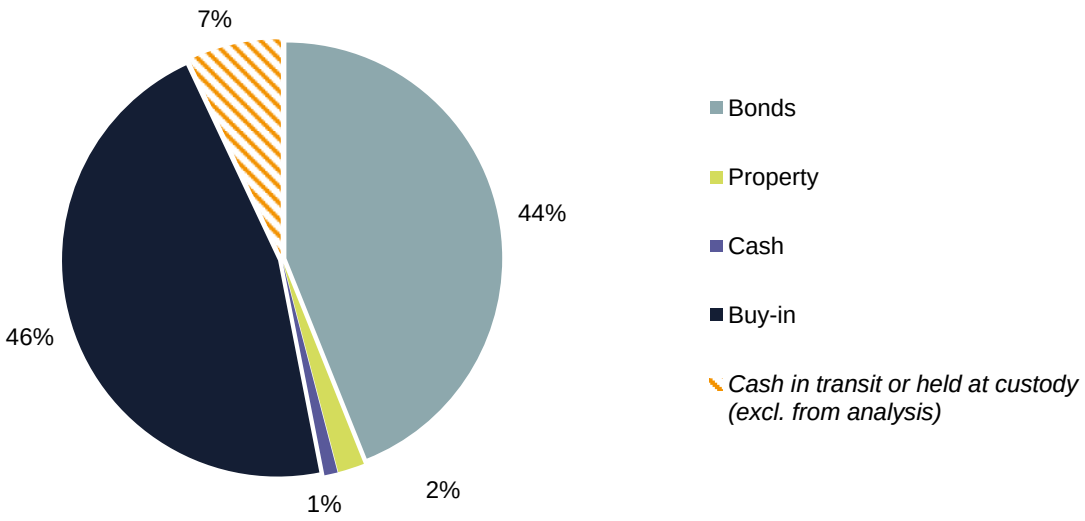
The Trustee has chosen four climate-related metrics to help it monitor climate-related risks and opportunities to the Plan. These are listed below and reported for the DB and DC section (as far as the Trustee was able to obtain the data).

Metric	High-level methodology
Absolute emissions: Total greenhouse gas emissions (t/CO2e)	The sum of each company's most recent reported or estimated greenhouse gas emissions attributable to the Plan's investment in the company, where data is available. Emissions are attributed evenly across equity and debt investors. Reported in tonnes of CO_2 equivalent. This methodology was chosen because it is in line with the statutory guidance.
Emissions intensity: Carbon footprint (tCO2e/£M)	The total greenhouse gas emissions described above, divided by the value of the invested portfolio in £m, adjusted for data availability. Emissions are attributed evenly across equity and debt investors. Reported in tonnes of CO_2 equivalent per £1m invested. This methodology was chosen because it is in line with the statutory guidance.
Portfolio alignment: Science-based targets (SBT alignment in %)	The proportion of the portfolio by weight of holdings with science-based targets to reduce their greenhouse gas emissions, demonstrated by a target validated by the Science Based Targets initiative (SBTi) or equivalent. This measures the extent to which the Plan's investments are aligned to the Paris Agreement goal of limiting global average temperature rises to 1.5°C. Reported in percentage terms. The Trustee chose this "binary target" measure because it is the simplest and most robust of the various portfolio alignment metrics available.
Data quality	The proportion of the portfolio for which greenhouse gas emissions data is verified, reported, estimated or unavailable. "Verified" emissions refers to data reported by the emitting company and verified by a third party. "Reported" emissions are reported by the emitting company but not verified. This approach was chosen because it is in line with the statutory guidance.

Further information about the methodologies used to calculate the metrics, including key judgements, assumptions, data inputs and treatment of data gaps is provided in Appendix 3.

The data has been calculated using portfolio holdings as at 31 March 2024 (excluding the Trustee bank account), using the most recent data available from the investment adviser's appointed climate metrics provider, MSCI, and the Plan's investment managers.

DB asset allocation as at 31 March 2024*



*The figures in the pie chart have been scaled to reflect the exclusion of DC assets (c16% as at 31 March 2024)

TotalEnergies DB Section coverage of the Plan's investments

Asset class (% DB Section assets)	Details of missing data or estimations
Bonds (44%)	LCP Estimate (Appendix 3)
Property (2%)	Manager provided data
Cash (1%)	Manager provided data
Buy In (46%)	Insurer provided data
Cash in transit or held at custody – BlackRock (DGF) and MFS (active equities) (7%)	*Excluded from analysis* ***These assets have been redeemed or are undergoing redemption as at 31 March 2024 and had not been reinvested***

TotalEnergies DC Section coverage of the Plan's investments

Asset class (% DC Section assets)	Details of missing data or estimations
Equities (66%)	Manager provided data (current Plan year); LCP Climate Dashboard (Appendix 3) was used for the previous Plan year.
Diversified Growth (18%)	
Bonds (12%)	LCP Estimate (Appendix 3) and Manager provided data (current Plan year); LCP Climate Dashboard (Appendix 3) was used for the previous Plan year.
Property (2%)	Manager provided data
Cash (2%)	Manager provided data

DB metrics breakdown

Manager, asset class and valuation as at 31 March 2024 (£m)[1]		Scope 1 and 2 emissions (for holdings with data)				Scope 3 emissions (for holdings with data)		Portfolio alignment	Data Quality (Scope 1 & 2 Emissions)	Data Quality (Scope 3 Emissions)	Source
		Coverage [2]	Total GHG emissions (tCO_2e)[2]	Carbon footprint (tCO_2e/£m)	Coverage[2]	Total GHG emissions (tCO_2e)[2]	Carbon footprint (tCO_2e/£m	Proportion with SBT (%)			
Property – LaSalle (Direct)[5,6]	£14m / 1% (£24m / 1%)	-	-	-	-	-	-	-	-	-	-
Property – LaSalle (Indirect)[5]	£20m / 1% (£108m / 4%)	88% (99%)	200 (1,445)	11 (14)	88%	234	13	85% (20%)	88% reported / 12% no data	88% reported / 12% no data	Manager (Manager)
All Stocks Index-linked gilts – L&G	£27m / 1% (£29m / £1%)	100% (100%)	4,455 (5,337)	163 (181)	100%	3,461	126	100% (100%)	100% reported	100% reported	LCP estimate (LCP estimate)
Over 15 Yr Index-linked gilts – L&G	£251m / 9% (£311m / 12%)	100% (100%)	40,790 (56,424)	163 (181)	100%	31,692	126	100% (100%)	100% reported	100% reported	LCP estimate (LCP estimate)
Bespoke portfolio – CTI	£730m / 27% (£435m / 16%)	**CTI metrics have been calculated for its gilt holdings <u>only</u>**									
CTI Gilts holdings[3,4]	*£703m (£379m)*	100% (100%)	114,305 (68,738)	163 (181)	100%	88,809	126	100% (100%)	100% reported	100% reported	LCP estimate (LCP estimate)
Liquidity fund – L&G	£26m / 1% (£1m / 0%)	53% (68%)	12 (1)	<1 (1)	52%	2,820	208	11% (1%)	53% reported / 47% no data	22% reported / 31%estimated / 47% no data	Manager (Manager)
Buy-in – PIC[5]	£1,039m / 38% (£1,103 / 41%)	55% (60%)	62,288 (61,139)	109 (63)	28%	130,623	449	25% (8%)	51% reported / 4% estimated / 45% no data	18% reported / 10% estimated / 72% no data	Insurer (Insurer)

Cash in Transit or held at custody – BlackRock (DGF) and MFS (active equities)	£170m / 6%	***Assets that have been redeemed prior to 31 March 2024 but had not been reinvested, we have excluded these holdings from the analysis***

Source: Investment managers, insurer, LCP

[1] Assets % are for the Plan as a whole (ie unscaled). Figures in brackets relate to the previous Plan year to 30 June 2023. **Scope 3 emissions data was not reported last year, therefore a comparison is not available for this year's report.**

[2]Figures relate only to the assets for which data is available. **Total emissions are for the DB section assets, not the whole fund/mandate.**

[3]The Scope 1 & 2 emissions have been calculated by multiplying the GHG emissions per £ of government debt with the 31 March 2024 value of UK government bonds. The Scope 1 & 2 carbon footprint has been calculated by dividing the Total Greenhouse Gas emission of the UK Government (2020, tons, production-based) by the UK total government debt (net debt). Please see the Appendix for further details on the LCP estimate.

[4]The Scope 3 emissions have been calculated by multiplying the GHG emissions per £ of government debt with the 31 March 2024 value of the government bonds. The Scope 3 carbon footprint has been calculated by dividing the Total Greenhouse Gas emission of the UK Government (2020, tons, production-based) by the UK total government debt (net debt). Please see the Appendix for further details on the LCP estimate.

[5] Emissions, carbon footprint, coverage and data quality data for LaSalle (Indirect) are all stated as at 31 December 2022. LaSalle emission figures relating to tenant electricity use are location-based (ie calculated using the average emissions intensity of the electricity grid where the property is located). The PIC emissions, carbon footprint, coverage, data quality and SBTs % data are all as at 31 December 2023. Total greenhouse gas emissions are based on 31 March 2024 asset values. **Note £13m of the LaSalle indirect holdings are held in cash.**

[6]LaSalle Direct property emissions figures have been excluded on materiality grounds given the Plan fully sold out of these holding on 10 April 2024.

DC metrics breakdown

Manager, asset class and valuation as at 31 March 2024 (£m)[1]		Scope 1 and 2 emissions (for holdings with data)			Scope 3 emissions (for holdings with data)			Portfolio alignment	Data Quality (Scope 1 & 2 Emissions)	Data Quality (Scope 3 Emissions)	Source
		Coverage	Total GHG emissions (tCO_2e)	Carbon footprint (tCO_2e/£m)	Coverage	Total GHG emissions (tCO_2e)	Carbon footprint (tCO_2e/£m)	Proportion with SBT (%)			
Low Carbon Transition Global Equity Index Fund (Hedged) – L&G	£122m / 4% (-)	98% (-)	2,222 (-)	19 (-)	98%	69,917	578	45% (-)	90% reported / 8% estimated / 2% no data	63% reported / 35% estimated / 2% no data	Investment Manager (-)
Low Carbon Transition Global Equity Index Fund – L&G	£119m / 4% (£96m / 4%)	98% (85)	2,173 (1,536)	19 (16)	98%	68,236	577	45% (33%)	90% reported / 8% estimated / 2% no data	63% reported / 35% estimated / 2% no data	Investment Manager (MSCI)
Sustainable Multi Asset Fund[3] – Schroders	£33m / 1% (£26m / 1%)	64% (16%)	880 (299)	42 (75)	62%	6,242	305	53% (5%)	57% reported / 7% estimated / 36% no data	62% estimated / 38% no data	Investment Manager (MSCI)
DC Diversified Growth Fund[3]- BlackRock	£33m / 1% (£26m / 1%)	79% (50%)	943 (874)	36 (72)	79%	7,803	301	23% (17%)	72% reported / 7% estimated / 21% no data	79% estimated / 21% no data	Investment Manager (MSCI)
Over 5 Year Index Linked Gilt Fund – L&G	£12m / 0% (£10m / 0%)	100% (100%)	1,916 (1,739)	163 (181)	100%	1,489	126	100% (0%)	100% reported	100% reported	LCP Estimate (LCP Estimate)
AAA-AA-A Bonds Over 15 Year Index Fund – L&G	£11m / 0% (£9m / 0%)	30% (27%)	540 (68)	163 (29)	22%	6,861	2,778	15% (15%)	28% reported / 2% estimated / 70% no data	20% reported / 3% estimated / 78% no data	Investment Manager (MSCI)

Over 15 Year Gilt Index Fund – L&G	£10m / 0% (£8m / 0%)	100% (100%)	1,671 (1,437)	163 (181)	100%	1,298	126	100% (0%)	100% reported	100% reported	LCP Estimate (LCP Estimate)
Cash Fund – L&G	£8m / 0% (£8m / 0%)	82% (71%)	470 (362)	67 (46)	21%	544	301	0% (-)	82% reported / 18% no data	14% reported / 7% estimated / 79% no data	Investment Manager (Investment Manager)
Overseas Bond Index Fund – L&G	£7m / 0% (£5m / 0%)	96% (96%)	1,352 (602)	170 (118)	91%	484	64	80% (0%)	96% reported / 4% no data	91% reported / 9% no data	Investment Manager (Investment Manager)
Hybrid Property (70:30) Fund – L&G	£7m/ 0% (£5m / 0%)	34% (30%)	36 (36)	16 (7)	34%	164	71	15% (11%)	31% reported / 2% estimated / 67% no data	16% reported / 18% estimated / 66% no data	Investment Manager (Investment Manager)
Sustainable Sterling Short Duration Credit Fund - BlackRock	£5m / 0% (£4m / 0%)	86% (74%)	155 (249)	38 (82)	84%	1,001	250	33% (24%)	78% reported / 8% estimated / 14% no data	84% estimated / 16% no data	Investment Manager (MSCI)

Source: Investment managers, MSCI and LCP.
[1] Assets % are for the Plan as a whole. [2] Figures relate only to the assets for which data is available. [3] The DC section disinvested from the Fund in April 2024. Figures in brackets relate to the report for the previous Plan year to 30 June 2023, where available.

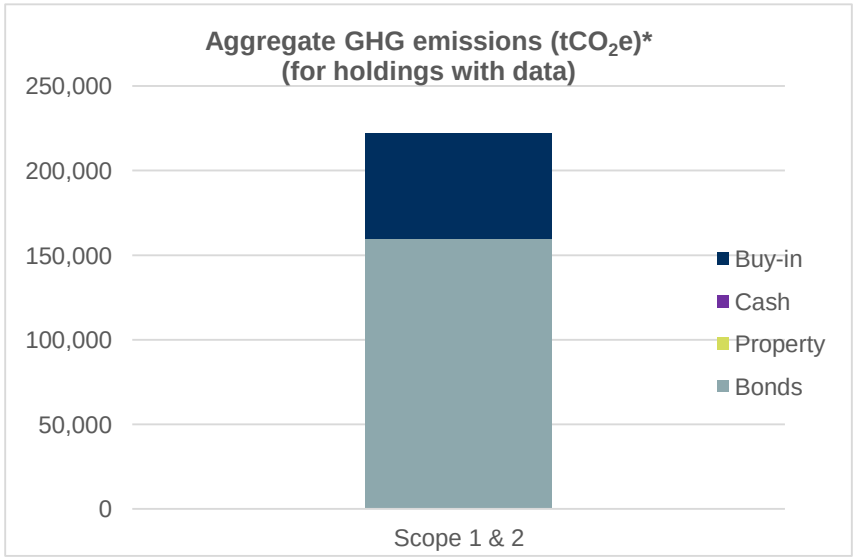
See Appendix 3 for more details, including how to interpret data where coverage is less than 100%. Scope 3 emissions data was not reported last year, therefore a comparison is not available

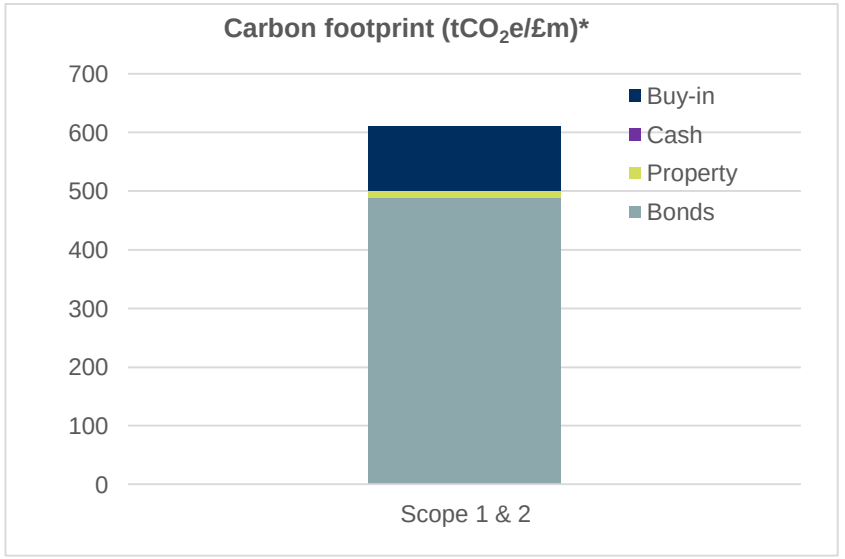
Emissions targets covered per asset class – DB Section

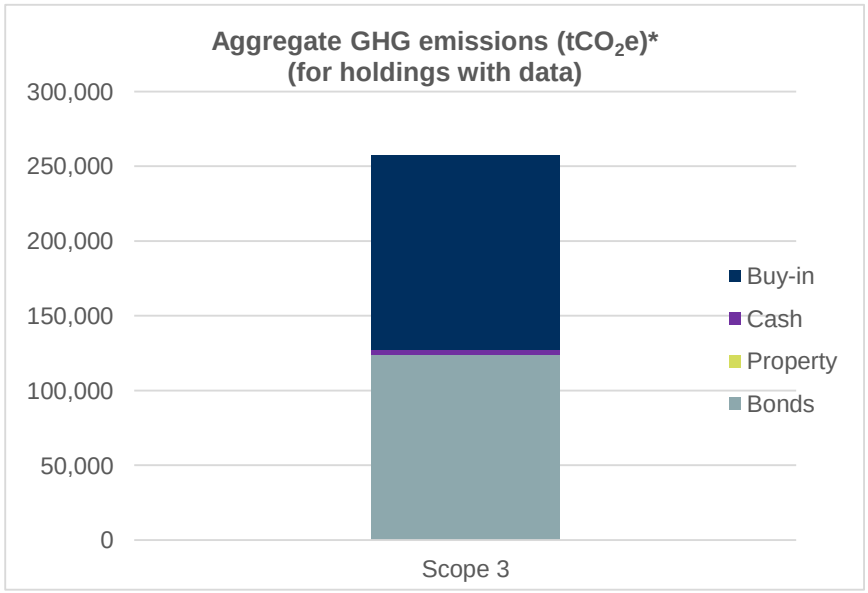
The charts below summarise the data shown on the previous pages. The next four pages give a breakdown of the data quality for the four metrics by asset class excluding cash and synthetic equities. The total carbon emissions and carbon footprint are given for each of listed asset classes shown below. Naturally, the funds with the largest assets and percentage of data reported have the largest total carbon emissions and carbon footprint.

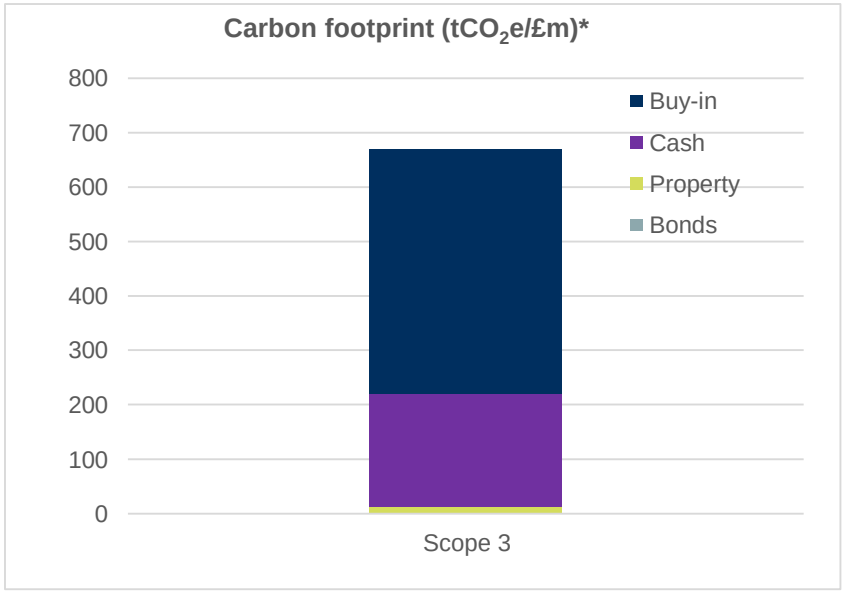
The Plan's allocation to matching UK government bonds (~44% of total DB assets) is driven by the DB Section's de-risking implementation over the last Plan Year and subsequent further investments into matching / gilt assets. Hence, climate related objectives are not a material driver of the strategic decision to invest in this asset class. As disclosed in Appendix 3, the data is wholly estimated using UK government macroeconomic (GDP and debt levels) data. Therefore, the UK government's climate change policies will have an important economic influence on the DB Section emissions data.

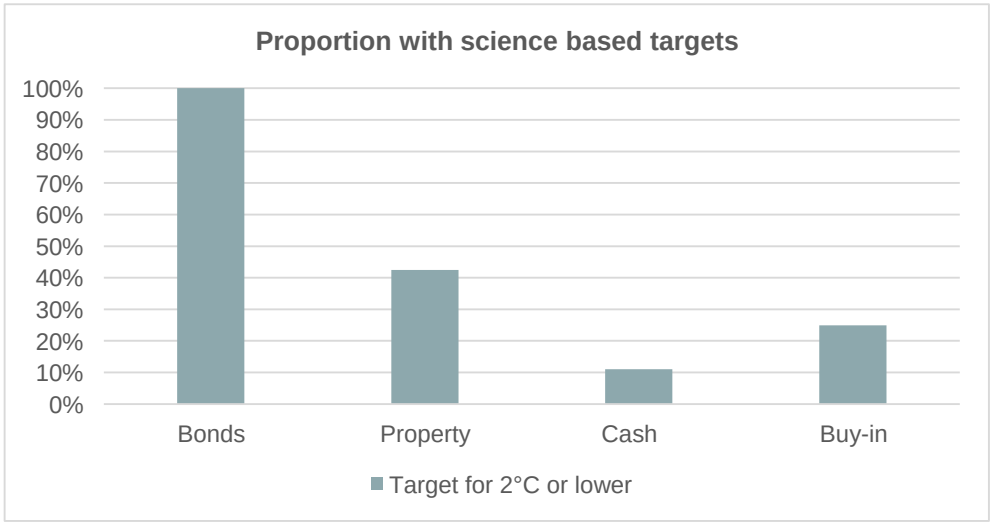
The Plan also has significant climate risk exposure through its buy-in assets (~46% of total DB assets). The Plan's exposure lies in tail risk scenarios where climate factors affect the insurer's solvency; the insurer's climate risk management practices are therefore more relevant.



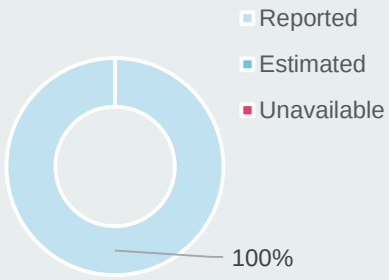
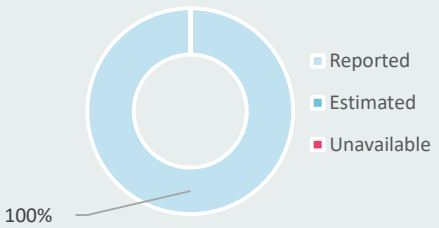
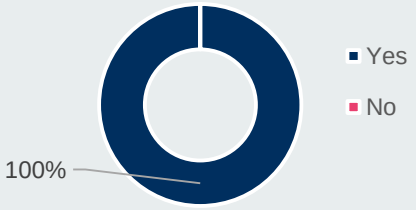
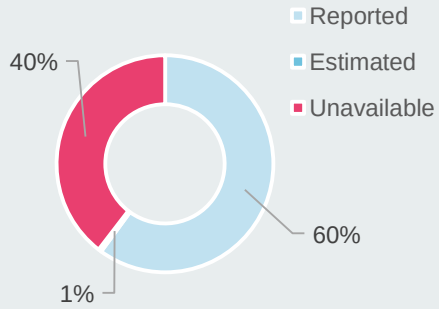
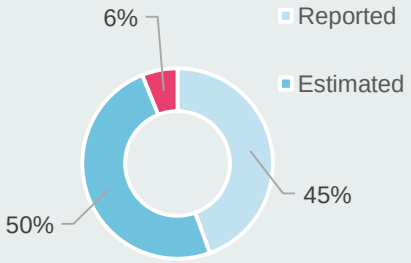
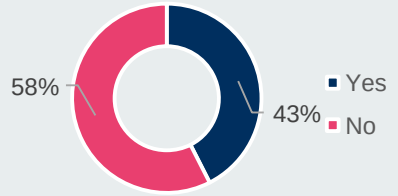
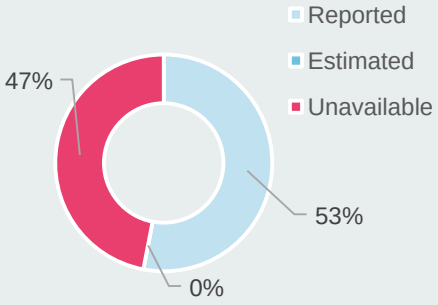
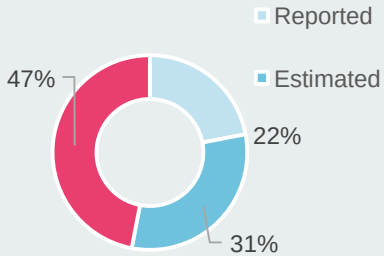
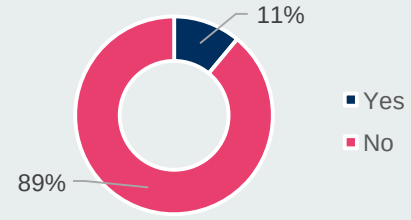




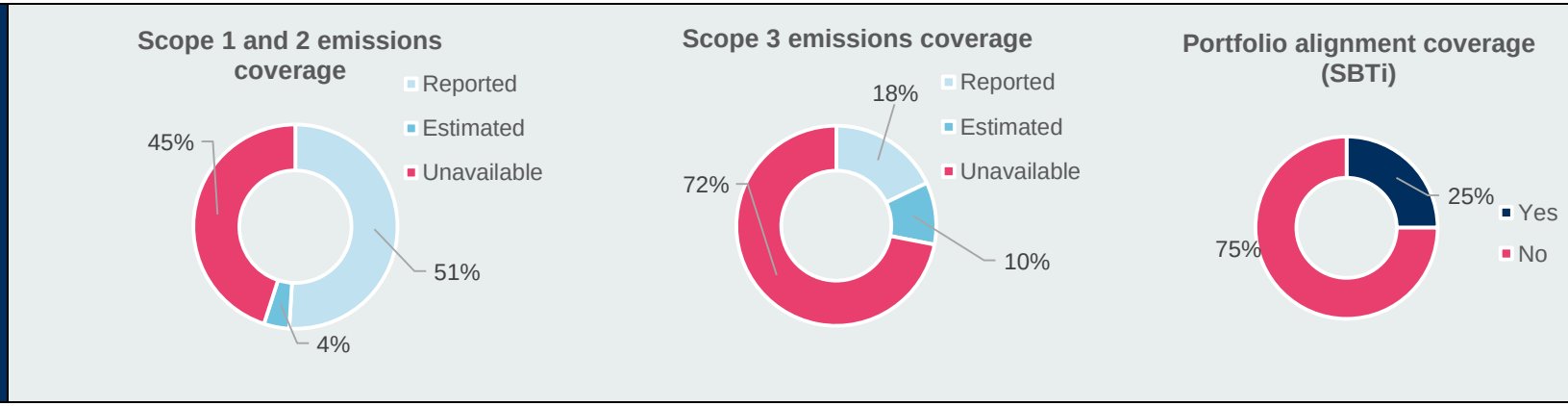




Source: Investment managers, Insurer and LCP.
*Figures relate only to the assets for which data is available, ie portfolio value * carbon footprint * coverage. Total emissions are for the Plan's assets, not the whole pooled fund.

Bonds **31 March 2024** **£981m**	**Scope 1 and 2 emissions coverage** 	**Scope 3 emissions coverage** 	**Portfolio alignment coverage (SBTi)** 
Property **31 March 2024** **£34m**	**Scope 1 and 2 emissions coverage** 	**Scope 3 emissions coverage** 	**Portfolio alignment coverage (SBTi)** 
Cash **31 March 2024 £26m**	**Scope 1 and 2 emissions coverage** 	**Scope 3 emissions coverage** 	**Portfolio alignment coverage (SBTi)** 

Buy-in
31 March 2024
£1,039m



Source: Investment managers, Insurer and LCP. Total may not sum to 100%.

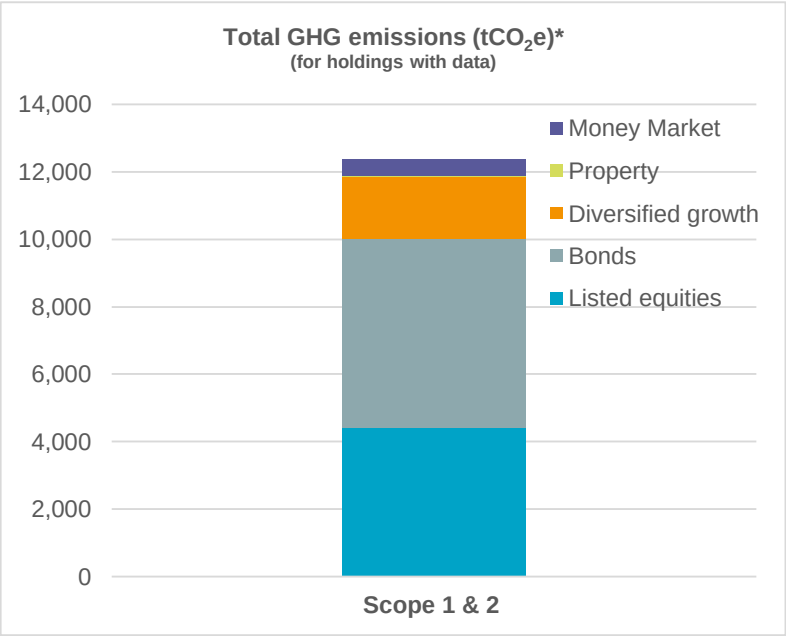
Buy-in emissions and coverage data as at 31 December 2024.

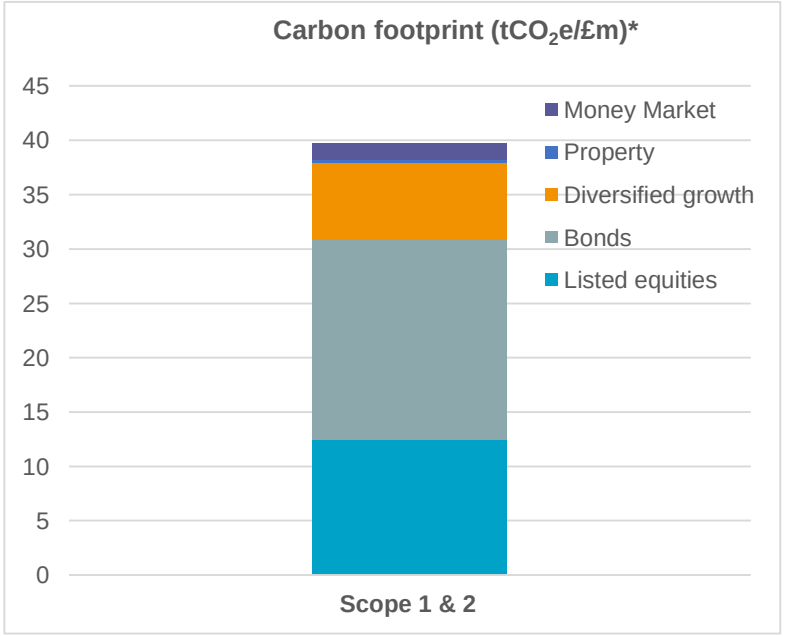
The Trustee expects the metrics scores to improve over time as data quality improves and climate practices and industry standards develop.

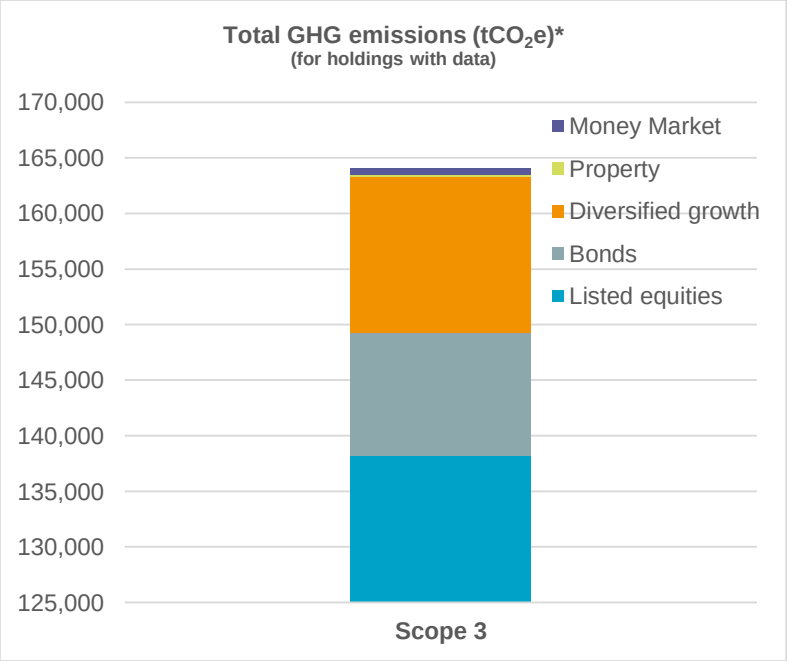
Emissions targets covered per asset class – DC Section

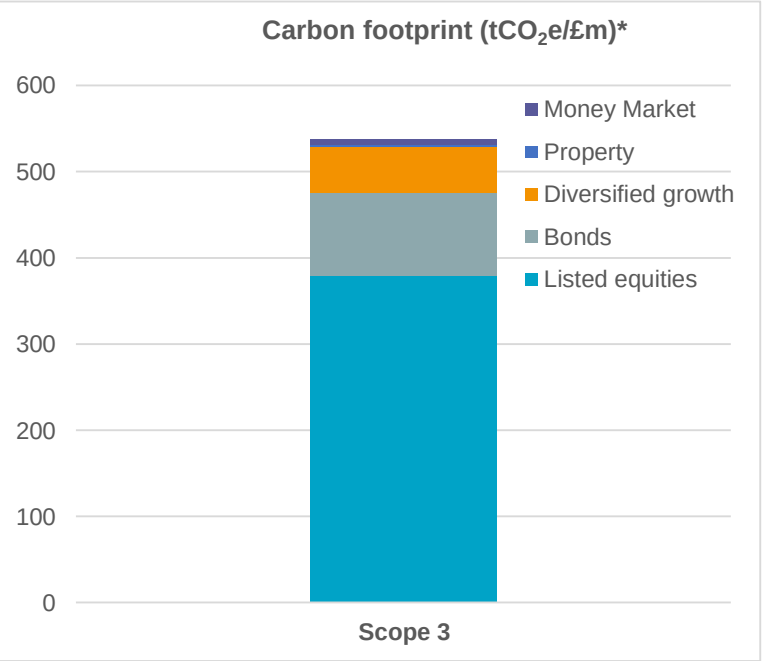
The charts below summarise the data for the DC Section. The next four pages give a breakdown of the data of the four metrics. Equities form by far the largest part of the DC assets given they make up 100% of the Growth Fund which is where most members are invested. The scenario analysis highlighted that equity exposure had the potential to cause some of the largest impacts on members.

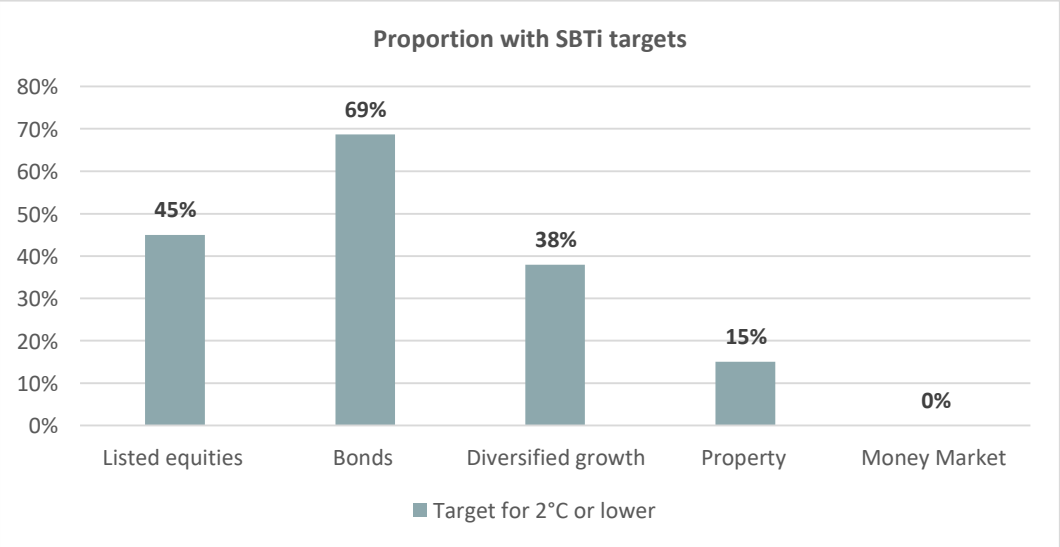
The DC Section also has exposure to climate risk through the diversified growth fund allocations. The current diversified growth fund, the Schroders Sustainable Multi-Asset Fund, makes up 50% of the Diversified Multi-Asset Fund. Note that this analysis also includes climate metrics for the BlackRock DC Diversified Growth Fund, which the DC section disinvested from in April 2024, transferring all assets into the Schroders Sustainable Multi-Asset Fund. Prior to this the allocation was split 25% in the Schroders fund and 25% in the BlackRock fund. Both of these diversified growth funds have relatively higher carbon footprints than the equity allocation.

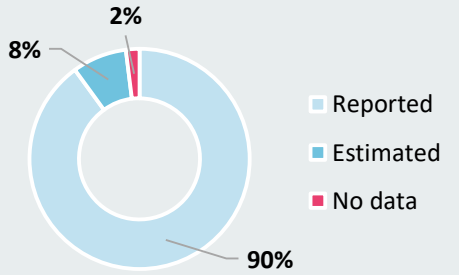
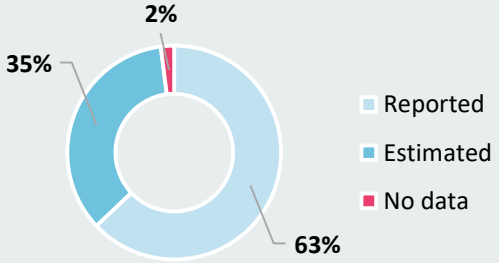
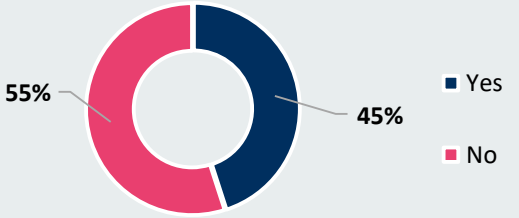
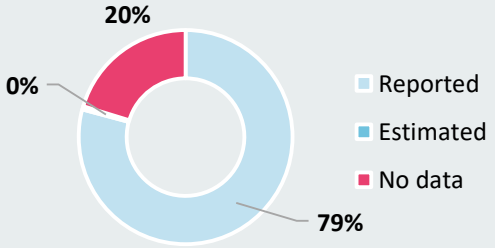
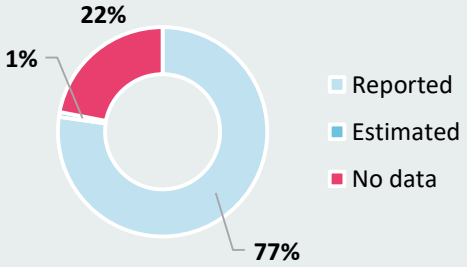
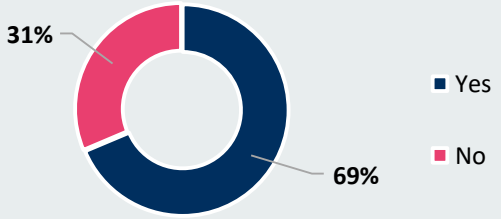
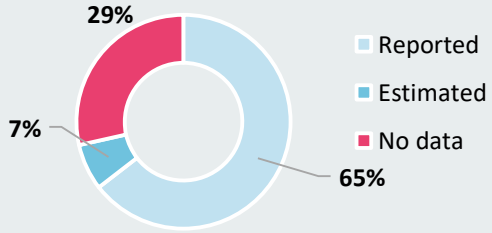
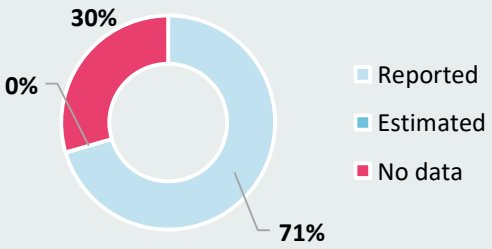
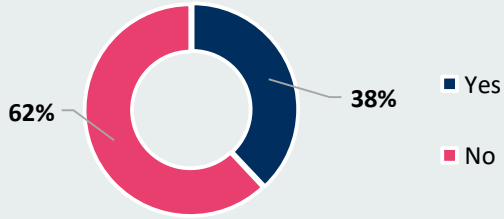

Total GHG emissions (tCO_2e)*
(for holdings with data)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Money Market
Property
Diversified growth
Bonds
Listed equities
Scope 1 & 2

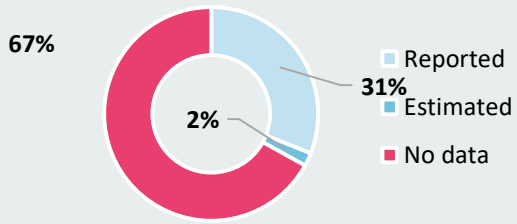
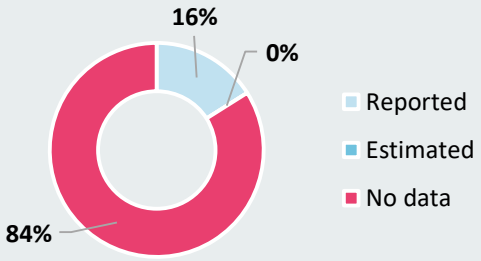
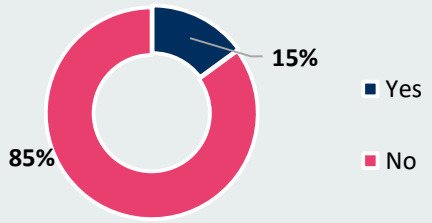
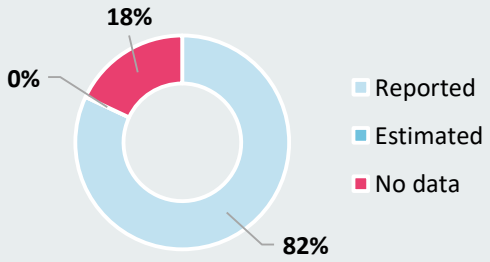
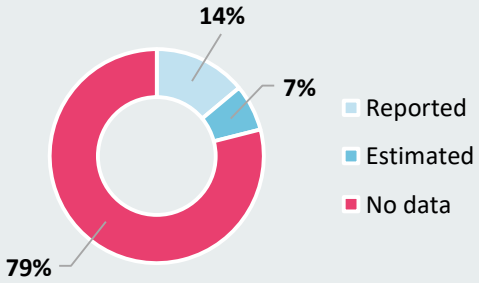
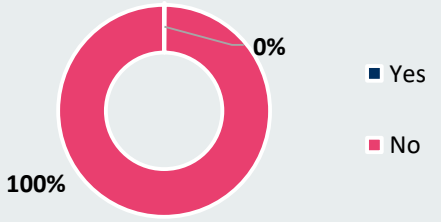

Carbon footprint (tCO_2e/£m)*
45
40
35
30
25
20
15
10
5
0
Money Market
Property
Diversified growth
Bonds
Listed equities
Scope 1 & 2


Total GHG emissions (tCO_2e)*
(for holdings with data)
170,000
165,000
160,000
155,000
150,000
145,000
140,000
135,000
130,000
125,000
Money Market
Property
Diversified growth
Bonds
Listed equities
Scope 3


Carbon footprint (tCO_2e/£m)*
600
500
400
300
200
100
0
Money Market
Property
Diversified growth
Bonds
Listed equities
Scope 3


Proportion with SBTi targets
80%
70%
60%
50%
40%
30%
20%
10%
0%
45%
69%
38%
15%
0%
Listed equities
Bonds
Diversified growth
Property
Money Market
Target for 2°C or lower

Listed equities 31 March 2024 £241m	**Scope 1 and 2 Emissions Coverage** 	**Scope 3 Emissions Coverage** 	**Portfolio Alignment Coverage (SBTi)** 
Bonds 31 March 2024 £45m	**Scope 1 and 2 Emissions Coverage** 	**Scope 3 emissions quality** 	**Portfolio alignment coverage (SBTi)** 
Diversified Growth Fund 31 March 2024 £66m	**Scope 1 and 2 Emissions Coverage** 	**Scope 3 Emissions Coverage** 	**Portfolio Alignment Coverage (SBTi)** 

Property 31 March 2024 £7m	**Scope 1 and 2 emissions quality** 	**Scope 3 Emissions Coverage** 	**Portfolio Alignment Coverage (SBTi)** 
Money Market 31 March 2024 £8m	**Scope 1 and 2 emissions quality** 	**Scope 3 emissions quality** 	**Portfolio Alignment Coverage (SBTi)** 

Source: Investment managers, LCP.
Reported by permission. See Appendix 3 for more details.

2. Target

The Trustee has set the following targets:

Section	Target	Section coverage	Section performance against target	Reference date
DC	**75% of physical listed equity investments to have set SBTi targets by 2030**	Listed equities of the DC default strategy **(~66%** of the DC default funds)	**~45%** of the DC section's physical listed equities in the default strategy had set SBTi targets.	31 March 2024
DB	**PIC is to have 90% data coverage (at minimum) across scope 1 and scope 2 by 2030**	46% of the DB section is made up of bulk annuities purchased from PIC	**~50% coverage as at 31 December 2023**	31 December 2023

In setting the target the Trustee had regard to the targets set by the Plan's investment managers as well as the sponsor.

The Trustee selected a portfolio alignment target for the DC Section as this is considered a positive way to encourage de-carbonisation across the Plan's invested assets vs an emissions target which can be achieved superficially through restructuring the Plan's investments. The target date was agreed as a significant date with reference to climate change as a target date in the Paris Agreement and the 2030 Agenda for Sustainable Development.

For the DB Section, the target effective over the Plan Year until the June 2024 IC meeting was the same as the DC Section (see above table for further information) . The initial performance against the target was not possible to be determined as the Trustee materially de-risked over the Plan Year and as at 31 March 2024 held no equity assets.

At the June 2024 IC meeting, the Trustee opted to amend the previous portfolio alignment target to a data quality target metric. This is due to the Section having made full redemption from all growth assets and purchasing the second bulk annuity asset with PIC by mid-June 2024 and therefore most of the assets are with the insurer. Therefore, the Trustee believed that focussing on data quality of insurer will be more relevant for the Section going forward.

The following steps are being taken to achieve the target:

The Trustee, with help from its investment adviser, has communicated the target to each investment manager and insurer where relevant.

Investment managers are routinely invited to present at Trustee meetings as part of the existing monitoring process. When meeting with any of the Plan's investment managers, the Trustee may ask the manager how they expect the proportion of portfolio companies with SBTi-validated targets to change over time and encourage the manager to engage with portfolio companies about setting SBT, prioritising those with the highest carbon footprint. Where relevant, it will ask the manager about "equivalent" methods of assessing whether emissions reduction targets are science-based, for example for holdings for which SBTi validation is not available or not well suited, with a view to extending the coverage of the SBT metric.

The investment adviser encourages managers to support the goal of net zero emissions by 2050 or earlier and has published its expectations for investment managers in relation to net zero. This includes the use of effective voting (where applicable) and engagement with portfolio companies to encourage achievement of net zero. The investment adviser continues to engage with managers on this topic and will encourage them to use their influence with portfolio companies to increase the use of SBT.

The Trustee will review progress towards the target each year and consider whether additional steps are needed to increase their chance of meeting the target.

_____ Date: _____

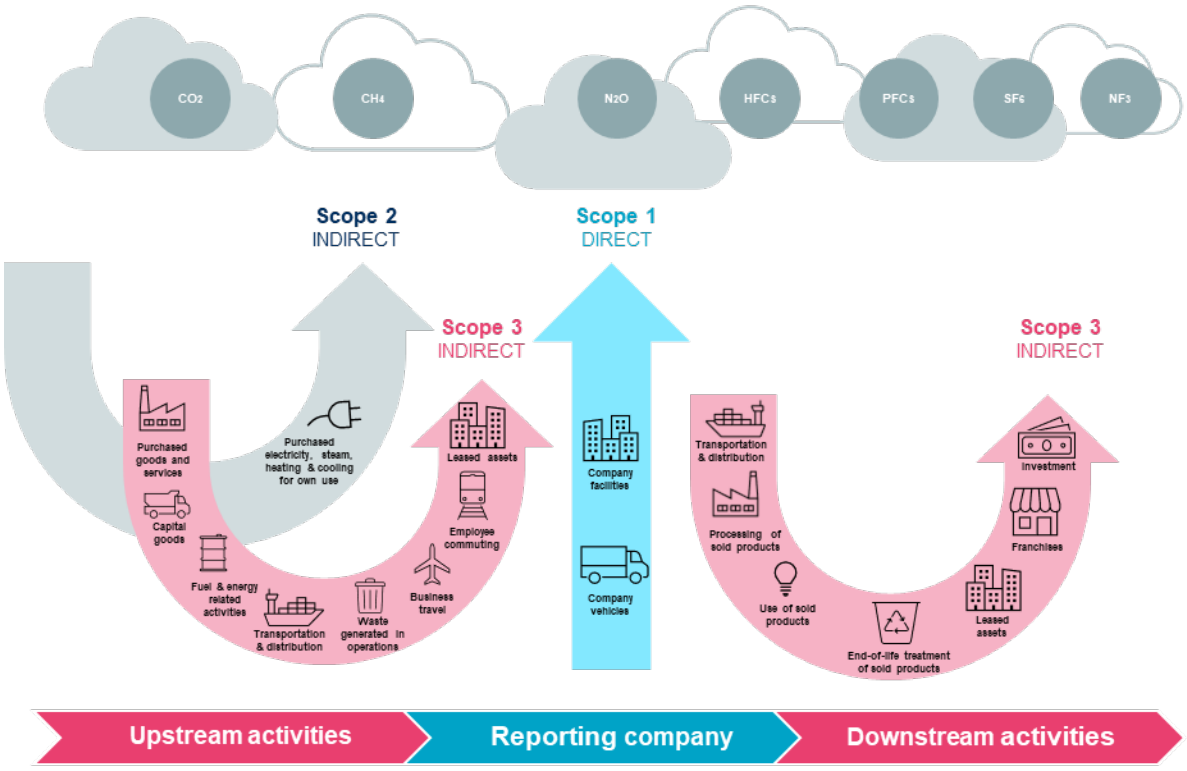
Signed by the Chair of the Trustee of the TotalEnergies Pension Trustee UK Limited

Appendix 1 – Greenhouse gas emissions explained

Within the 'metrics and targets' section of the report, the emissions metrics relate to seven greenhouse gases – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). The figures are shown as "CO_2 equivalent" (CO_2e) which is the amount of carbon dioxide that would be equivalent to the excess energy being stored by, and heating, the earth due to the presence in the atmosphere of these seven greenhouse gases.

The metrics related to greenhouse gas emissions are split into the following three categories: Scope 1, 2 and 3. These categories describe how directly the emissions are related to an entity's operations, with Scope 1 emissions being most directly related to an entity's everyday activities and Scope 3 referring to indirect emissions in an entity's value chain. Scope 3 emissions often form the largest share of an entity's total emissions, but are also the ones that the entity has least control over.

- **Scope 1** greenhouse gas emissions are all direct emissions from the activities of an entity or activities under its control.
- **Scope 2** greenhouse gas emissions are indirect emissions from electricity purchased and used by an entity which are created during the production of energy which the entity uses.
- **Scope 3** greenhouse gas emissions are all indirect emissions from activities of the entity, other than scope 2 emissions, which occur from sources that the entity does not directly control.



Source: GHG Protocol

Appendix 2 – Climate Scenario Analysis

Modelling approach

- The scenario analysis is based on a model developed by Ortec Finance and Cambridge Econometrics. The outputs were then applied to the Plan's assets and liabilities by LCP.
- The three climate scenarios are projected year by year, over the next 40 years.
- The results are intended to help the Trustee to consider how resilient the DB funding strategy, DB investment strategy and the DC default strategy are to climate-related risks.
- The Trustee discussed how future planned changes to the investment strategies for both Sections would change the analysis.
- The three climate scenarios chosen are intended to be plausible, not "worst case". They are only three scenarios out of countless others which could have been considered. Other scenarios could give better or worse outcomes for the Plan.
- The results discussed in this report have been based on macro-economic data at 31 December 2021, calibrated to market conditions at 30 June 2022.
- For more information about the modelling approach, see Appendix 3.

Modelling limitations

- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held by the Plan's DB investment portfolio and DC default strategy. As such, the modelling does not require extensive plan-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the Plan's DB assets and DC assets in the default strategy.
- In practice, the Plan's investments may not experience climate impacts in line with the market average.
- The asset and liability projections shown reflect the Plan's current strategic journey plan. No allowance is made for changes that might be made to the funding or investment strategy as the climate pathways unfold, nor for action to be taken in response to the Plan achieving its long-term funding target.
- Like most modelling of this type, the modelling does not allow for all potential climate-related impacts and therefore is quite likely to underestimate some climate-related risks. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts.
- The Plan currently has an insurance contract covering a significant proportion of the DB benefits payable to pensioners. As this contract exactly matches the DB benefits payable to members, it has been excluded from the analysis. The Trustee considered qualitatively how insurance contracts might be affected by climate risk (see p16).

Modelling approach – more details

- The scenario analysis is based on the ClimateMAPS model developed by Ortec Finance and Cambridge Econometrics, and was then applied to the Plan's assets and liabilities by LCP. The three climate scenarios were projected year by year, over the next 40 years.
- ClimateMAPS uses a top-down approach that consistently models climate impacts on both assets and liabilities, enabling the resilience of the DB Section's funding strategy to be considered. The model output is supported by in-depth narratives that bring the scenarios to life to help the Trustee's understanding of climate-related risks and opportunities.
- ClimateMAPS uses Cambridge Econometrics' macroeconomic model which integrates a range of social and environmental processes, including carbon emissions and the energy transition. It is one of the most comprehensive models of the global economy and is widely used for policy assessment, forecasting and research purposes. The outputs from this macroeconomic modelling – primarily the impacts on country/regional GDP – are then translated into impacts on financial markets by Ortec Finance using assumed relationships between the macroeconomic and financial parameters.
- Ortec Finance runs the projections many times using stochastic modelling to illustrate the wide range of climate impacts that may be possible, under each scenario's climate pathway. LCP takes the median (ie the middle outcome) of this range of impacts, for each relevant financial parameter, and adjusts it to improve its alignment with LCP's standard financial assumptions.
- LCP then uses these adjusted median impacts to project the assets and liabilities of the Plan to illustrate how the different scenarios could affect its funding level. The modelling summarised in this report used scenarios based on the latest scientific and macro-economic data at 31 December 2021, calibrated to market conditions at 30 June 2022.
- The modelling included contributions assumed to be paid in line with the current Schedule of Contributions, and the Trustee discussed how future planned changes to the investment strategies for both Sections would change the analysis. For the DC Section, members' starting pots values were assumed to equal the average value for Plan members of their age, and member and employer contributions were assumed to be paid in line with the current contribution structure. No allowance was made for changes to the investment strategy or contributions in response to the climate impacts modelled.
- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class, ie assuming that the Plan's investments are affected by climate risk in line with the market-average portfolio for the asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held in the Plan' s investment portfolio. As such, it does not require extensive plan-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the Plan's assets.
- In practice, the Plan's investment portfolio may not experience climate impacts in line with the market average. The Trustee considers, on an ongoing basis, how the Plan's climate risk exposure differs from the market average using climate metrics (which are compared with an appropriate market benchmark) and its annual responsible investment review which considers the investment managers' climate approaches (see page 20).
- The Trustee notes that the three climate scenarios chosen are intended to be plausible, not "worst case", and the modelling is based on median outcomes. It therefore illustrates how the centre of the "funnel of doubt" surrounding DB funding and DC asset projections might be affected by climate change. It does not consider tail risks within that funnel, nor does it consider how the funnel might be widened by the additional uncertainties arising from climate change. In addition, only three scenarios out of infinitely many have been considered. Other scenarios could give better or worse outcomes for the Plan.
- Uncertainty in climate modelling is inevitable. In this case, key areas of uncertainty relating to the financial impacts include how climate change might affect interest rates and inflation, and the timing of market responses to climate change. ClimateMAPS, like most modelling of this type, does not allow for all climate-related impacts and therefore, in aggregate, is quite likely to underestimate the potential impacts of climate-related risks, especially for the Failed Transition scenario. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts.

Appendix 3 – Further information on climate-related metrics

Listed equities and corporate bonds

Notes for data sourced from MSCI (shown on pages 27 and 28)

The portfolio value analysed excludes holdings that were not covered by MSCI's database such as cash, sovereign bonds, bonds that have recently matured, or shares in companies no longer listed when the analysis was undertaken. Emissions are attributed to investors using "enterprise value in. Emissions are attributed to investors using "enterprise value including cash" (ie EVIC, the value of equity plus outstanding debt plus cash).

The total GHG emissions figures omit any companies for which data was not available. For example, if the portfolio was worth £200m and emissions data was available for 70% of the portfolio by value, the total GHG emissions figure shown relates to £140m of assets and the portfolio's carbon footprint equals total GHG emissions divided by 140. In other words, no assumption is made about the emissions for companies without data.

The science-based targets metric equals the % of portfolio by weight of companies that have a near-term carbon emissions reduction target that has been validated by the Science Based Targets initiative (SBTi). The MSCI database does not distinguish between companies which do not have an SBTi target and companies for which MSCI does not check the SBTi status, so the coverage for this metric is equal to the % of the portfolio with an SBTI target.

Emissions data coverage and quality

For the September 2022 climate metrics, where coverage of the portfolio analysed is less than 100%, this is because the MSCI database:

- Does not cover some holdings (eg cash, sovereign bonds, bonds that have recently matured, shares in companies no longer listed when the analysis was undertaken);
- Does not hold emissions data for some portfolio companies because the company does not report it and MSCI does not estimate it; and/or
- Does not hold EVIC data for some portfolio companies, so emissions cannot be attributed between equity and debt investors.

The last of these reasons is usually the main explanation for the fairly low coverage of bond portfolios.

The MSCI database records whether emissions data is reported or estimated, and which estimation method has been used, but not whether companies' reported emissions have been independently verified. On behalf of the Trustee's, LCP as the investment adviser has asked MSCI to introduce this distinction. Where emissions data is estimated, MSCI uses one of three methods.

- For electric utilities, MSCI's estimate of Scope 1 emissions is of direct emissions due to power generation, calculated using power generation fuel-mix data.
- For companies not involved in power generation, which have previously reported emissions data, MSCI starts with a company-specific carbon intensity model.
- For other companies, MSCI uses an industry segment-specific carbon intensity model, which is based on the estimated carbon intensities for 1,000+ industry segments.

MSCI is a leading provider of climate-related data, so we would expect the coverage to compare favourably with other data sources. The investment adviser, on behalf of the Trustee is engaging with MSCI to encourage them to improve EVIC coverage for debt issuers and to distinguish between companies which do not have an SBTi target and companies for which it does not check the SBTi status.

Disclaimer

any errors or omissions in connection with any data or Information herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

UK government bonds

GHG emissions for government bonds (gilts) are calculated on a different basis from the other asset classes, so cannot be compared with the other emissions figures shown.

The emissions figures were calculated by the Trustee's investment adviser using publicly available data sources. As suggested in the statutory guidance, Scope 1+2 emissions have been interpreted as the production-based emissions of the country. Scope 3 emissions have been interpreted as the emissions embodied in goods and services imported by the country and consumed within the country (rather than re-exported).

In line with guidance from the Partnership for Carbon Accounting Financials (PCAF) issued in December 2022, emissions intensity has been calculated as:

$$\frac{UK\ GHG\ emissions}{PPP-adjusted\ GDP\ for\ the\ UK}$$

GHG emissions have then been calculated as:

$$Emissions\ intensity\ x\ value\ of\ the\ \text{Plan}'s\ investment\ in\ gilts.$$

Appendix 4 – Glossary

Actuarial valuation – an actuarial valuation is an accounting exercise performed to estimate future liabilities arising out of benefits that are payable to members of a DB pension scheme, typically once every three years. In the actuarial valuation exercise, a liability payout at a future date is estimated using various assumptions such as discounting rate and salary growth rate.

Alignment – in a climate change context, alignment is the process of bringing greenhouse gas emissions in line with 1.5°C temperature rise targets. It can be applied to individual companies, investment portfolios and the global economy.

Asset class – a group of securities which exhibit broadly similar characteristics. Examples include equities and bonds.

Avoided emissions – these are reductions in greenhouse gas emissions that occur outside of a product's life cycle of value chain, but as a result of the use of that product. For example, emissions avoided through use of a wind turbine or buildings insulation.

Bond – a bond is a security issued to investors by companies, governments and other organisations. In exchange for an upfront payment, an investor normally expects to receive a series of regular interest payments plus, at maturity, a final lump sum payment, typically equal to the amount invested originally, or this amount increased by reference to some index.

Buy-in – DB pension scheme trustees may choose to "buy-in" some of their scheme's expected future benefit payments by purchasing a bulk (ie one covering many individuals) annuity contract with an insurance company. This allows the trustees to reduce their scheme's risk by acquiring an asset (the annuity contract) whose cash flows are designed to meet ie "match" a specified set of benefit payments under the pension scheme. The contract is held by the trustees and responsibility for the benefit payments remains with the trustees. Common uses of buy-in arrangements have been to cover the payments associated with current pensioners or a subset of those members. Contracts to meet payments to members who are yet to become pensioners can also be purchased.

Carbon emissions - These refer to the release of carbon dioxide, or greenhouse gases more generally, into the atmosphere, for example from the burning of fossil fuels for power or transport purposes.

Carbon footprint – In an investment context, the total carbon dioxide or greenhouse gas emissions generated per amount invested (eg in £m) by an investment fund. Related definitions are used to apply the term to organisations, countries and individuals.

Climate change adaptation – steps taken to adapt to the physical effects of climate change such as improving flood defences and installing air conditioning.

Climate change mitigation – steps taken to limit climate change by reducing greenhouse gas emissions, for example by shifting to renewable sources of energy – such as solar and wind – and by using less energy and using it more efficiently.

Covenant – the ability of a company or companies with a legal obligation to a DB scheme to make up any shortfall between a DB scheme's assets and the agreed funding target.

Credit – long-term debt issued by a company, also known as corporate bonds. Corporate bonds carry different levels of credit risk which is indicated by their rating and credit spread.

Defined Benefit (DB) – a pension scheme in which the primary pension benefit payable to a member is based on a defined formula, frequently linked to salary. The sponsor bears the risk that the value of the investments held under the scheme falls short of the amount needed to meet the benefits.

Defined Contribution (DC) – a pension scheme in which the sponsor stipulates how much it will contribute to the arrangement which will depend upon the level of contributions the member is prepared to make. The resultant pension for each member is a function of the investment returns achieved (net of expenses) on the contributions and the terms for purchasing a pension at retirement. In contrast to a defined benefit scheme, the individual member bears the risk that the investments held are insufficient to meet the desired benefits.

Debt – money borrowed by a company or government which normally must be repaid at some specified point in the future.

Default strategy – the fund or mix of funds in which contributions in respect of a DC member will be invested in the absence of any explicit fund choice(s) of that member.

Environmental, social and governance (ESG) – an umbrella term that encompasses a wide range of factors that may have been overlooked in traditional investment approaches. Environmental considerations might include physical resource management, pollution prevention and greenhouse gas emissions. Social factors are likely to include workplace diversity, health and safety, and the company's impact on its local community. Governance-related matters include executive compensation, board accountability and shareholder rights.

Equity – through purchase on either the primary market or the secondary market, company equity gives the purchaser part-ownership in that company and hence a share of its profits, typically received through the payment of dividends. Equity also entitles the holder to vote at shareholder meetings. Note that equity holders are entitled to dividends only after other obligations, such as interest payments to debt holders, are first paid. Unlike debt, equity is not normally contractually repayable.

Ethical investment – an approach that selects investments on the basis of an agreed set of environmental, social and governance (ESG) criteria that are motivated by ethical considerations. These can be positive – eg choosing companies involved in water conservation or negative – eg not choosing companies involved in the arms trade.

Fiduciary obligations – a legal obligation of one party (a fiduciary) to act in the best interest of others. Fiduciaries are people or legal entities that are entrusted with the care of money or property on behalf of others. They include pension scheme trustees.

Fossil fuels – fuels made from decomposing plants and animals, which are found in the Earth's crust. They contain carbon and hydrogen, which can be burned for energy. Coal, oil, and natural gas are examples of fossil fuels.

Funding position – a comparison of the value of assets with the value of liabilities for a DB pension scheme.

Gilts – bonds issued by the UK government. They are called gilts as the bond certificates originally had a gilt edge to indicate their high quality and thus very low probability of default.

Greenhouse gas (GHG) emissions (scopes 1, 2 and 3) – gases that have been and continue to be released into the Earth's atmosphere. Greenhouse gases trap radiation from the sun which subsequently heats the planet's surface (giving rise to the "greenhouse effect"). Carbon dioxide and methane are two of the most important greenhouse gases. See also Appendix 1.

Investment mandate – see pooled mandate and segregated mandate.

Integrated risk management – Integrated risk management is an approach used by DB pension scheme trustees to identify, manage and monitor the wide range of risks (relating to investment, funding and covenant) which might impact the chances of meeting their scheme's overall objectives.

Liabilities – obligations to make a payment in the future. An example of a liability is the pension benefit 'promise' made to DB pension scheme members, such as the series of cash payments made to members in retirement. The more distant the liability payment, the more difficult it often is to predict what it will actually be and hence what assets need to be held to meet it.

Net zero – this describes the situation in which total greenhouse gas emissions released into the atmosphere are equal to those removed. This can be considered at different levels, eg company, investor, country or global.

Paris Agreement – the Paris Agreement is an international treaty on climate change, adopted in 2015. It covers climate change mitigation, adaptation and finance. Its primary goal is to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels.

Physical risk – these are climate-related risks that arise from changes in the climate itself. They include risks from more extreme storms and flooding, as well as rising temperatures and changing rainfall pattens.

Pooled mandate – a feature of a collective investment vehicle whereby an investor's money is aggregated (ie "pooled") with that of other investors to purchase assets. Investors are allotted a share of those assets in proportion to their contribution. Ownership is represented by the number of "units" allocated – eg if the asset pool is worth

£1m and there are 1m units then each unit is worth £1. Pooled funds offer smaller investors an easy way to gain exposure to a wide range of investments, both within markets (eg by buying units in a UK equity fund) as well as across markets (eg by buying units in both a UK equity fund and a UK corporate bond fund).

Portfolio alignment metric – this measures how aligned a portfolio is with a transition to a world targeting a particular climate outcome, such as limiting temperature rises to well below 2°C, preferably to 1.5°C, as per the Paris Agreement. Assessments using these metrics consider companies' and governments' greenhouse gas (GHG) emissions reduction plans and likelihood of meeting them, rather than current, or the latest reported, GHG emissions.

Responsible Investment (RI) – the process by which environmental, social and governance (ESG) issues are incorporated into the investment analysis and decision-making process, and into the oversight of investments companies through stewardship activities. It is motivated by financial considerations aiming to improve risk-adjusted returns.

Science-based targets – targets to reduce greenhouse gas emissions that are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement.

Science-Based Targets initiative (SBTi) – an organisation that sets standards and provides validation for science-based targets set by companies and investors.

Scenario analysis – a tool for examining and evaluating different ways in which the future may unfold.

Scope 1, 2 and 3 – a classification of greenhouse gas emissions. See Appendix 1.

Segregated mandate – a segregated investment approach ensures that an investor's investments are held separately from those of other investors. This approach offers great flexibility – for example, the investor can stipulate the precise investment objective to be followed and can dictate which securities can or cannot be held.

Stakeholder – an individual or group that has an interest in any decision or activity of an organisation. The stakeholders of a company include its employees, customers, suppliers and shareholders.

Statutory obligations – statutory obligations are those obligations that do not arise out of a contract, but are imposed by law.

Stewardship – stewardship is the responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society. It is often implemented via engagement with investee companies and exercising voting rights.

Taskforce on Climate-related Financial Disclosures (TCFD) – a group of senior preparers and users of financial disclosures from G20 countries, established by the international Financial Stability Board in 2015. The TCFD has developed a set of recommendations for climate-related financial risk disclosures for use by companies, financial institutions and other organisations to inform investors and other parties about the climate-related risks they face.

Transition risk – these are climate-related risks that arise from the transition to a low-carbon economy and can include changes in regulation, technology and consumer demand.