TfL Pension Fund

Report on Sustainable Investing

MAYOR OF LONDON

Transport for London

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Chair's Foreword

On behalf of the Trustees of the TfL Pension Fund, I am pleased to present our second Annual Report on Sustainable Investing. This report builds on last year's Foundation Report and provides both a summary of our activities and how they have progressed since last year.

The Trustees have continued to seek to align the Fund's investment activity to their Sustainable Investing Beliefs. In this each of the three factors: Environmental, Social and Governance play their role in driving the long-term value of the (ESG) Fund's portfolio. The Trustees also accept their responsibilities as asset owners for engagement and the exercise of voting power to influence companies towards sustainability. Changes to government investment regulations in the year will provide a further stimulus to pension schemes in respect of these activities and for a more explicit recognition of climate change risk.

I trust you will obtain a better understanding of the Trustees' approach from this report and in the detail provided from the sample of investments presented.

Maria Antoniou
Chair, TfL Pension Fund

Key facts

As at 31 March 2019, the TfL Pension Fund had £11 billion of assets and was responsible for the pension provision of approximately 86,000 members.

In the year to 31 March 2019, the Fund received £465 million in contributions and paid out £382 million in pensions and associated retirement benefits.

The Fund assets are externally managed by 30 investment managers, diversified across multiple asset classes and invested in over 50 countries.

During the year the Trustees updated their 'Statement of Investment Principles' ("SIP") which is a written statement which governs the Trustees' decisions about the Fund's investments. More specifically, the SIP now sets out how the Trustees take account of financially material considerations (including but not limited to ESG considerations and climate change) and stewardship as part of their investment process.

As part of its stewardship role the Trustee appointed Sustainalytics to enhance the Fund's stewardship and active ownership of its assets.

Investment Beliefs

1. Risk and return are related, but not all risks are rewarded
2. Clear objectives are essential and should be liability related and funding driven
3. An active corporate governance programme can add value
4. Skilled investment managers do exist and it is possible to outperform the market
5. Timing is important: asset valuation cannot be ignored when planning strategic change
6. Long-term focus is important in thinking about investment strategy and implementation
7. Return and sustainability are not conflicting objectives and the main objective of the Fund is to deliver superior investment returns and sustainability is a part of this, not a standalone objective
8. Climate change is a significant long-term financial risk which has potential to impact all holdings in the portfolio over time if not properly managed
9. There is frequently a first mover advantage, but to exploit it requires a willingness to take unconventional risk
10. Diversification helps to control risks and improve efficiency
11. Illiquidity is frequently rewarded in the long-term
12. The equity market is generally rewarded in the long-term
13. Unrewarded risks should be mitigated where possible
14. The implementation of any investment or strategy should be cost effective and at an appropriate price relative to the opportunity

Background
Regulation and Investment Framework is evolving

Key Deliverables
Noteworthy progress made since the publication of 2018 Report

Measuring & Reporting
Assessing ESG through multiple lenses is helpful

UNPRI Assessment Results
High rating from the Fund's first public UNPRI review

Voting & Engagement
Collaboration with like-minded investors enhances our progress

Case Studies
Investments with material ESG outcomes are being made

TfL Pension Fund's ESG Journey

Executive Summary:

In this report we show how the Trustees are making noteworthy progress in sustainable investing in 2019 by reference to the following six areas:

BACKGROUND

- The Fund's first Sustainability Report, published in December 2018, set out the Trustees' thinking and approach in this area ("RISEN" Framework on page 8 of this report).
- The report was well received by the Fund's stakeholders, with an expectation that more will be done in this very important journey for the Trustees.
- The Fund's obligations and approach continue to evolve to keep in pace with (or even stay ahead of) the rapidly evolving regulatory and legal framework, as reflected in the Fund's Responsible Investment Policy included in the Statement of Investment Principles ("SIP") and Investment Beliefs.

CASE STUDIES

- The Fund continues to source interesting investment opportunities that are profitable alongside having very strong "ESG" credentials, many of which are showcased in this section.

KEY DELIVERABLES

- Received an overall score of "A" in the Fund's first public PRI Review.
- Incorporated explicit ESG consideration into the Fund's investment beliefs.
- Excluded coal investment from the Fund active mandates.
- Close to hitting 5% target of the Fund's investments by value in investments with strong ESG characteristics.
- The Fund's Carbon Intensity fell from 170 metric tonnes per million USD sales to 162 metric tonnes per million USD sales in 12 months to December 2018.

UNPRI

- The Fund received an overall score of "A" and "A+" in many sections of its first public PRI review.
- One area the Trustees recognize where the Fund can improve upon is their Manager Monitoring and Reporting Framework, an area where the ratings reversed versus last year. The Trustees have since added resources to address this particular area.
- Gradually widen the scope of future PRI assessments to also include the Fund's private markets programme.

MEASUREMENT & MONITORING

- The Trustees continue to use multiple complementary lenses to track the Fund's ESG journey and make improvements.
- Sustainable Development Goals ("SDG"), the broadest possible lens, enables the Trustees to understand and articulate the overall socioeconomic impact of their portfolio.
- The MSCI Ratings lens helps to track and monitor the ESG performance of the Fund's publicly listed equities and bonds.
- Transition Pathway Initiative ("TPI"), a climate change specific lens, assists the Trustees to evaluate the progress of the portfolio companies in 'high carbon impact sectors' against the Paris Climate Benchmarks.
- The Fund is making good progress across majority of metrics.

VOTING & ENGAGEMENT

- As a supporting investor of Climate Action 100+, the Trustees continue their engagement and voting efforts on the 161 global companies accounting for 80% of global industrial emissions. Examples include Rio Tinto and Shell.
- On the broader ESG agenda, the Fund voted on important resolutions concerning Amazon, Google, and Facebook.
- Appointed Sustainalytics as the Fund's third party stewardship partner to bring consistency to engagement and voting activities.

BACKGROUND

Regulation and Investment Framework

Regulations driving ESG related considerations and obligations in pensions continue to evolve, providing greater clarity to the Trustee's Investment Framework.

Pensions Regulations

- In last year's sustainability report reference was made to proposed changes by the U.K. government to the investment regulations to improve the disclosure that pension schemes are required to make about their investment activities, in particular in respect of ESG.

- By 1 October 2019, trustees needed to update their Statement of Investment Principles ("SIP") so that they set out policies in relation to:
  - "financially material considerations" (including ESG considerations), including how they were taken into account in the selection, retention and realisation of investments;
  - the extent (if at all) to which "non-financial matters" are taken into account in the selection, retention and realisation of investments;
  - undertaking engagement activities in respect of investments (stewardship).
  - These requirements were incorporated into the revised TfL Pension Fund SIP issued in March 2019.

- In June 2019 the Government published new Regulations which implement the EU's second Shareholders' Rights Directive covering workplace pension scheme stewardship and governance. The new Regulations significantly expand the SIP requirements in addressing stewardship in more detail and revise trustees' investment disclosure obligations:
  - Trustees are required to explain how they incentivise their appointed investment managers to align investment strategy with the trustees' policies and make decisions based on long-term performance.
  - Trustees will be required to produce an annual disclosure on their engagement and voting practices from 1 October 2020.
  - Defined benefit schemes will have to publish SIPs and annual engagement and voting reports on a publicly available website.
- The Fund already makes available its SIP on a public site. That site also contains the annual report and accounts which includes information on engagement and voting to meet both trustee and regulatory needs.
- Overall, the Trustees will be reviewing what further changes are needed to its SIP to comply with the latest regulatory change and in consultation with TfL as Principal Employer. The updated SIP is expected to be approved by the Trustee Board in March 2020.
- As well as operating by reference to these specific investment regulations, there are broader legal concepts which have to be taken into account in investment decision making, as explained next.

Fiduciary duties and the prudent person – practical perspective

- A trustee has a fiduciary duty to exercise their investment power for its proper purpose and alongside this to act in accordance with the "prudent person" principle.
- How these should be exercised for pension scheme investment is being much discussed in relation to the part played by ESG factors, including climate change risks.
- In a defined benefit scheme such as the Fund the exercise of investment powers should be to maximise the chances of the defined level of benefits being provided in full.
- So for a particular ESG factor or approach, consideration should be given to whether it will contribute positively towards that objective. This could be through it providing a potential improvement to "risk-related returns". But equally it could involve the avoidance of an insufficiently rewarded risk. Or provision of the promised benefits could be achieved without having to tolerate a particular risk.
- However bringing in the duty to act prudently can bring a new perspective as it does not involve the assessment of whether that investment decision was successful, rather it's about following a reasonable process in reaching a decision. So in considering ESG factors, including climate change risk, an investment decision may be grounded in the desire to act prudently rather than a seeking solely to maximise returns.

Investment Framework

- As this report aims to outline the work done by the Trustees since the publication of the first report in December last year, it is important to reiterate and reflect on the "RISEN" framework that guides the Trustee long-term thinking in this area:

R — **Recognising (R)** that companies which fail to understand and handle their social and environmental impacts with care, or ones that do not adopt ethical and responsible governance practices, are poor long-term investments because they will be prone to financial losses and reputational risk.

I — **Improving (I)** its ESG Approach and Practices from ongoing learning and doing, fully accepting that this is a new area for the Trustees and clearly more can and will be done as the collective knowledge improves over time.

S — **Seeing (S)** ESG factors not in isolation but as part and parcel of the investment process with a view to making ESG integration less of a labelling exercise and more of a push towards real and positive long-term changes in the underlying companies the Fund has invested in.

E — **Engaging (E)** with investment managers both during the selection process and their ongoing monitoring to understand how ESG is taken into account from a long-term risk management and valuation perspective.

N — **Nudging (N)** investment managers to consider in more detail the impact of the activities of companies in which they invest have on the environment, particularly when they operate in countries with less sophisticated and demanding regulatory requirements. This is to ensure companies are fairly treating all stakeholders (shareholders, customers and employees) and conforming to standard business principles of transparency, integrity and fair and reasonable dealing.

- The Trustees take into account a range of investment-related factors in the selection, retention and realisation of investments. The Trustees have a fiduciary duty to secure financial returns for the Fund to ensure they can meet the Fund's current and long-term pension obligations. Investing sustainably in opportunities which will deliver long-term value aligns with the overall objective of the Fund and is in line with the fiduciary framework outlined earlier in this section.
- The Trustees take a holistic view in aligning their Sustainable Investing Beliefs towards the Fund's investment activities. There is a clear recognition that each of the three factors: Environmental, Social and Governance "ESG" play an important role in driving the long-term value of the Fund's investment portfolio.
- And finally, the Trustees believe that as a long term provider of responsible capital, the Fund should exercise its stewardship responsibilities effectively and be an agent of positive change. This involves engagement and collaboration to help businesses and markets adopt and transition to best practices and sustainable business models.

KEY DELIVERABLES

Noteworthy progress made since the publication of 2018 Report

- The Trustees published the first Sustainability Report in 2018 that set out their thinking and actions in this very important area. The report acknowledged that it was a start of an important journey for the Fund where lessons will be learnt and the Trustee will continue to adapt and finesse their approach.
- The report was received very positively by our stakeholders and constructive feedback provided with an expectation that more will continue to be done by the Trustees.

"The PCC (TfL Pension Consultative Council) would like to congratulate the Trustees for the publication of the Report on Sustainable Investing in December 2018. It is clear that great progress has been made in the area of sustainable investments, the Fund's approach to the risks of unsustainable investments, and the part our fund can play in tackling climate change. We understand that the Report, and the developments it describes, are widely regarded as significant steps forward and we hope other organisations will follow this lead. All involved are to be congratulated."

"I really enjoyed reading it especially the one about return being the primary goal and sustainability being a part of it, not in conflict. That philosophy makes sense to me."

"Overall I think the articulation is succinct and logical and the pictures are uplifting :)"

"I think you are ahead of the curve with the bottom up look through aggregation of the Fund's exposures on an ESG lens using Aladdin."

"It's a very interesting report! Very comprehensive and easy to read."

"Indeed, a lot of other schemes have started to work on similar sustainability reports ahead of the DWPs disclosure deadline next year. So another year with ESG remaining on the agenda looks likely. Many thanks for sharing this. I also applaud the 5% and growing commitment to impact themes."

"It's a very good Sustainability Report – accessible explanation and realistic objectives. Attractive presentation too."

- The Trustees continue to take material actions to progress the sustainability agenda, putting into practise the principles and framework outlined in the 2018 report. As a signatory to the UN Principles of Responsible Investment (PRI) since 2016, the Fund had its first public assessment completed for 2018. It received an overall score of A and A+s in many of the underlying sections. This represented significant improvement over its own 2016 and 2017 score and also vs. the median scores of 2,300 UNPRI signatories.
- The Trustees adopted a detailed ESG Policy and fully incorporated into the Fund's Statement of Investment Principle for 2019.

- Although climate change risk was always considered an integral part of ESG, in February 2019, the Trustees decided to make it more explicit through adding to its investment beliefs that "Climate change is a significant long-term financial risk which has potential to impact all holdings in the portfolio over time if not properly managed."
- The Trustees are actively more engaged both during the selection process of the managers and their ongoing monitoring to understand how ESG is taken into account from a long-term risk management and valuation perspective.
- The Trustees have decided to exclude companies that generate more than 30% of their annual revenues from thermal coal in power generation and/or mineral extraction from its active mandates across the Fund.
- The Trustees are committed to the monitoring and annual reporting of the Fund's active holdings' (Equity & Fixed Income) "carbon footprint" and more importantly in pursuing an engagement policy with respect to addressing climate change risk. The carbon footprint based on scope 1 and 2 greenhouse gas emissions reported in the 2018 annual report and accounts was 170 metric tonnes per million USD sales at 31 December 2017. This compared with an average figure of 220 for the representative global index. In the 2019 annual report and accounts the comparative figures were 162 metric tonnes per million USD sales at 31 December 2018 and an average figure of 213 for the representative global index.

THE FUND HAS RECEIVED AN OVERALL SCORE OF A IN THE UNPRI.

- In addition, there is regular monitoring of the level of carbon emissions in the Fund's actively managed public equity and bond holdings on a manager by manager basis and also at the overall Fund level. For those holdings with the highest emissions, the respective managers are required to provide a clear analysis on how climate change risk is being incorporated in their risk-return analysis, how they are engaging with such companies to encourage the shift to a more sustainable business model and rationale for the continued inclusion of such holdings in their portfolio.
- More holistically, the Trustees are using a third-party tool to monitor the ESG characteristics and scores of all the Fund's active public equity and bond mandates. Underlying individual companies with the lowest ESG scores are being tracked and supplemented by the manager's own reporting of ESG considerations within their portfolio.

- The Trustees, in partnership with like-minded pension schemes, aim to use engagement as a way to encourage companies to adopt sustainable business models and practices. However, where "sufficient" progress would not be made or is not forthcoming in view of the Fund's managers, the Trustee is open to the consideration of divestment and exclusions. As a supporting investor in Climate Action 100+ (a joint initiative between the PRI organisation and regional investor groups on climate change) since 2018, the Trustees participated collectively with fellow investors in engaging with the world's largest greenhouse gas emitters. The objectives are that companies implement a strong governance framework which clearly articulates their Boards' accountability and oversight of climate change risk, take action to reduce greenhouse emissions and provide enhanced corporate disclosure in line with the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD").
- The Fund's engagement and voting activities are planned to be enhanced during this financial year through the engagement of a third-party specialist Sustainalytics. In addition, the Trustees chose Plastics and the Circular Economy and Emerging Markets as proactive engagement themes which map onto the United Nations Sustainable Development Goals.
- The Fund is targeting at least 5% of its portfolio, by value, in investments which have a strong "ESG tilt" and there is an ambition to increase this proportion should suitable opportunities be found. The Fund is nearing that target rapidly with around 4% of the portfolio already in such assets.
- The Trustees aim to be early adopters and innovators in areas of "impact investments", where there is an intention to generate a measurable, beneficial social or environmental impact alongside a financial return. Examples include the Fund's investments in clean energy, waste, education and banking, where such investments can deliver on many of the UN's Sustainable Development Goals.
- The continuation of the Trustees' strategy of searching for financially sound investments with strong ESG credentials can be seen in its investment in 2018 of over £125 million in the largest Energy to Waste facility in the UK located on the river Thames. By sourcing around 90% of its waste by river this facility saves the equivalent of approximately 100,000 trucks and generates a reliable base-load of renewable energy. It is a net carbon positive business saving around 200kg of carbon per tonne of waste processed compared with equivalent landfill.
- The Fund's £350 million global real estate portfolio is where ESG is fundamental to the manager's approach to business strategy, investors, key stakeholders, tenants and communities. It has led to outperformance due to lower operating costs and higher occupancy and over the long-term helps to mitigate risk by anticipating legal and regulatory requirements, climate change issues and early recognition of tenant needs. As well as implementing ESG into its investment processes, it provides transparent and practical reporting to the Fund.
- The Fund very recently committed to invest $325 million to a US social infrastructure fund.
- The Trustees have decided to use a very intuitive and holistic framework developed by Sackers and Partners LLP, the Fund Legal Advisers to keep a tab on the progress made in this area. As one can see that in the majority of areas, the Fund is either "On the front foot" or "Getting Ahead". When it's on the "back foot", the Trustee are actively working on a range of initiatives and this should hopefully improve the assessment next year. It is helpful to note that in none of the areas the Fund can be deemed to be "behind the curve".

A plan for ESG and climate-change integration | behind the curve to getting ahead

YOUR ACTION PLAN

ACTION PLAN	**Behind the curve** Unlikely to stand up to any serious scrutiny	**On the back foot** Getting compliant	**On the front foot** Embedding ESG into Trustee governance	**Getting ahead** Making ESG and climate change a key strategic issue
1. Set investment beliefs	Trustee board relies on its investment consultants to tell them what to believe. Sets nothing out in writing.	Trustee board receives a brief training session before minuting that ESG and climate change are considered material financial factors.	✓ Trustee board spends time on training before discussing and agreeing a responsible investment beliefs statement including a position on climate change risk.	Trustee board discusses ESG beliefs at least annually. Where applicable, trustee seeks to align beliefs with sponsor views. Considers alignment of strategy with UN SDGs.
2. Review existing managers	No engagement with existing managers.	✓ Takes stock of existing managers and uses investment consultant scoring framework to rate current managers on their ESG credentials. However, scores are only used as a differentiator where there are other reasons to review a manager.	Full consideration of each manager's ESG capabilities (including qualifications) with specialist input from investment consultants – includes being alive to "green-washing". Managers which require most attention identified and engaged with. Where no improvement is forthcoming or possible within current mandates, these will be reviewed.	All managers expected to demonstrate deep ESG integration. Integrates corporate environmental data in manager investment processes. All managers expected to demonstrate deep ESG integration. Integrates corporate environmental data in manager investment processes.
3. Set a DB investment strategy	Existing strategy not reviewed.	✓ Trustee keeps existing strategy under review as ESG experience develops.	For active mandates: considers diversification across sources of climate risk as well as traditional asset classes. Sustainability and low carbon indices considered for passive allocations.	Positive allocation to sustainable investment or investment in assets aligned with a below 2°C pathway. Consider tilting portfolio away from lower scoring ESG assets or sectors such as high carbon emitters.
4. Document a Policy	Adds generic wording to SIP at suggestion of the investment consultant. No further thought by trustee. Trustees do not consider wording or how it will be implemented in practice.	Trustee considers wording in the SIP reflecting the circumstances of the scheme and existing manager mandates. Trustees agree how wording is implemented in practice with their investment consultants.	✓ Trustee develops a stand-alone responsible investment policy which supplements the SIP. This may start with existing manager mandates but will progress to deeper integration of ESG factors over time. The policy is periodically reviewed.	Extensive responsible investment policy with detailed consideration of ESG in each asset class, detailed climate change policy and stewardship policies. Climate change risk embedded across other trustee governance and internal control frameworks and considered as part of an integrated risk management framework (including any climate change risks pertinent to the scheme sponsor covenant).

Source: Sackers and Partners LLP

A plan for ESG and climate-change integration | behind the curve to getting ahead

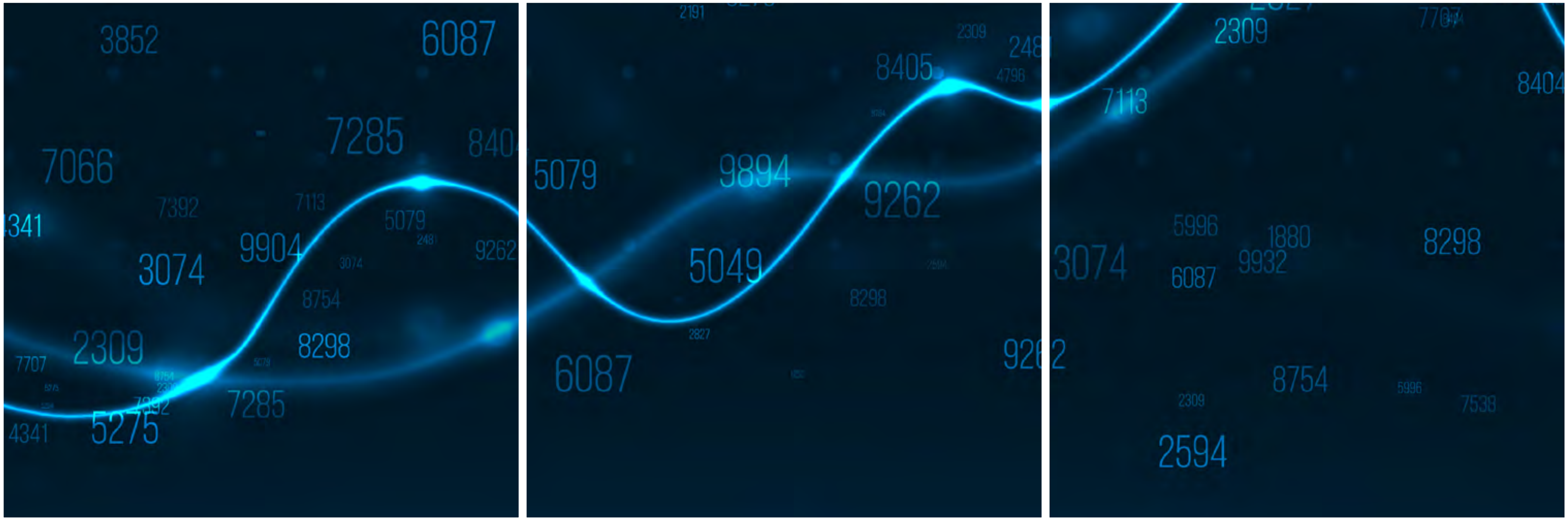
FURTHER CONSIDERATIONS

ACTION PLAN	**Behind the curve** Unlikely to stand up to any serious scrutiny	**On the back foot** Getting compliant	**On the front foot** Embedding ESG into Trustee governance	**Getting ahead** Making ESG and climate change a key strategic issue
5. Ongoing manager monitoring	Reports on quarterly past performance figures only. No forward-looking consideration of manager ESG attributes or exposure of mandates to climate change risk in the longer term.	Active managers are expected to demonstrate how ESG criteria are being used in stock selection and de-selection.	Develops a robust monitoring process – reporting qualitatively and quantitatively against each manager. Managers expected to demonstrate integration of ESG in investment processes rather than the existence of separate "advisory" ESG analysts.	Measures alignment of listed equity and corporate bond portfolios across 2° transition sectors and technologies.
6. Appointing new managers	Mentions ESG only as an afterthought in tender invitations and gives it no weight in selection criteria.	ESG is identified in tenders as an important issue on which potential new managers will be expected to demonstrate competency.	ESG credentials key in tender process. Investment management agreements negotiated to include specific ESG requirements.	Responsible investment requirements included across all asset classes including e.g. side letter terms in private equity funds.
7. Stewardship & engagement	Not considered relevant. Justified based on an incorrect assumption that the scheme's investments are all pooled and therefore "stewardship is impossible".	Trustee expects managers to report on how they have exercised voting rights attached to shares (including across passive equity mandates). Managers are expected to be signatories to the FRC Stewardship Code.	Managers are expected to report in detail on their engagement policies and how these have been implemented. This should include examples of voting against the board on ESG related issues. Managers with a poor engagement record will be downgraded. Consider adoption of an off-the-shelf voting e.g. AMNT redlines.	Large schemes: takes an active and direct role engaging with investee companies across all asset classes. Considers joining other investors in filing climate-related shareholder resolutions where companies are underperforming on adaptation or disclosure. Small schemes: appoints proxy voting and engagement service reflecting trustee's ESG beliefs and position on climate risk.
8. Scenario testing	None	Obtains broad estimates from consultants as to the potential significance of climate change on the scheme's portfolio.	Considers carbon foot-printing tests on portfolio. This may focus initially on listed equities and corporate bonds.	All-portfolio risk assessment (including all real asset holdings) to identify exposure to transaction risks and potential physical damage risk under different climate scenarios.
9. Reporting	Sends stock wording to any members causing a nuisance.	Some commentary provided to scheme members in annual report.	Considers TCFD reporting framework as a structure for internal governance.	Reports publicly against TCFD.
10. Industry Involvement	None	Relies on advisers to provide updates on significant developments requiring action and training as required.	Trustee board keeps abreast of industry discussions and attends events to improve knowledge and observe best-practice. Considers becoming a UN PRI Signatory.	Joining investor groups such as IIGCC. Engage with policy makers to improve practice across the industry.

Source: Sackers and Partners LLP

MEASUREMENT & MONITORING

Assessing ESG through multiple lenses provides richness to our analysis



As the trend of ESG investing has risen in recent years, so too has the influence of ESG rating agencies. However, ESG ratings can vary among providers primarily due to differences in methodology, subjective interpretation of survey results and conflicting datasets.

In order to mitigate some of the above challenges, the Trustee employs the following three lenses: to gain a better insight and understanding of the companies in which they are invested from an ESG-related and carbon perspective. Each lens provides a unique look-through enabling the Trustee to monitor its own ESG policy and report outcomes to the Fund's beneficiaries in this increasingly important area:

- Lens 1. Sustainable Development Goals ("SDGs")
- Lens 2. MSCI Ratings ("MSCI")
- Lens 3. Transition Pathway Initiative ("TPI")

Lens 1 Sustainable Development Goals ("SDGs") comprise 17 core goals and 169 individual targets which together provide a critical roadmap to a sustainable future and more prosperous world. These ambitious goals ranging from ending poverty and hunger, through to stemming climate change will guide the global community's sustainable development priorities from now until 2030. The SDGs offer the Trustee a useful framework as it enables them to better understand and articulate the overall impact of their investments. Over the coming years, the Trustee will continue to explore ways of aligning their investment strategies with the SDGs.

Lens 2 – MSCI evaluates 37 key ESG issues, divided into three pillars (environmental, social and governance) and ten themes; climate change, natural resources, pollution & waste, environmental opportunities, human capital, product liability, stakeholder opposition, social opportunities, corporate governance, and corporate behaviour. MSCI provides ESG ratings for over 6,000 global companies and 400,000+ equity and fixed-income securities. The Trustee uses the MSCI ratings to track its overall ESG score at the overall Fund level but also at the company level too. By doing so it provides useful analysis which the Trustee can employ when engaging with its investment managers.

Lens 3 – The Transition Pathway Initiative ("TPI") is a global initiative led by asset owners and supported by asset managers. It is a "climate changed focused" lens aimed at investors to enable them to gain a better understanding of how companies with the biggest impact on climate change (such as oil and gas; mining; electricity generation; cement; steel; airlines and autos) are adapting their business models for a low carbon economy. Companies are assessed in two ways, on their 'Management Quality' and their 'Carbon Performance'. This lens enables the Trustee to monitor those companies in which it is invested and their impact on climate change.

As the climate continues to change with rising temperatures and increasing sea levels as a result of human activity, the Trustee as a responsible investor is proactively taking steps to prepare for the economic ramifications of climate change. These lenses, all equally important as each other, form part of a toolkit which allow the Trustee to measure and track its investments and to evolve its investment strategy to take account of the Fund's socio-economic footprints, ESG considerations and climate change.

In the next pages, we take a more detailed look at each lens in turn and the impact on the overall portfolio. In the long run, it is imperative to invest responsibly to avoid unrewarded risk and unlock value by positioning the portfolio towards those companies that can improve the resilience of the portfolio.

Lens #1: Resource Intensity & Sustainable Development Goals Analysis

- The Trustees partnered with a leading sustainability manager LGT Capital Partners to undertake holistic analysis of the Fund's portfolio vs. the benchmark covering both Resource Intensity and SDG impact.
- The resource intensity analysis indicates the Fund's active equity portfolio is delivering far superior environmental footprint (measured per USD 1 million sales) vs. the benchmark on almost all the measurement metrics but waste. The Fund's poor waste score is resulting from its significantly higher allocation vs. benchmark to consumer companies whose products generate plastic packaging and disposal related waste. On three other critical metrics namely GHG, Energy Consumption and Water Usage, the Fund's environmental footprints are anywhere between quarter to half of its benchmark's.
- The adverse footprint of the fund portfolio influenced the Trustee decision to choose the Plastics and Circular Economy engagement theme with Sustainalytics (covered in more details in Section E).

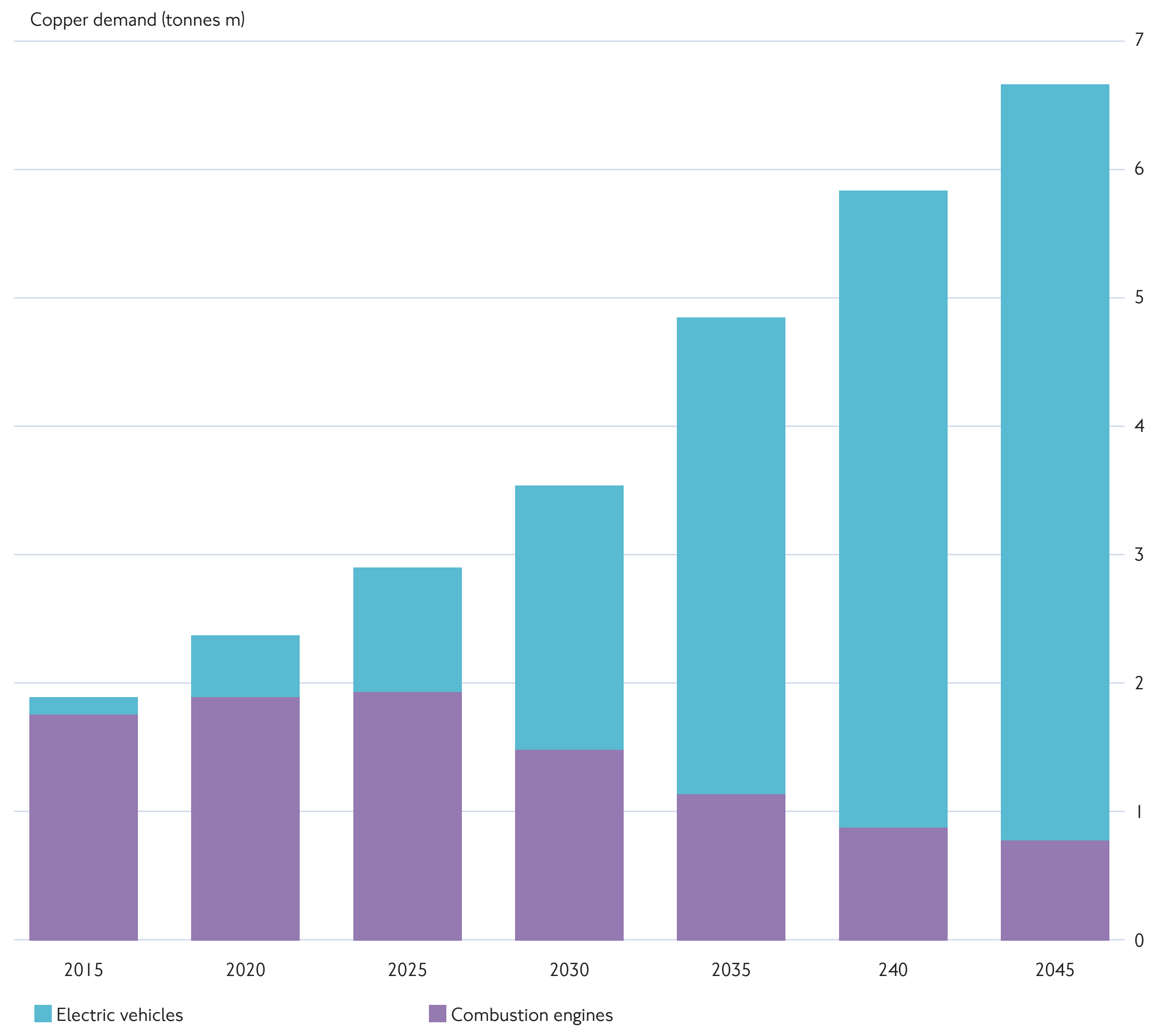
Resource Intensity Measurement
per USD 1 million sales

Positive Impact
per USD 1 million sales

	Transport for London equity portfolio	Custom benchmark	Positive Impact
Greenhouse gas	**166** Tons CO_2 p.a.[1]	**230** Tons CO_2 p.a.[1]	**64 tons less CO_2 emissions p.a.[1]** Equals CO_2 emissions of 27 cars
Energy	**440** Megawatt hrs p.a.	**556** Megawatt hrs p.a.	**126 MWh less energy usage p.a.[1]** Equals energy usage of 80 persons
Water	**5,694** Cubic metres p.a.	**10,742** Cubic metres p.a.	**5,048m³ less water usage p.a.[1]** Equals water usage of 109 persons
Waste	**950** Tons p.a.	**381** Tons p.a.	**569 tons more waste generation p.a.[1]** Equals waste of 1,168 persons

Source: LGT Capital Partners, Thomson Reuters
Data as of 21 May 2019. 1 CO_2 and other gases that are recalculated into CO_2 equivalent
The average emission of a new car in Europe equals CO_2 equivalent of 2.37 metric tons per year for driving distance of 20,000 kilometres per year and 118.5g/km CO2 emission. The average electricity consumption in Europe is 1.584 megawatt hours per capita per year. The average water usage in Europe is 46.355 cubic meter per capita per year. The average amount of household waste in Europe is 0.487 metric tons per capita per year. Calculation basis of 2017 (greenhouse gas, water, waste) and 2016 (energy).

ADOPTION OF ELECTRIC VEHICLES WILL CAUSE HIGHER DEMAND FOR COPPER



Source: Financial Times

- The Fund's lower GHG emissions vs. its benchmark is resulting from both beneficial sector allocation trend (significant under allocation to GHG intensive sectors such as utilities, energy and industrials) and positive stock selection (investing in companies across all sectors emitting lower GHGs than its sector peers). Only in the materials sector, the Fund's score is below the benchmark. Here, the Trustees recognise that the materials sector will play a leading role in the decarbonising agenda. Mining is supplying critical metals and minerals such as copper, aluminium, iron ore, lead, nickel, graphite, cobalt, and lithium, all of which will be needed in significantly higher quantities to support the global shift to renewable energy and electrifying the transport sector, amongst other things.
- The Trustees as an active member of the Climate Action 100+ group has been part of several initiatives to make these miners more GHG and resource efficient; respect, protect and develop local communities (many of the largest mining operations are in parts of the world where regulation is weak) and divest their coal operations.
- The Fund Trustees are using the Sustainable Development Goals (SDGs) framework, a collection of 17 global goals set by the United Nations General Assembly in 2015 for the year 2030, to monitor the progress made by the Fund's active equities as a provider of long term capital in addressing these critical socio-economic challenges and at the same time generating much needed returns to maintain the Fund's funding sustainability.
- LGT Cockpit assessed the impact of different product and service provided by the Fund's holding companies on the respective SDGs, measured in terms of companies' revenue share in these categories.

- The following spider graph presents the Fund portfolio SDGs impact vs. its benchmark. It suggests that the Fund has greater impact on Goal 13 (climate Action), 14 (life below water), 15 (life on land) and 16 (peace and justice strong institutions), but lagged on Goal 11 (sustainable cities and communities) and 17 (partnerships to achieve the goal).
- The Fund's slightly lower score on Goal 11 is primarily because majority of its 4% real estate holdings are through private markets that are not captured in the analysis. If private holdings are taken into account, the score would be materially superior to that of the benchmark.

FUND'S ACTIVE EQUITY PORTFOLIO DELIVERS FAR SUPERIOR ENVIRONMENTAL FOOTPRINT VS. BENCHMARK

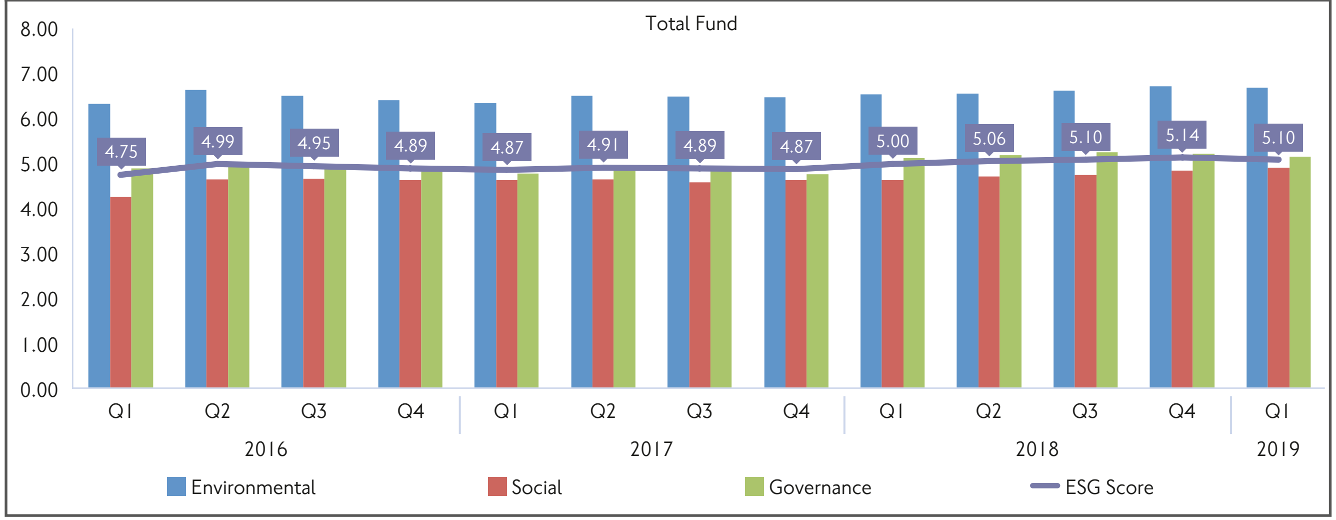
Note: Green line represents custom benchmark, and blue line represents TfL equity portfolio.
TfL equity portfolio outperforms benchmark when blue line is closer to positive scale.

Lens#2: Portfolio MSCI Scores

- The Fund continues to track its performance on all the key ESG metrics to provide a consistent measurement framework. The MSCI ESG Indexes are designed to support common approaches to environmental, social and governance (ESG) investing, and help institutional investors more effectively benchmark to ESG investment performance as well as manage, measure and report on ESG mandates. MSCI's ESG Indexes also provide institutional investors with transparency into ESG sustainability and values alignment, together with the ability to compare holdings.
- The Fund continues to make good progress but there are areas where the progress slightly slipped and the Trustees are using this transparent baseline to understand the reasons to come up with remedial actions. More specifically, through the period Q1 2016 to Q1 2019, the ESG scores of the Fund's active equity mandates has improved by around 7.5% from 4.75 to 5.1, and its environmental score from 6.33 to 6.69.

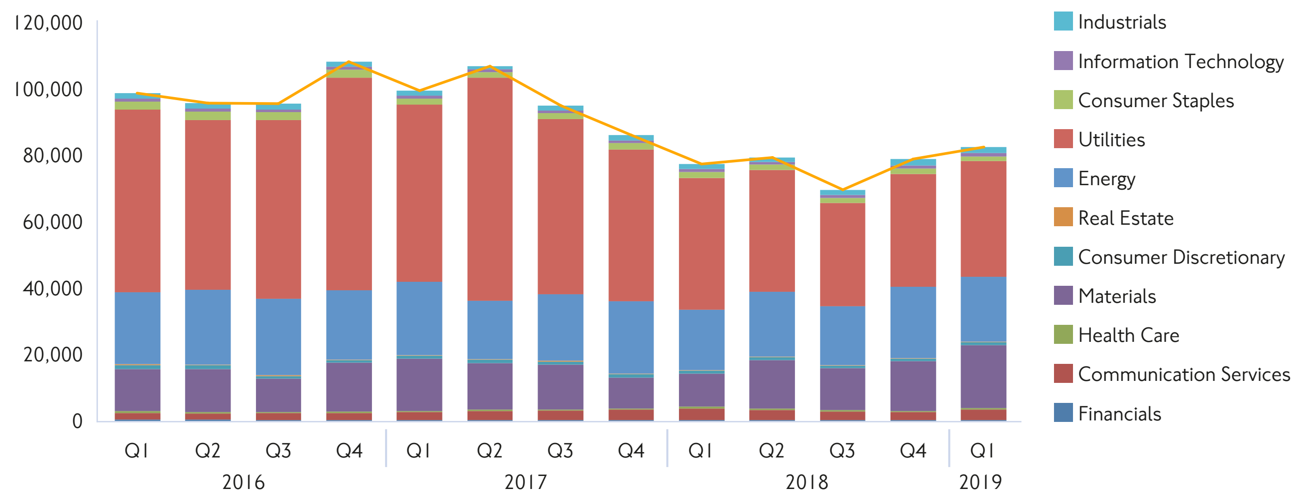
THE TOTAL FUND ESG SCORES HAVE IMPROVED OVER THE LAST THREE YEARS.

ACTIVE MANDATES (EQUITY & BOND)

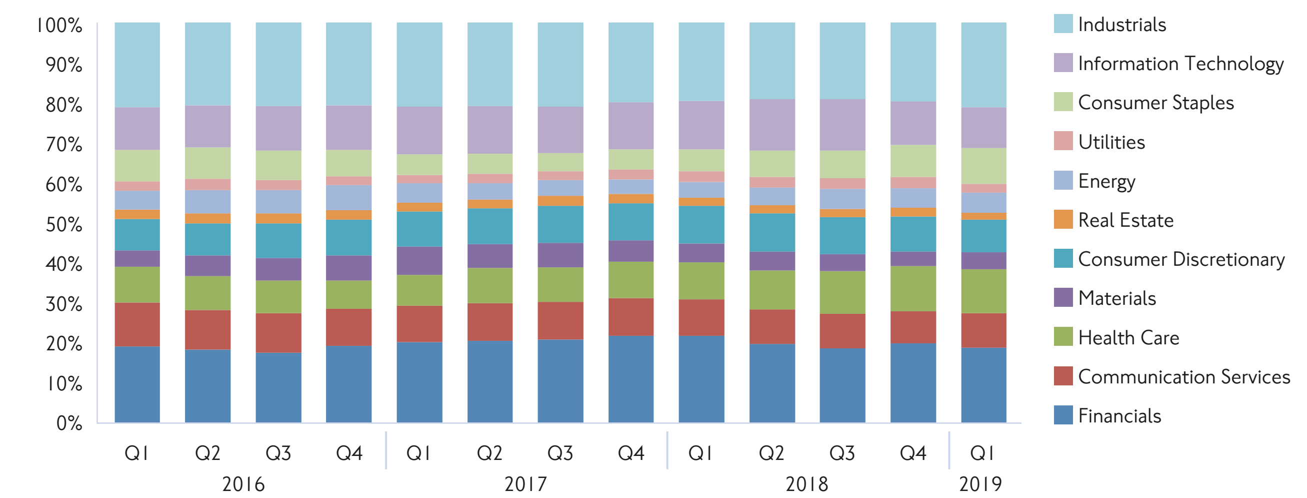


- The Fund's carbon emission (t) of the active portfolio fell by 20% between 2016 and 2019. Utilities, Energy and Materials are the top 3 emission (t) attributors, accounting for 90% of carbon emission, but only 11% of the Fund's market value, which itself has fallen from a peak of 15% in late 2016. It is important that the Fund holds these sectors as part of a balanced portfolio, where materials and energy provide much needed cushion in an inflationary environment and utilities is a classic defensive sector that holds up well when some of the more growth friendly sectors struggle.
- The Fund holds a diversified active portfolio of equities and bonds invested in a range of sectors, with Financials, Information Technology and Industrials being the largest three (combined around 40% of the portfolio) and Energy, Utility and Real Estate being the smallest (around 10% combined). Please note the Fund separately holds a large £350m private real estate portfolio.

CARBON EMISSION (000' TONNAGE BY SECTOR)

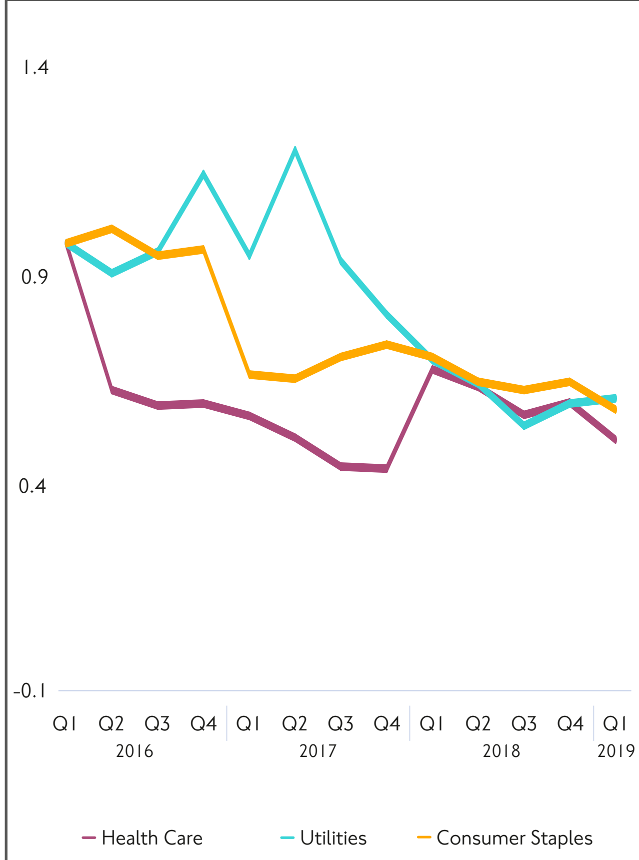


FUND EQUITY / BOND HOLDINGS MARKET VALUE BY SECTOR



- Emission tonnage of all the sectors the Fund invested in continue to fall, with the greatest improvements seen in the Consumer Staples and Utilities Sector where it is down on an average by around 40% since 2016 and for Energy where it is down by around 10%.

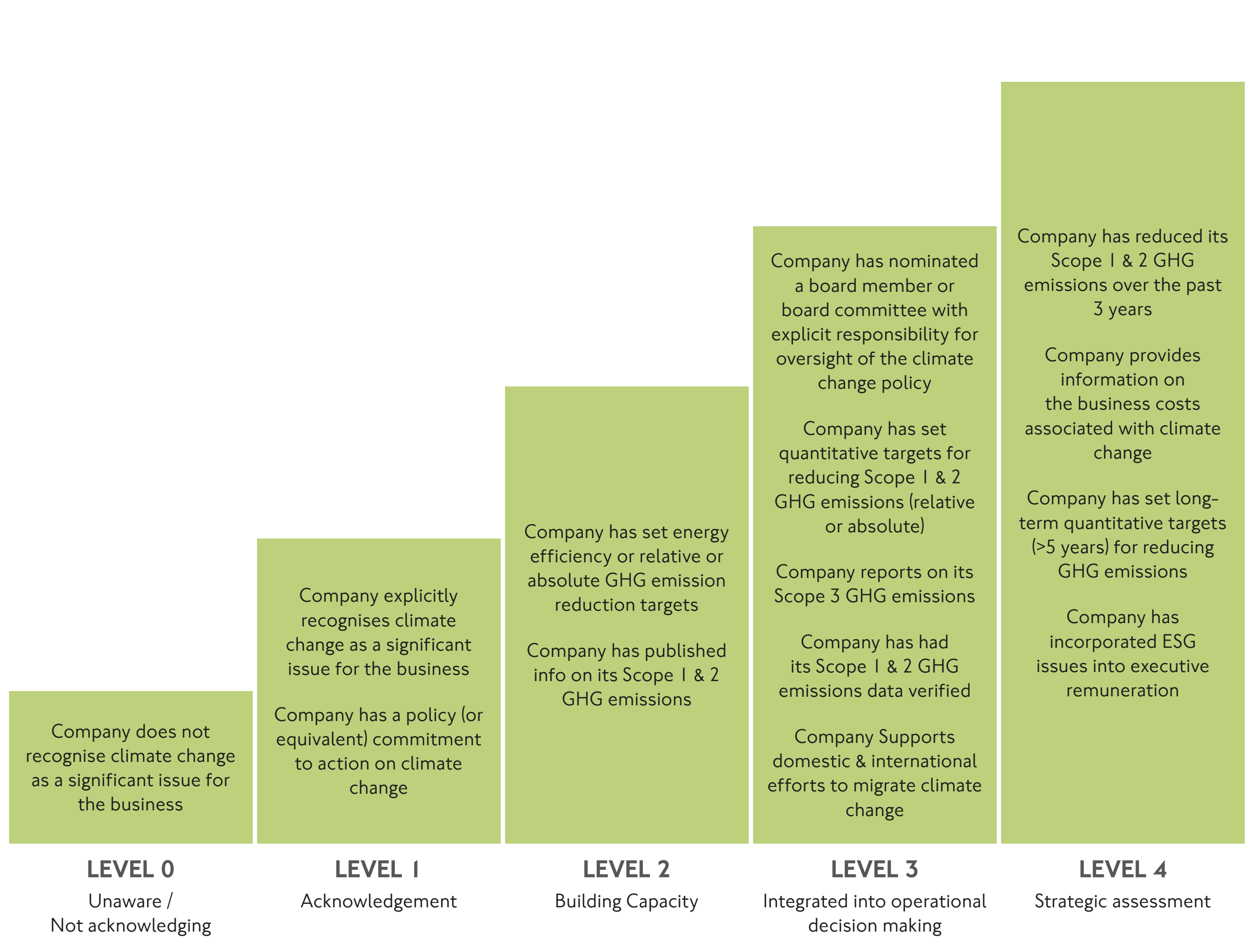
EMISSION TONNAGE REDUCTION – TOP 3 SECTORS



Lens #3: Transition Pathway Initiative (TPI)

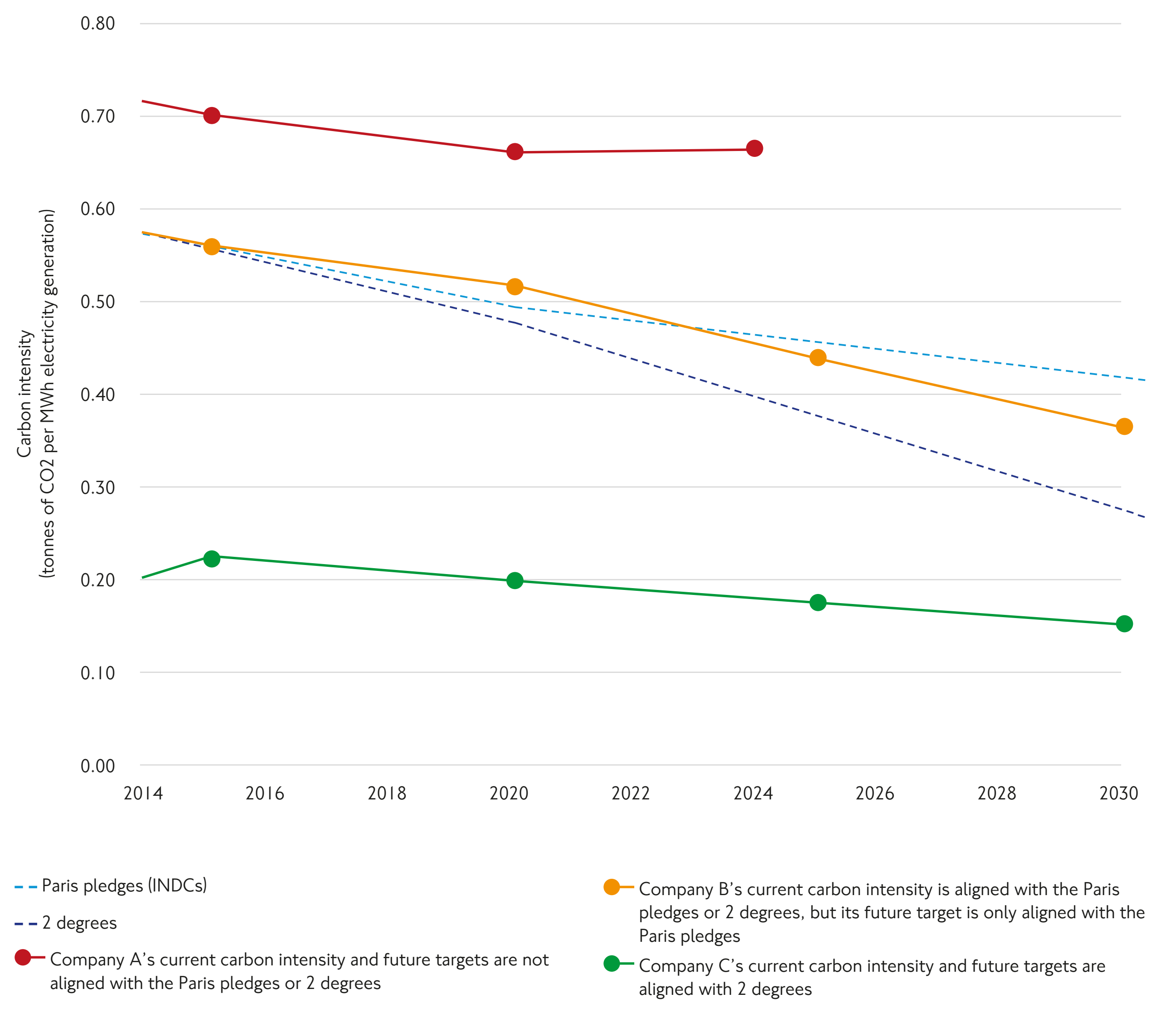
- TPI assesses preparation for the high impact sector's transition in terms of the Quality of Management of these companies to make changes and Carbon Performance by benchmarking their carbon emissions against the international targets and national pledges made as part of the 2015 UN Paris Agreement.
- The Quality of Management assessment has a scoring system of 0 – 4. Level 0 indicates the company has no awareness of carbon management quality, while level 4 represents the company has strategic assessment on its carbon emission issue. In relation to the evaluation of Management Quality, companies are annually assessed as follows against 14 indicators.
- There are two ways to measure progress on this metrics. First, over time a smaller proportion of the Fund's Assets under Management should be captured by the TPI mapping as part of the decarbonisation agenda. Second, the companies it continues to hold should show better scores if they are embracing actions demanded by the TPI.

FIGURE 1: MANAGEMENT QUALITY ASSESSMENT



- On both the counts, there are positive developments to report. The Fund's active equity holdings in companies captured by TPI continues to decline as a percentage of Fund value, falling from 2.6% to 2.2% between March 2016 and June 2019. More importantly, the biggest declines were seen in the Oil&Gas and Coal sectors where absolute holdings fell by 60% and 85% respectively. As a percentage of the Fund value, coal exposure went from 0.14% to .01% (expected to fall to zero imminently) and in the oil & gas from 0.65% to 0.2%. The weighted average Quality of the Management score of the companies held by the Fund increased from 2.3 in 2016 to 3 in June 2019.
- In relation to the evaluation of Carbon Performance, companies are assessed both against the globally-agreed 2 degrees temperature increase target, and against national pledges for emissions reductions made at, or subsequent to, the Paris Agreement. These Carbon Performance assessments are conducted on a sector-by-sector basis, taking account of the relative amount of decarbonisation that will be required from different sectors to limit temperature increases.
- The following chart explains how companies carbon performance measured in Utility sector (in this instance) compares against Paris Pledges and 2 degrees benchmarks. The lower the Carbon Intensity the better a company is performing on this metric.
- It enables the Trustees to evaluate how companies are aligning their business models with the emission reduction targets being set by national governments, illustrated in the figure opposite. These assessments are based on the International Energy Agency (IEA) Energy Technologies Report.

FIGURE 2: CARBON PERFORMANCE ASSESSMENT



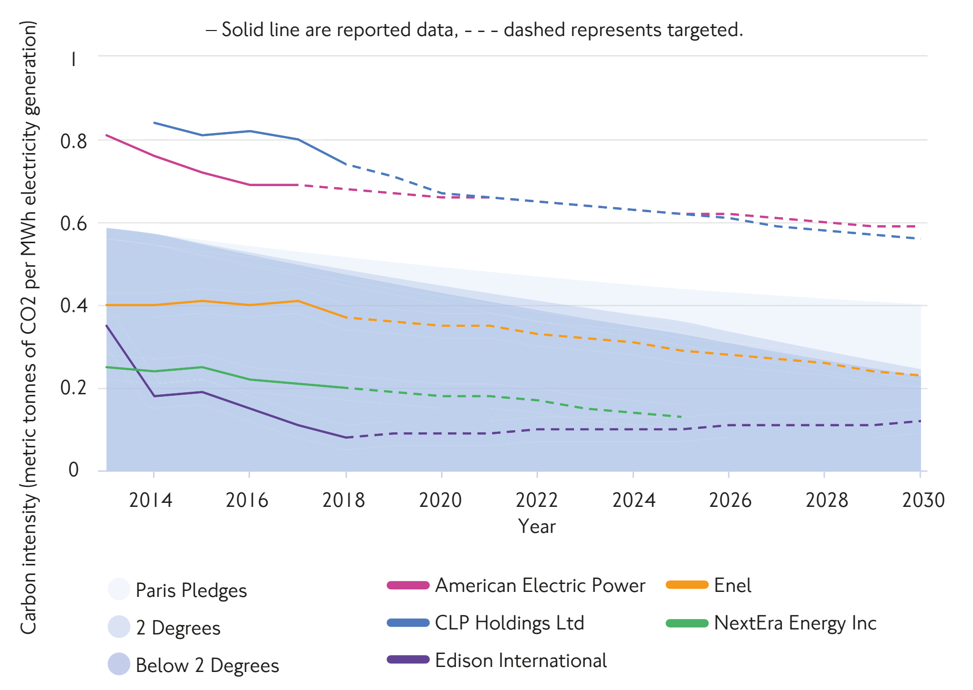
- TPI, focussed on the most carbon intensive sectors and the worst companies within those sectors, and does not, as expected, provide Carbon performance measurements for all the Fund holding companies. Out of 36 holdings' in companies that potentially map onto the TPI framework as of June 2019, only 11 companies were formally assessed by the TPI as set out in the table here.
- The emission activity targets to comply with the Paris Pledges, 2 Degrees and Below 2 Degrees benchmark are sector specific as each sector has a different starting carbon intensity (a function of the sector's business model) and accordingly a different target.
- The Trustees have looked at the Carbon Performance Measurement for the 11 holding companies in the five sectors (Utility, Autos, Airlines, Steel, and Cement) and using that framework to challenge and initiate detailed conversations with the Fund managers.

Company Name	Market Value (£)	Sector	Carbon Performance* (Emission / Activity)
AMERICAN ELECTRIC POWER INC	1,555,659	Electricity Utilities	0.66
CLP HOLDINGS LTD	4,159,409	Electricity Utilities	0.73
EDISON INTERNATIONAL	12,299,878	Electricity Utilities	0.15
ENEL	8,160,738	Electricity Utilities	0.37
NEXTERA ENERGY INC	11,958,845	Electricity Utilities	0.22
HONDA MOTOR LTD	20,450,716	Autos	133.00
SUBARU CORP	3,973,965	Autos	158.00
VOLKSWAGEN NON-VOTING PREF AG	12,240,396	Autos	144.07
JAPAN AIRLINES LTD	3,061,996	Airlines	131.20
POSCO	7,412,836	Steel	1.94
SEMEN INDONESIA (PERSERO)	3,302,425	Cement	0.71
Total	**88,576,862**		
Total Fund	11,195,865,000		
% of Fund Value	**0.79%**		

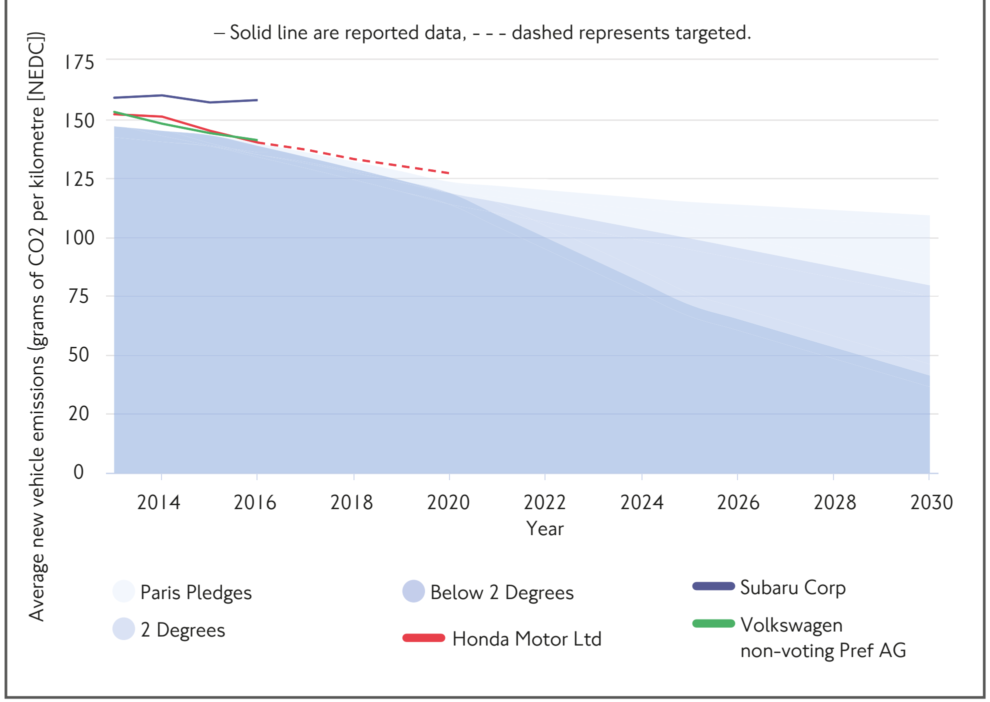
* Carbon Performance is sector specific and therefore the results of the companies in different sectors are not comparable.

- Utilities – Out of the 5 companies mapped, 3 companies outperformed the TPI benchmarks and two although cutting their carbon intensity are not projected to meet the required benchmark.
- Airlines – The Fund's only holding in this sector is projected to trend downwards but its current business model would need a clear pivot and nudge if it is serious about hitting the targets.
- Autos – Of the three companies analysed by the TPI, two are broadly on the right trajectory needed to hit the targets; only Subaru is way off the mark and not projected to hit the target.
- Steel – Posco, the only holding in this sector, is clearly not on the desired trajectory to meet the Carbon Intensity targets.

CARBON PERFORMANCE: ELECTRICITY UTILITIES



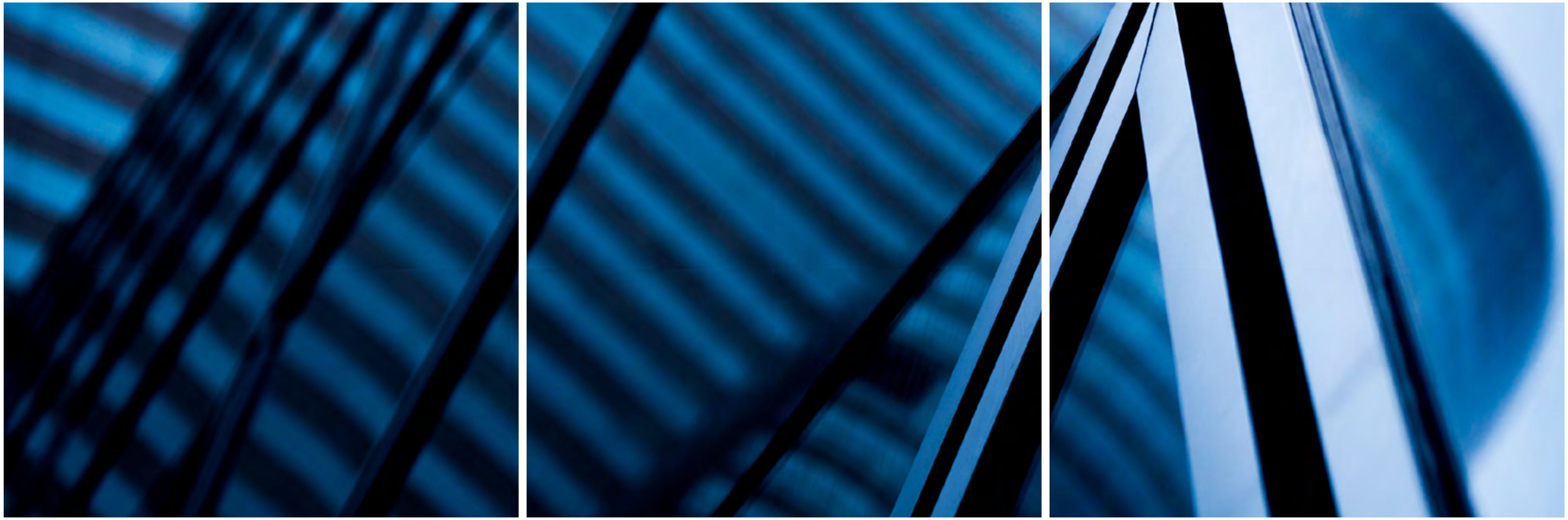
CARBON PERFORMANCE: AUTOS



In all the above cases, the Trustees are using this framework to have detailed conversations with the Fund managers to understand what and how these companies are thinking about adapting their business models and manufacturing processes to bring them in line with the carbon targets.

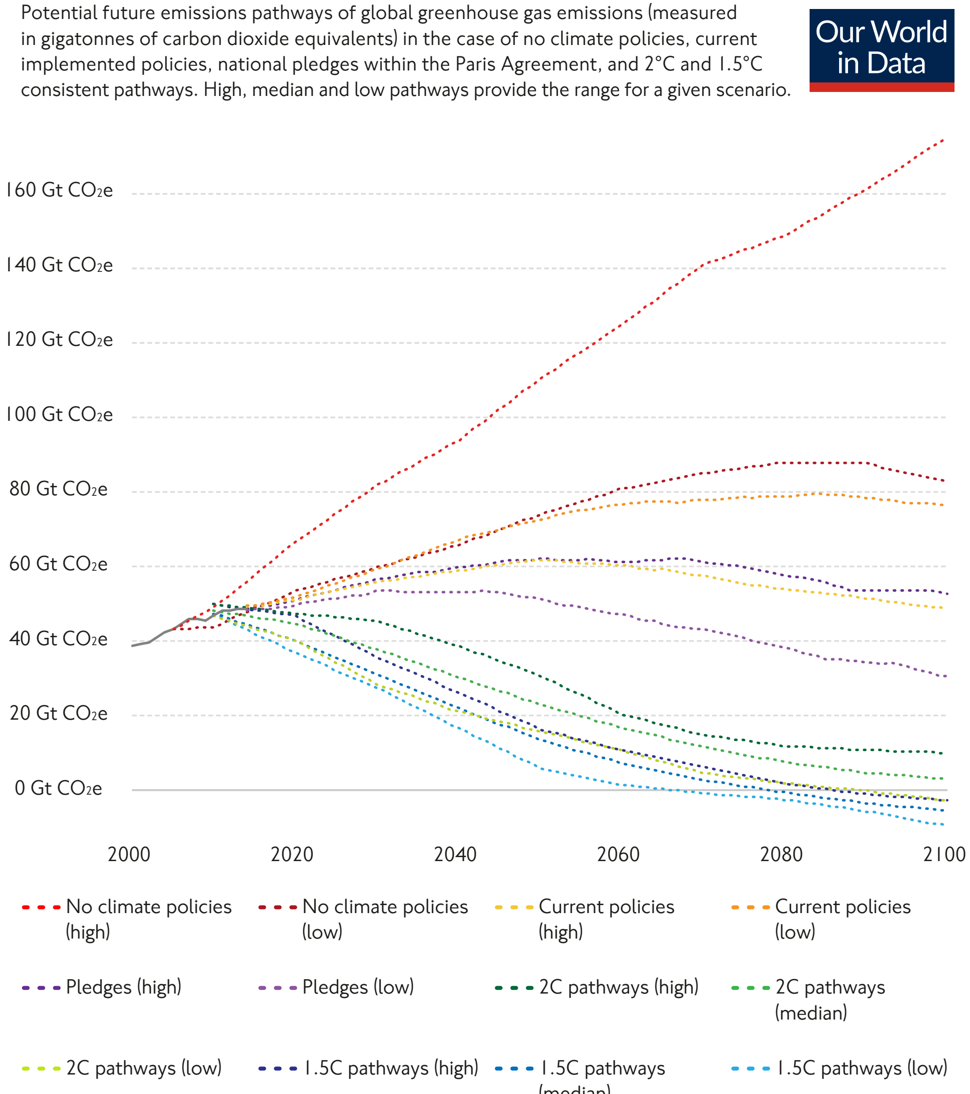
UNPRI

The Fund's first public PRI review gives the Fund a very high rating, confirming significant progress being made in the area of ESG.



FUTURE GREENHOUSE GAS EMISSIONS SCENARIOS

Potential future emissions pathways of global greenhouse gas emissions (measured in gigatonnes of carbon dioxide equivalents) in the case of no climate policies, current implemented policies, national pledges within the Paris Agreement, and 2°C and 1.5°C consistent pathways. High, median and low pathways provide the range for a given scenario.



Source: Climate Action Tracker (CAT)

- The Fund became a signatory of the UN Principles of Responsible Investment ("PRI") in 2016. PRI has over 2,300 PRI signatories worldwide comprising asset owners, such as the Fund, investment managers and service providers, representing $89 trillion in assets. As a signatory the Fund:
  - Incorporates Environmental, Social and Governance ("ESG") issues into investment analysis and decision-making processes.
  - Is an active owner and incorporate ESG issues into ownership policies and practices.
  - Seeks appropriate disclosure on ESG issues by the entities in which it invests.
  - Promotes acceptance and implementation of the Principles within the investment industry.
  - Works together to enhance our effectiveness in implementing the Principles.
  - Reports on activities and progress towards implementing the Principles.
- The Fund's assets are managed by 30 external investment managers and of these 22 are signatories to PRI. Where relevant, the Trustees are nudging the remaining managers to become signatories for better alignment of the objectives.
- The Fund has been undertaking a PRI assessment since 2016. The PRI grace period allowed it to undertake two full assessments before taking its third and first publicly available assessment. As a result, the Fund's first public assessment under PRI covering activities for the 2018 calendar year was issued in July 2019. This "Transparency Report" for the Fund (reference: Transport for London Pension Fund) and for the other PRI signatories can be found on the PRI website via the link below. https://www.unpri.org/signatories/transparency-reports-2019/4506.article
- The fund was formally assessed on 4 criteria: Strategy & Governance, Manager Selection, Appointment and Monitoring for its single Listed Equity composite and three Fixed Income composites.
- It received A on two of these criteria and A+ (highest possible rating) for the other three. The ratings are summarised in the table below, which also globally benchmarks the Fund's score to all the other PRI members.
- Under the Strategy & Governance criteria, the Fund improved its score on 6 sub-categories (to highest possible 3 star rating vs. 0 to 2 stars achieved last year), the score remained flat on 5 sub-categories (of which four are rated 3 stars so could not have improved any further) and deteriorated on one sub-category (Publicly Available Policy & Guidelines). The formal inclusion of the ESG Policy in the Fund's SIP this year will help to address this one area of under-performance.

- Under the category of Listed equity, the Fund's score increased from B in 2016 to A in 2017 to A+ in 2018. The Fund improved its score to 3A+ (highest possible score) in 8 sub-categories, remained flat in 13 areas (of which nine were 3 stars last year and four 2 stars) and deteriorated in one (Monitoring – measuring progress).
- The Fund will work hard to extend the scope of PRI assessment to the asset classes that were not captured in 2019 report, namely Private Equity, Real Estate and possibly Infrastructure.

SUMMARY SCORECARD

AUM	Module Name	Your Score	Median Score
	01.Strategy & Governance	A	A
Indirect – Manager Sel., App. & Mon			
10-50%	02. Listed Equity	A+	A
10-50%	03. Fixed Income – SSA	A	B
<10%	04. Fixed Income – Corporate Financial	A+	B
<10%	05. Fixed Income – Corporate Non-Financial	A+	B
<10%	06. Fixed Income – Securitised	Not reported	
<10%	07. Private Equity	Not reported	
<10%	08. Property	Not reported	
<10%	09. Infrastructure Not	Not reported	

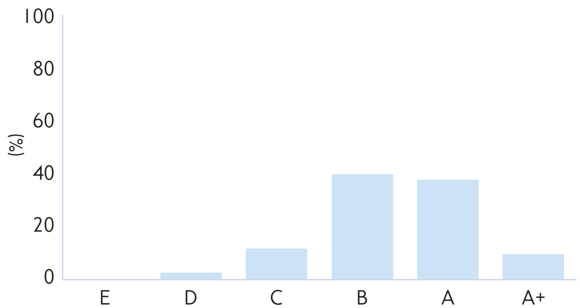
COMPARISON WITH PEERS

Signed PRI: 2017 (271)

Your Strategy and Governance module score has been compared to relevant peer groups in a series of distribution charts below.

Module | STRATEGY AND GOVERNANCE

Band A



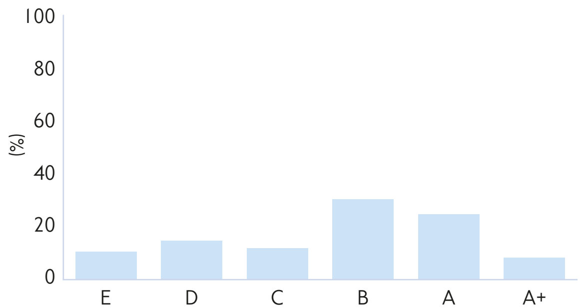
COMPARISON WITH PEERS

Signed PRI: 2017 (271)

Your Indirect – Listed Equity module score has been compared to relevant peer groups in a series of distribution charts below.

Module | INDIRECT – LISTED EQUITY

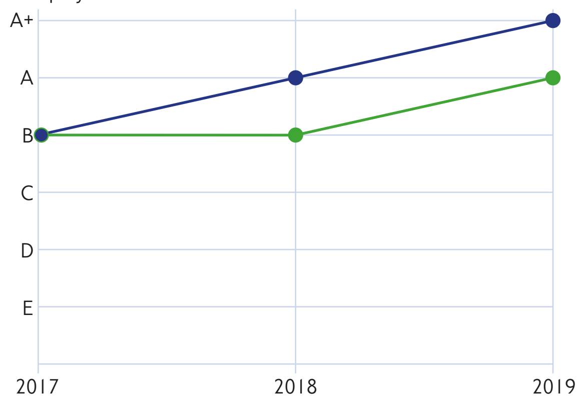
Band A+



YEAR ON YEAR

Your company year-on-year performance – SAM Listed Equity

Average year-on-year trends – SAM Listed Equity (Median)



- Under the category Fixed Income, the Fund scored 2 A+ and 1 A for 3 sub-categories. This has shown an improvement from 3 A scores achieved last year. For Fixed Income Corporate (Financial) & Corporate (Non-Financial) category, the Fund scored 39 stars (out of a maximum 39 stars from 13 indicators). For all 3 categories, the Fund improved its score on 6 sub-categories (to highest possible 3 start ratings), and deteriorated in one (Monitoring – measuring progress).
- The Trustees do not treat PRI assessment and benchmarking scores as an end itself, rather a platform to learn from its peers globally about the areas and initiatives they should prioritize to improve the Fund's ESG impact. For example, as part of learning from this process, the Trustees have decided to significantly update their manager monitoring and reporting framework – an area where its rating fell or didn't improve from last year. The Trustees have also incorporated their investment advisers ESG review ratings in quarterly investment reports to inform internal discussions and monitoring of progress made by the Fund managers.

PUBLIC EQUITY ESG ASSESSMENT 2019

Each manger is given a **weakness**, neutral or strength score in 3 areas: **ESG integration**, **Voting** and **Engagement**.

Manager	ESG integration	Voting	Engagement
Ardevora	strength ▲	neutral ▲	neutral
BlackRock	strength	neutral ▼	strength
Coronation	strength	strength	strength
JO Hambro	strength	neutral ▲	neutral
Paradice	neutral	neutral	weakness
Pzena	strength ▲	neutral	neutral
Veritas	strength ▲	strength	strength

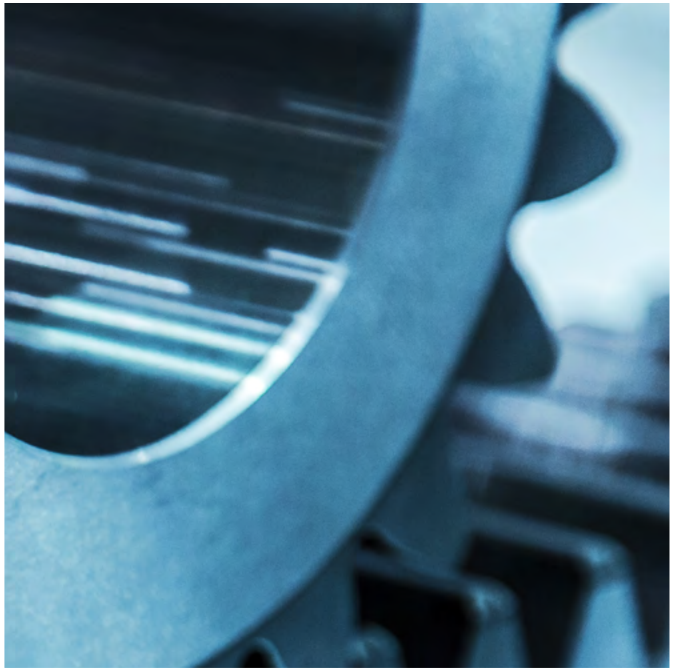
4 MANAGERS HAVE IMPROVED SCORES SINCE 2017

6 MANAGERS SCORED STRENGTH FOR ESG

2 MANAGERS SCORED STRENGTH IN ALL 3 CATEGORIES

VOTING & ENGAGEMENT

Collaboration with like-minded is more effective and cost efficient



- In 2018 the Fund became a supporting investor in Climate Action 100+ which is a 5 year initiative of PRI and other groups who are seeking to focus more efforts on the largest corporate greenhouse gas emitters. It is engaged with 161 global companies which account for up to 80% of global industrial emissions.
- The Trustees participation in Climate Action 100+ has enabled the Fund to participate collectively with fellow investors in engaging with the world's largest greenhouse gas emitters. The Economist magazine has stated that "investors concerned about climate change have never been better organized, thanks to Climate Action 100+... nor have they ever had more success".
- This month Climate Action 100+ produced its first public report which one can review at http://www.climateaction100.org/. The report includes some case studies, which help to illustrate it activities. For those companies for which the Fund was a supporting investor this included face-to-face engagement with company management, usually at Board level, making a statement at AGM (Annual General Meeting) and supporting climate friendly shareholder resolutions, as outlined in the examples here.
- Taking all the voting in the financial year ended 31 March 2019 for companies in the Fund's actively managed equity portfolios into account, there were 594 annual general meetings or extraordinary general meetings and in 212 of these there were votes for the Fund's portfolio cast against management.
- With respect to the Fund's passive equity management, because the Fund holds units rather than the underlying shares, its manager BlackRock voted at 16686 shareholder meetings and at 6472 of these it cast votes against management.

Example 1

The Fund has a holding in Rio Tinto (page 37 of the Climate Action 100+ report). There was a shareholder climate change resolution at the annual general meeting in May 2019 which received 6% vote of the vote (in 2018 it achieved a 18% vote). While the resolution related to one of the Climate Action 100+ objectives of reducing greenhouse gases across the value chain, the low support reflects the progress of engagement with management and their ongoing response e.g. Rio Tinto has produced its first Taskforce on Climate Financial Disclosures (TCFD) report and is currently conducting analysis to inform new Scope 1 and 2 emissions targets to replace the existing targets which expire in 2020. It also agreed to exit from mining coal, undertake a review of its lobbying activities, committed to an asset by asset review to underpinning new emissions targets, plus scope 3 projections under different Asian steel-making scenarios and Joined the Energy Transitions Commission to accelerate progress for hard to abate sectors.

Example 2

Shell (page 29 of the report) where engagement has led to a joint statement with its leading investors to set carbon reduction targets on the full range (including scope 3) of its carbon emissions.

Example 3

In the case of Amazon, the Fund voted in favour of a shareholders resolution for a climate change report which would allow shareholders to better understand how the Company is ensuring resilience to climate-related disruptions. It was the strongest vote against management and received 101 million votes in favour, but 228 million votes against.

Example 4

Voting activity is not only focused on environmental matters, but also governance and social issues. For Twitter a shareholder resolution for a report on the Company's content enforcement policies received 191 million votes in favour (including the votes of the Fund) but there were 293 million against.

Example 5

For Alphabet (Google) a shareholder resolution for one vote per share received 198 million votes in favour and 461 million against. The proposal regarding a report on sexual harassment risk management received 115 million in favour and 534 million against. The Fund voted in favour of both these resolutions through its investment manager.

Example 6

For Facebook a shareholder resolution for an independent chair received 1139 million votes in favour and 4546 million votes against. The proposal for a content governance report received 320 million votes in favour and 5295 million against. The Fund voted in favour of both these resolutions through its investment manager.

- Experience to date in the votes against management is that they have rarely been sufficient to overturn management proposals. But such votes "against" may still have a role in influencing or nudging management behaviour going forward.
- Prior to the appointment of Sustainalytics engagement and voting was delegated to the Fund's investment managers to promote good practice. In general, this approach worked well, however, it also brought about some particular challenges. The most obvious challenge was where the same stock was being held by more than one manager, and there they were being voted differently.

APPOINTMENT OF SUSTAINALYTICS IN 2019

Voting

Voting recommendations to the Fund's active public equity managers

Themes

Active engagements on the themes '**emerging markets**' and '**plastics and circular economy**' on behalf of the fund

Engagement

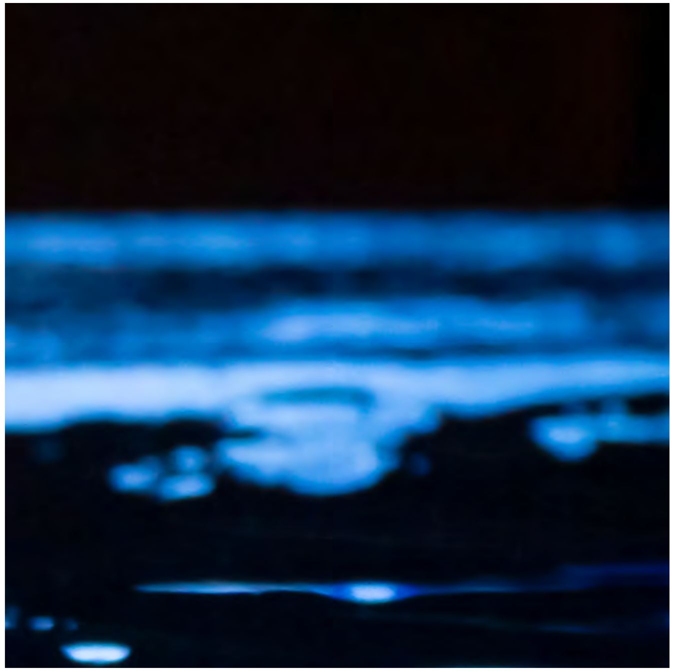
Reactive engagement in response to business conduct incidents

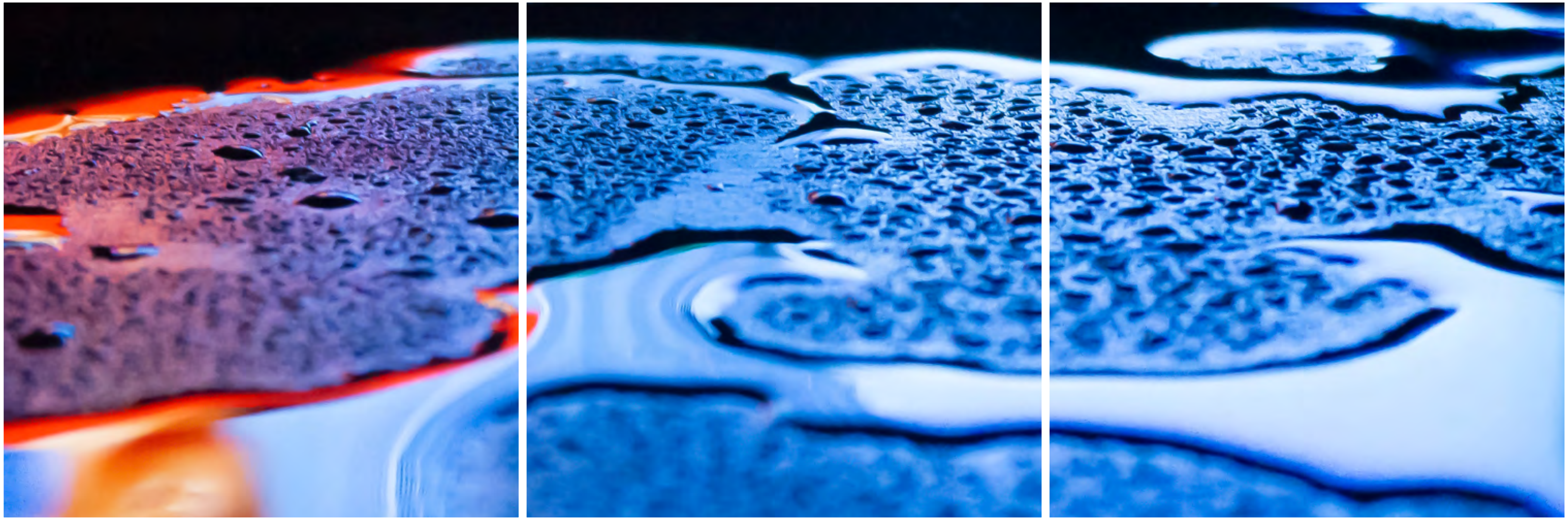
IMPROVES THE FUND'S STEWARDSHIP AND ACTIVE OWNERSHIP OF ITS ASSETS

- Appointment of Sustainalytics will be a steep change for the Fund's engagement and voting process. Under their Global Standards framework, Sustainalytics will assist the Trustees initiate engagements with companies that are, or have been involved in business misconduct incidents. A change objective would be set for every engagement case in order to influence companies to address identified problems or risks and opportunities. This model would provide a comprehensive engagement across a wide number of companies in which the Fund invests and should improve the ESG performance of the Fund's active equity holdings.
- The Trustee have selected two proactive engagement themes which map onto the United Nations Sustainable Development Goals. These themes are "*Plastics and Circular Economy*" and "*Emerging Markets*". The plastics waste issue is currently one of the fastest growing environmental topics on the political agenda as governments and consumers are becoming increasingly aware of the substantial impact of plastic on our environment and our health. Equally, emerging markets present big opportunities for investors. The growth potential for companies in these markets is significant, but so are the risks. Emerging market companies typically face more ESG related risks than developed market companies because they operate in countries with lower levels of regulation, reduced rule of law, corruption and more widespread social and environmental challenges.

CASE STUDIES

The Trustees continue to find attractive investment opportunities with material "ESG" outcomes





#1: Great River Hydro – $60m investment in one of the largest hydro facilities in North East America

- The company owns and operates a portfolio of hydro power generation facilities comprising thirteen generating stations and three storage reservoirs in New England totalling 584 MW.
- The portfolio represents critical power infrastructure as the largest conventional hydroelectric system in New England providing ~23% of generation and ~40% of qualified capacity from conventional hydro power assets in the region.
- The company supports land conservation and community recreation areas in New England with nearly 30,000 acres under management including dozens of public recreation areas and hiking trails.
- Storage reservoirs and operations play an important role in region flood control and renewable power generation from the facilities displaces ~680,000 tons of CO_2 per year.
- Responsive reserve energy and system transmission support grid services that enable further penetration of renewables such as wind and solar into the regional energy mix.
- Critical Asset for New England Electronic Power Markets: Great River Hydro is black start capable, making it a critical asset in the event of system black-out. This was especially important for grid reliability during the 1965 system blackout, Tropical Storm Irene, Hurricane Sandy and 2014 polar vortex.

- **Additional Community and Economic Benefits:**
  - Flood Control: Storage reservoirs and operations play an important role in regional flood control
  - Local Economy: Great River contributes to skilled labour force in local communities with 38 jobs in New Hampshire, 38 in Vermont, and 38 in Massachusetts
  - Community Programs via Property Taxes: Great River is a source for ~$23m in tax revenues for 51 local municipalities in three states – a major tax payer in each of the towns where power stations are located via long-term agreements with the communities
  - Historical Contributes to Economic Development: Great River's facilities are historically significant for the their roles in the development on the regional electric system and industries it supported going back to the early 1900s.

- **Land Conservation and Public Recreation**:
  - Great River assets encompass ~30,000 acres of land in New England, mostly protected in perpetuity and open to the public, including dozens of picnic areas, 20 boat launches, and miles of trails
  - Connecticut Lake Conservation Easement: Held by the Society for the Protection of New Hampshire Forests, covers 2,300 acres with 39 miles of lake and stream frontage at Connecticut River headwaters
  - Fifteen Miles Falls Conservation Easement: Held by the New England Forestry Foundation, includes 2,953 acres in Littleton, Dalton and Monroe
  - Bald eagle nest sites on Great River property in New Hampshire, monitored in partnership with NH Audubon
  - Great River support for the greeter programme at Connecticut Lakes to educate users and prevent the spread of aquatic invasive species.

#2: Kwinana – £4m investment in Australia's largest Waste to Energy Plant

- Australia's first large-scale waste to energy project, integrating the recovery and reuse of waste with the generation of energy to provide a practical solution to two community challenges: waste disposal and renewable energy supply.
- The facility utilises proven incineration technology that will process up to 400,000 tonnes of waste per annum.
- Significant reductions in landfill utilisation and greenhouse gas emissions, particularly harmful methane emissions.
- Diversion of around one quarter of Perth's post-recycling waste landfill.
- Generate and export 36MW of base-load renewable power into the Western Australian grid every year, sufficient to power more than 50,000 households.
- More than 800 jobs created during construction; and more than 60 full-time positions once the facility is operational.
- No need for upfront pre-treatment or additional source separation of waste, reducing the complexity and cost of waste collection and handling, and no change to current 2-3 bin collection systems.
- Ferrous and non-ferrous metals can be recovered post-combustion and recycled, increasing recycle rates and reducing greenhouse gas emissions through avoidance of new metals production and associated energy consumption.
- Developing technologies to reuse the solid ash by-product in construction products such as bricks and aggregate for roads, thus increasing the potential for zero waste to landfill.

400,000 tonnes of household, commercial, and industrial waste diverted from WA landfill annually → **25%** of Perth's post-recycling rubbish

>400,000 tonnes of CO_2 emissions reduced annually → **85,000** cars off the road

>36MW of reliable base-load energy to be exported to the grid → **>50,000** household electricity needs

800+ jobs created in WA during construction → **60** full-time positions once operational

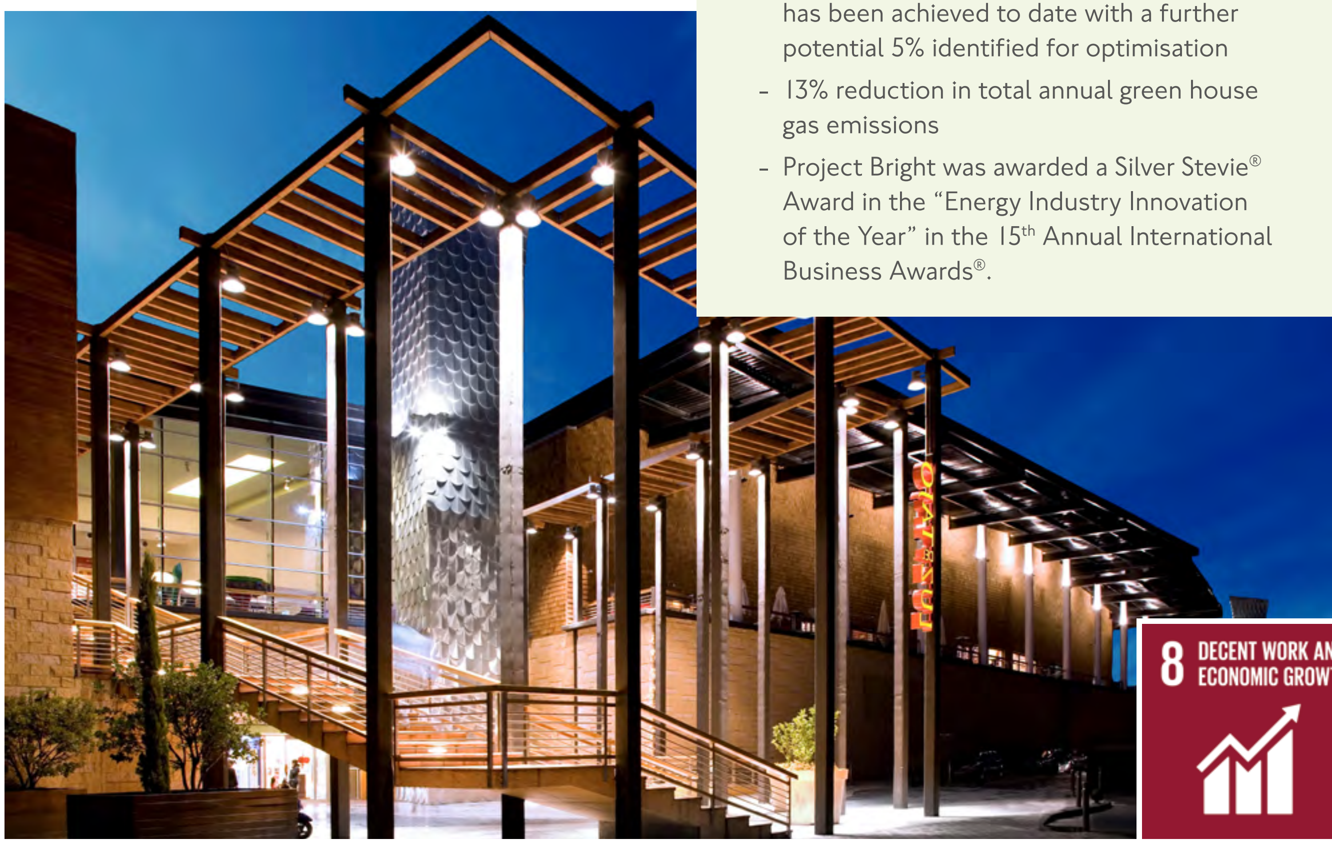
#3: Cambridgeshire – £16m investment in UK's largest agriculture fed Anaerobic Digestion Plants

- The investment includes two of the largest agricultural-fed Anaerobic Digestion ("AD") plants. The fully built and operational plants together generate more than 1600 cubic meter of biomethane that is injected into the grid. In addition the plants generate 14.7MWe electricity (most of which is exported to the grid) and 10MW heat.
- The plant's end waste (digestate) is used as fertiliser to grow new feedstock (and other crops) while the plants produces all the gas, heat and electricity needed to operate the plant whilst also exporting the excess to the grid.
- The methane-rich biogas produced by AD is captured for use in a combined heat and power (CHP) plants to produce electricity and heat. No methane is released to the atmosphere and carbon is saved through the displacement of energy from fossil fuels.

#4: CBRE – £11m investment in Sonae Iberia Shopping Centre Venture

- The Sonae Iberia Shopping Centre Venture ("SISCV") is a portfolio consisting of 4 wholly owned shopping centres located across Portugal and Spain. Representing over 117,000 square meters of Gross Leasable Area, this venture is managed and operated by Sonae Sierra who are recognised as an ESG leader, achieving a 5-star GRESB rating for this venture.

- Project Bright , an innovative energy modelling initiative, helped SISCV deliver:
  - 250 optimisation measures were identified, 76% of which have since been implemented across the broader portfolio
  - 11% reduction in annual electricity usage has been achieved to date with a further potential 5% identified for optimisation
  - 13% reduction in total annual green house gas emissions
  - Project Bright was awarded a Silver Stevie® Award in the "Energy Industry Innovation of the Year" in the 15th Annual International Business Awards®.



21% Improved the water efficiency of portfolio by 21% since 2003

248% Increased the proportion of waste recycled by 248% since 2002, and reduced the proportion of waste sent to landfill by 69% since 2007

81% Reduced the GHG emissions intensity by 81% since 2005

9% Reduced the number of workforce accidents resulting in absence from work by 9% since 2005

49% Improved the electricity efficiency of the portfolio by 49% since 2002

86% Reduced the severity of workplace accidents and occupational diseases by 86% since 2005

8 DECENT WORK AND ECONOMIC GROWTH | 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | 12 RESPONSIBLE CONSUMPTION AND PRODUCTION | 13 CLIMATE ACTION

#5: CORIANCE – £5.5m Investment in District Heating Scheme in France

- Coriance is a market leading provider of renewable heat solutions in France operating a portfolio of networks delivering heat to residential, social and commercial buildings.
- As at the end of 2018, 60% of Coriance's energy production came from renewable resources, the highest currently of any market participant.
- In 2018, nine of Coriance's district heat networks were awarded the prestigious "Ecoreseau de Chaleur" notation recognising their performance in using sustainable energy resources for heat generation.
- First network in France to supply district cooling using recovered energy from waste. In the city of Toulouse's district heating network operated by Coriance 99% of the energy required for the network is recovered from waste related sources.

DELIVERS 57T PER ANNUM CO_2 REDUCTION FROM COOLING

DELIVERS 1,500T PER ANNUM OF TOTAL CO_2 REDUCTIONS

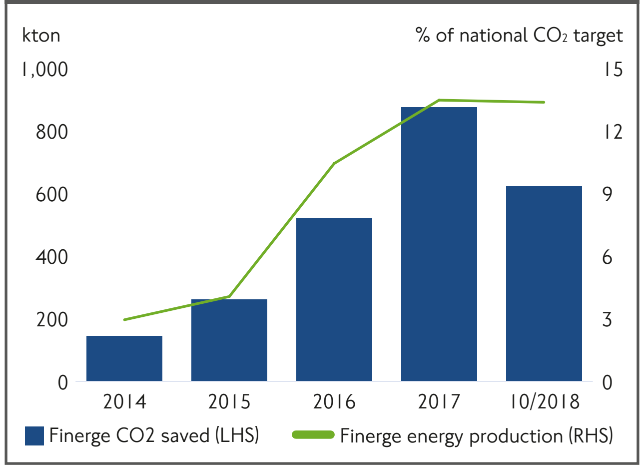
16.3 MW HEAT CAPACITY

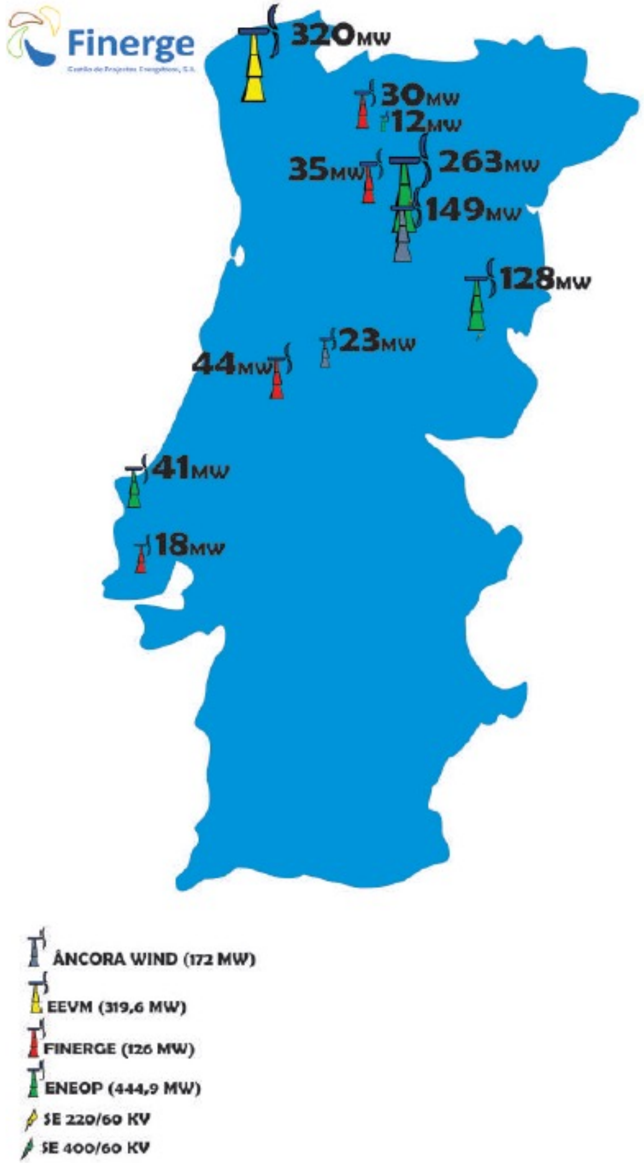
3.7 MW COOLING CAPACITY

#6: Finerge – £17m investment in one of the largest Wind Portfolio in Portugal

- The second largest wind portfolio in Portugal producing 899 MW of clean energy in 2018.
- Operates 499 turbines across 25 wind farms with 48 employees.
- Since acquisition the portfolio has contributed to a cumulative diversion of 2,371Kton of CO2. This represents a 190% improvement from the 2015 base. This year Finerge deployed further capital to acquire an additional 66MW of capacity and so increasing its total clean energy footprint by 36% since 2015.
- Since 2016 Finerge has donated €500k to 'Fundo do Lobo' a Fund established to protect the local Iberian wolf population. The team also works with the Environmental Agency to protect the local bat population close to its wind production sites.

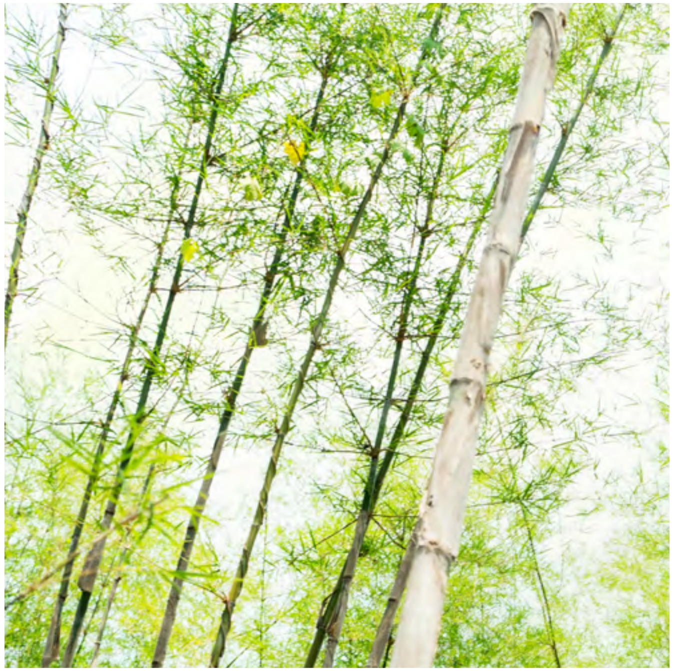
PORTUGAL'S CO_2 EMISSION REDUCTION TARGET (TONNES OF CO_2)





GLOSSARY & TERMS

- **AMNT**: Association of Member Nominated Trustees
- **Climate Action 100+**: an investor initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change
- **DB**: Defined Benefit
- **ESG**: Environmental, Social and Governance
- **Fiduciary duty**: The legal duty of one party (the fiduciary) to act in the best interests of another (the principle). In the investment chain there are a number of these relationships including the duty that boards have to shareholders, the duty between trustees and beneficiaries and the duty between asset managers and their clients
- **FRC Stewardship Code**: Financial Reporting Council Stewardship Code
- **GHG**: Greenhouse Gas
- **IIGCC**: Institutional Investors Group on Climate Change
- **MSCI**: Morgan Stanley Capital International, a global provider of equity, fixed income, hedge fund stock market indexes, and multi-asset portfolio analysis tools
- **Paris Pledges**: By joining the pledge, businesses, cities, civil society groups, investors, regions, trade unions and other signatories promised to ensure that the ambition set out by the Paris Agreement is met or exceeded to limit global temperature rise to less than 2 degrees Celsius.
- **Scope 1 emissions**: direct emissions from owned or controlled sources
- **Scope 2 emissions**: indirect emissions from the generation of purchased energy
- **SDG**: Sustainable Development Goals
- **SIP**: Statement of Investment Principles
- **Stewardship**: A purposeful dialogue between shareholders and boards with the aim of ensuring a company's long-term strategy and day-to-day management is effective and aligned with shareholders' interest. Good stewardship should help protect and increase the value of investments
- **TCFD**: Task Force on Climate-related Financial Disclosures
- **TPI**: Transition Pathway Initiative
- **UN PRI**: United Nation Principles of Responsible Investment
- **Voting rights**: Equity investors typically enjoy rights to vote at annual and extraordinary general meetings (AGMs and EGMs). The resolutions on which shareholders vote will vary according to individual countries' legal frameworks. They may include voting on an individual director's appointment, remuneration or mergers and acquisitions



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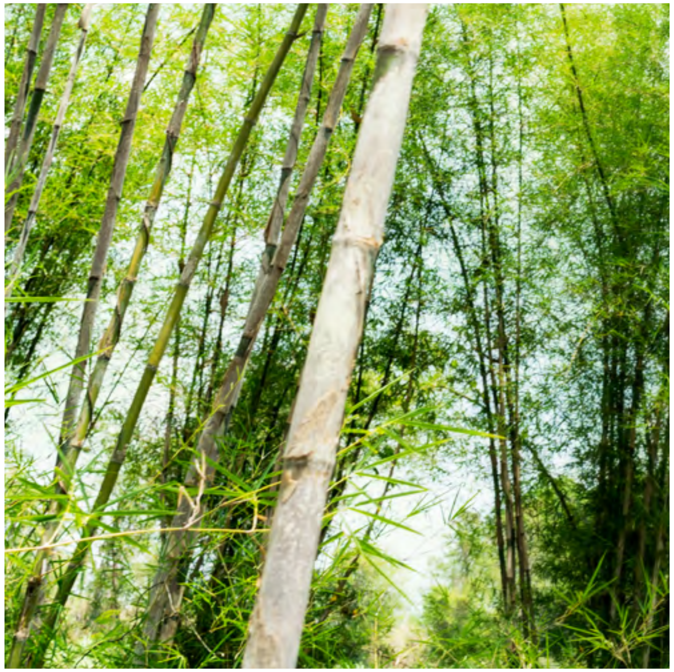

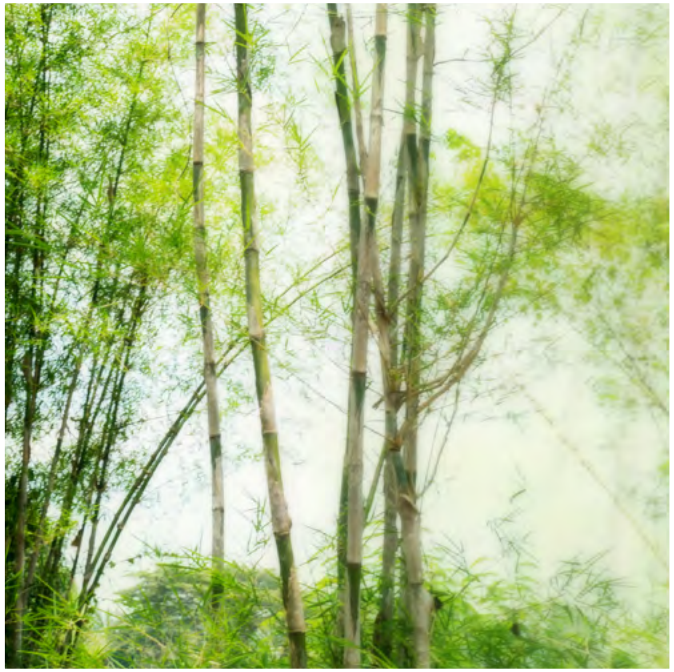

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