

**M&G Climate Solutions Fund**

# Climate Measurement Report

**August 2022**



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# Introduction



**Ben Constable-Maxwell**

Head of Sustainable  
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**Randeep Somel**

Fund manager

It has been just over a year since we published the first annual climate measurement report for the M&G Climate Solutions Fund. Over the past year, we have seen climate initiatives continue, with world leaders coming together for the COP26 climate summit in November 2021. There were fresh commitments to reduce greenhouse gas emissions to net zero, and new promises to stop deforestation, cut methane emissions and phase out the use of thermal coal for electricity generation.

Subsequently, in early 2022, the latest report of the Intergovernmental Panel on Climate Change (IPCC) painted a concerning picture of our current progress and the future path of climate change. The report warned that, without immediate and deep emission reductions, limiting global warming to 1.5°C above pre-industrial levels as required by the Paris Agreement will become increasingly difficult.

Clearly, much more needs to be done by governments, companies and individuals alike. However, encouragingly the report claimed that there is still a chance of reaching the goal, if emissions peak by 2025 and we manage to cut them by 43% by 2030.

The decarbonisation of the energy sector must play a key role if we are to succeed. The world must transition away from using fossil fuels, increasingly adopt electrification, improve energy efficiency and embrace newer technologies. A cost of living crisis and Russia's war on Ukraine, two problems that sadly remain present at the time of writing (August 2022), have also provided fresh impetus for change. Nations can now

see the problems raised by depending on external regimes, such as Russia, for fossil fuels. They can see that energy security and energy decarbonisation go hand in hand. Changes are already being made. For example, the European Union has brought forward its decarbonisation targets in its proposed RepowerEU plan. On the back of these developments, we expect to see growing investment and increased incentivisation for the transition to renewables.

There are also opportunities to provide climate solutions in countless other areas, from low-carbon buildings and clean transport to sustainable forestry and the recycling of waste into new products. The potential is there, but sufficient infrastructure, technical expertise and funding are also required.

Turning to the fund itself, this year we have expanded our climate measurement report to give you a greater insight into our portfolio and processes. As before, we have provided in-depth climate metrics on all investee companies, including case studies to provide measurement where applicable. We have also highlighted a company from each of our three impact areas, providing an in-depth look at what they do and how this makes a positive impact on the climate. Elsewhere, we have compared the portfolio's total emissions to its benchmark, and highlighted our biggest emitters.

Engagement is an important aspect of climate investing. Over the past year we have continued to engage with investee companies to encourage positive change. You will find several examples of engagements on **page 24**. We are also pleased to report that three more companies have set or committed to Science Based Targets for emission reductions since last year. The full list is on **page 12**.

As we look to the year ahead, we will continue to encourage companies to set targets and improve climate disclosures. We will also continue to look for new companies providing climate solutions, ensuring we rigorously analyse any companies on their impact, intention and investment quality before making a decision.

Clearly, there remain significant challenges if we are to tackle climate change and achieve the goals of the Paris Agreement. However, if we can act quickly and provide funding in the right areas, we still have a chance.

In the M&G Climate Solutions Fund we remain confident in the abilities of our investee companies to continue making positive climate impact in this area, and we hope you enjoy finding out more about them in this report.

*Julian Russell*      *Renée-Lee Lunn*



The value and income from the fund's assets will go down as well as up. This will cause the value of your investment to fall as well as rise. There is no guarantee that the fund will achieve its objective and you may get back less than you originally invested.

# Overview of impact investing

Impact investing explicitly targets investments that deliver positive social or environmental changes, while also generating financial returns. However, there are several key features that set it apart from other responsible investing approaches.

The historical nature of impact investing – primarily private finance to fund specific impactful projects – means that it has chiefly sat within the sphere of institutional or high net worth investors, with little access for the general public. The M&G Climate Solutions Fund, however, invests in listed equities as a liquid, open-ended investment vehicle. This effectively allows for the ‘democratisation of impact investing’, providing access to impact investments for ordinary investors and institutions alike.

Impact investing takes a stricter approach than many other forms of responsible investing, and there are several areas that impact investors specifically need to consider (beyond the financial investment case for a business).

## Intentionality

This means that a company specifically sets out to deliver a particular impact, with that goal being part of the company’s mission statement, strategy and actual day-to-day operations (inadvertent impact doesn’t count). There is also intentionality from the investor’s viewpoint. That is, the intention to generate positive social or environmental impact through an investment. To achieve this, we must actively pick stocks because of their positive impact, rather than simply screening out companies or picking the least bad from each sector.

## Additionality and materiality

Additionality involves identifying and reporting the resultant impact of every pound, euro or dollar invested in a project. As we invest in listed equities, and are generally dealing in secondary markets where the directing of that funding is not always possible, additionality is considered in other ways, generally focused on understanding the additionality of the company. To do that, we might ask how the world would be different if that particular company did not exist or if it were not adequately funded, or how replicable its products or services are. We also consider the ‘materiality’ of those products or services – this is the level to which they help solve a given societal problem or contribute to a particular goal, such as one of the UN’s Sustainable Development Goals (SDGs), and the percentage of a company’s revenue derived from those activities.

## Measurement

Another key differentiator between impact investing and other forms of responsible investment is ‘measurability’. In other words, the company’s positive impact must be measurable. This is one of the central tenets of impact investing, and also one of its most challenging aspects, especially so for investors in public equity markets where measurement can be less clear.

# Our approach

The M&G Climate Solutions Fund invests in companies across any country and sector whose products and services directly aim to deliver solutions to the challenge of climate change. Every company in the portfolio must also prove that it makes a net-positive climate contribution. In other words, the carbon emissions avoided/saved through the use of the company's products and services must outweigh those emitted in providing these products and services.

## Three impact areas

The fund is a concentrated portfolio of quality, sustainable, impactful companies typically held for the long term. The fund generally holds fewer than 40 stocks, diversified around three main climate areas:

- **Clean energy** – renewable energy producers, such as solar, wind and hydro, as well as companies that provide critical components for the production of renewable energy. See **page 14**.
- **Green technology** – companies focusing on batteries and electrification, efficient buildings, clean transportation, products that promote sustainable agriculture and plant-based foods. See **page 17**.
- **Circular economy** – businesses focusing on the 'reduce, re-use, recycle' model, utilising products already in the economic system and reducing new production. See **page 21**.

## The UN's Sustainable Development Goals

Each company is assigned a primary Sustainable Development Goal\* (SDG) that we believe the company is addressing. We determine specific, SDG-aligned key performance indicators (KPIs), against which we measure the materiality of the impacts they are achieving. You can find the primary SDG and KPI for every investee company over the following pages.

\*While we support the UN SDGs, we are not associated with the UN and our funds are not endorsed by the organisation.

## Different types of company

The fund invests in three different types of company, providing additional diversification across industries, end markets, and maturity of business models.

### Pioneers

Pioneers tend to be young companies whose innovative products/services are likely to disrupt and revolutionise a given area. They tend to spend large amounts of capital as a percentage of revenues on research and development and are not mature in their development.

### Enablers

Enablers are those that provide tools for other companies to deliver the impact. For example, simulation software companies whose software directly helps to design energy-efficiency products.

### Leaders

Companies that have spearheaded sustainability and impact in their own area of expertise. They maintain their leadership by continuing to invest in research and development, but this cost represents a smaller percentage of revenues compared with pioneers, as their profitability is more established. For example, this could be a leading offshore wind company.

## III framework

Before a company can be added to the watchlist and held in the M&G Climate Solutions Fund, it must be analysed through our III framework. This is split into three areas – Investment, Intention and Impact.

The investment and impact case in the company will be debated by M&G's internal impact committee and must be approved unanimously, while scoring a minimum of 5 out of 10 in each area, before the company can be added to the watchlist. The team will then use scenario-based valuation modelling to determine the company's intrinsic value. If the price and timing are right, only then will the company be added to the fund.

### Investment

- Business model
- Competitive positioning
- Capital allocation
- Business risk
- Environmental, social and governance (ESG) factors
- Liquidity



### Intention

- Mission statement and purpose
- Management and strategic alignment
- Management transparency
- Culture



### Impact

- Impact balance
- Measurability
- Materiality/revenues to SDGs
- Additionality
- Impact risk





## Impact Results Chain



### Input

Money/Effort spent on an activity



### Activity

Activity that will be measured



### Output

Volumes sold or revenue generated



### Outcome

Number or % of target population that has been reached



### Impact






Goal level change achieved (eg, educational attainment, health status, income level)

As part of the team's efforts to measure impact and direct our focus on the variables that are within a company's control, we have adapted the Impact Results Chain Framework used by the World Health Organisation and the Gates Foundation. This helps map the route to (or the logic of) impact investment from start to finish.

We also started to look at the impacts of our companies through the lens developed by the Impact Management Project (IMP) – a forum for building global consensus on how to measure and manage impacts (this has since become the 'Impact Management Platform', a collaboration between leading providers of public good standards and guidance for managing sustainability impacts). This lens is referred to as the 'Five Dimensions of Impact'. We believe the Five Dimensions dovetails neatly with our own IIL framework, and provides an additional means to understand the scope of the impact being generated by our investee companies. We have also begun considering the IMP's 'ABC' classification system for companies within the portfolio with 'A' companies acting to avoid harm, 'B' benefiting stakeholders and 'C' contributing to solutions. By considering the nature of the companies we invest in, and how their activities align with these classifications, we are able to steer the portfolio in an even more impactful direction.



## Five Dimensions of Impact

-  **What**  
Tells us what outcome the enterprise is contributing to, whether it is positive or negative, and how important the outcome is to stakeholders.
-  **Who**  
Tells us which stakeholders are experiencing the outcome and how underserved they are in relation to the outcome.
-  **How Much**  
Tells us how many stakeholders experienced the outcome, what degree of change they experienced, and how long they experienced the outcome for.
-  **Contribution**  
Tells us whether an enterprise's and/or investor's efforts resulted in outcomes that were likely better than what would have occurred otherwise.
-  **Risk**  
Tells us the likelihood that impact will be different than expected.

# How we consider emissions

Greenhouse gas emissions data is integral to our investment process. This information tells us whether or not a company is eligible for the fund, while helping us to measure the impact from individual holdings and the fund as a whole, as well as measure progress over time.

## Our net emissions approach

Every company held in the fund must deliver a net-positive climate impact. In other words, the carbon emissions avoided/saved through the use of the company's products and services must outweigh those emitted in providing these products and services. We must be able to validate this quantitatively, so if a company cannot provide this data, it would not be eligible for the fund.

When calculating the climate impact of investee companies, it is important that we compare like-for-like. This is why we consider our holdings' Scope 1 and 2 emissions (see next page), as well as the emissions saved/avoided, but not Scope 3 emissions.

Currently, the reporting of Scope 3 emissions is very patchy, and not all investee companies report this data. This is because Scope 3 requires organisations to survey their entire supply chains – and the supply chains of their suppliers – which makes capturing this data more challenging. As climate reporting metrics improve and regulation becomes more stringent, we hope this will improve over time.

See **page 25** for a detailed breakdown of the net emissions for each company held in the fund.

## Measuring the climate impact

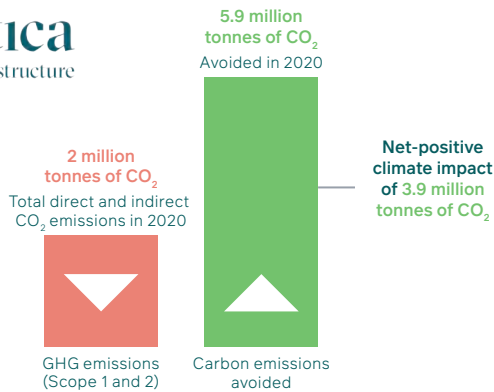
Every company in the fund must contribute towards one of the UN's Sustainable Development Goals (SDGs).

As every holding must also make a net-positive climate impact, it is important that we can measure the CO<sub>2</sub> emissions that it saves/avoids. As most third-party data providers don't cover net positive climate impacts, investors must often rely on company reporting, and wherever possible we will source data directly from investee companies. This also means that the data is backward looking, which is why we are reporting on 2021 figures (or the latest available).

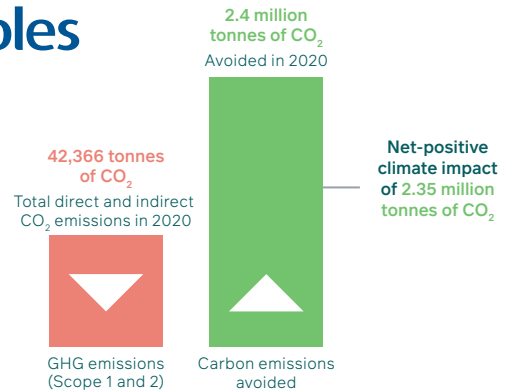
There are three companies in the 'green technology' impact area where it has been challenging to quantify the exact carbon dioxide emissions avoided/saved. This is because these companies are what we call 'enablers'. In other words, their products allow other businesses to deliver a positive climate impact. This makes it more difficult to measure their total climate impact, so in these cases, we have taken a sample of the companies' customers and measured their saved/avoided emissions. Encouragingly, these examples alone have more than offset the companies' Scope 1 and 2 emissions.

There are also three companies in the circular economy area whose impact has been difficult to quantify. This is because these companies report emissions avoided/saved as a percentage relative to other more carbon-intensive alternatives, rather than as an absolute figure. We continue to work with these companies to develop more effective means of measuring their impact, and hope that this disclosure will improve in the near future.

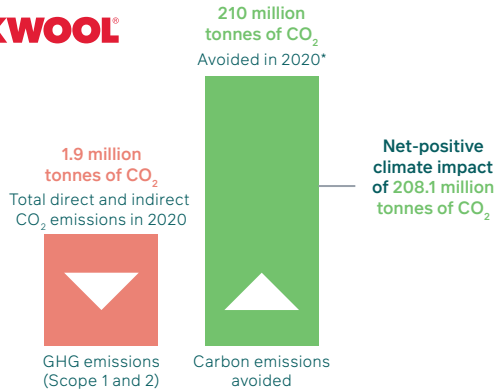
## Example companies



Generates renewable energy, primarily through solar and wind. Renewable energy makes up ~75% of its energy capacity and the group also undertakes other low-carbon activities, such as electricity transmission and water desalination.



An Australian logistics company, which perpetuates the sharing and reusing of the world's largest pool of reusable pallets, crates and containers, providing efficiencies not otherwise available through one-way, single-use alternatives.



Produces stone wool and stone wool-based products such as insulation, fire protection and noise control products. Stone wool can be indefinitely recycled, which promotes greater circularity and sustainability.

\*Avoided over the lifetime of insulation sold in 2020.

## What are Scope 1/2/3 emissions?

**Scope 1:** All direct emissions from the activities of an organisation or under its control. This includes fuel combustion on site, emissions from owned vehicles and fugitive emissions.

**Scope 2:** Indirect emissions from electricity purchased and used by the organisation.

**Scope 3:** All other indirect emissions from activities of the organisation, but which occur from sources it does not own or control. This is usually the largest share of the carbon footprint, especially for office-based companies, including emissions associated with business travel, procurement, waste and water, use of sold products, and transportation and distribution (up and downstream).

# Science Based Targets

While an increasing number of companies have established emission reduction targets, the next step is to ensure that those targets are consistent with the pace recommended by climate scientists to limit the worst impact of climate change. This is possible by using Science Based Targets.

## The Science Based Targets initiative (SBTi)

The Science Based Targets initiative (SBTi) is a joint initiative of CDP, the United Nations Global Compact (UNGC), the World Resources Institute (WRI) and WWF. The goal is for companies to set greenhouse gas reduction targets that align with the Paris Agreement. Targets are considered 'science based' if they are in line with emission reduction levels required to keep the temperature increase below 1.5°C compared to pre-industrial temperatures (before 15 July 2021, the target was 'well below 2°C').

As of June 2022, 15 portfolio companies have set or committed to Science Based Targets – an improvement on last year, when 12 companies had done so. We are currently engaging with the highest emitters in the portfolio to set SBTs where feasible, and are continually monitoring these companies' emission reduction targets.


## Setting a Science Based Target: a five-step process

1. **Commit** – a company submits a letter establishing its intent to set a Science Based Target.
2. **Develop** – the company works on an emission reduction target that is in line with the SBTi's criteria.
3. **Submit** – the company presents the target to the SBTi for official validation.
4. **Communicate** – the company communicates its target and informs its stakeholders.
5. **Disclose** – the company reports emissions and progress against targets on an annual basis.

## Portfolio companies that have set or committed to Science Based Targets

- AES Brasil Energia (committed)
- Atlantica Sustainable Infrastructure
- Autodesk
- Ball Corp
- Brambles
- DS Smith (committed)
- Johnson Controls
- Linde (committed)
- Ørsted
- Republic Services
- Rockwool
- Schneider Electric
- Spirax-Sarco Engineering (committed)
- Umicore (committed)
- Vestas.



An aerial photograph of a vast, dense forest of tall, green coniferous trees. The trees are packed closely together, creating a rich, textured canopy of various shades of green. The perspective is from a high angle, looking down on the forest floor.

The following pages explain in greater detail each of our impact areas and the companies that we invest in. We also take a deeper look into a company from each area, including the IIR case for the company, the Impact Results Chain and the Five Dimensions of Impact.



## Impact area

# Clean energy

Clean energy companies include producers of renewable energy such as solar, wind and hydro, as well as those that provide critical components for the production of renewable energy.











The renewable energy drive has formed a large part of governments' 'build back better' plans since the height of the pandemic, representing accelerating momentum post the 2015 Paris Agreement. This has helped to hasten progress towards decarbonising the electricity sector.

We need to cut energy-related greenhouse gas emissions by around 7% every year to meet the Paris Agreement goals, so huge progress is needed.

Furthermore, BloombergNEF estimates that between \$92-\$173 trillion of clean energy funding will be needed over the coming decades to achieve the goals by 2050\*.

The positive news is that, in addition to increasing public policy action on clean energy generation, private sector investment continues to rise. More than half of respondents to the 2020 GIIN Survey said they plan to increase their allocations to energy over the next five years. This is encouraging, and progress is even ahead of schedule in some areas, but more is needed to accelerate the transition away from fossil fuels, and the positive wind and solar growth trend remains far from being aligned with the goal to reach net zero by 2050.

\*Source: BloombergNEF New Energy Outlook, July 2021.

Company	Activity	Goal	Revenue to Primary SDG*	Primary SDG
AES Brasil Energia	Hydro, solar and wind energy production	Reduce emissions through clean energy	100%	
Atlantica Sustainable Infrastructure	Operates renewable energy and water infrastructure	Reduce emissions by facilitating clean energy production	77%	
Boralex	Wind, solar, hydro and thermal energy	Reduce emissions through clean energy	99%	
Brookfield Renewable	Renewable energy production and storage	Reduce emissions through clean energy	100%	
EDP Renováveis	Renewable energy production, focusing on wind	Reduce emissions through wind energy	100%	
Ørsted	Operates wind farms	Reduce emissions through offshore wind generation	90%	
SolarEdge Technologies	Smart energy products for residential and commercial use	Advancing smart energy use and technology	100%	
Verbund	Renewable energy production, focusing on hydro	Reduce emissions through hydro energy	80%	
Vestas Wind Systems	Manufactures, installs and services wind turbines	Reduce emissions by facilitating wind energy production	100%	
Weyerhaeuser	Timberland company	Capture carbon through timberland and wood products	98%	

\*SDG = UN Sustainable Development Goal. Figures are based on latest information available from company literature.

# EDP Renováveis



## **EDP Renováveis is one of the largest global renewable energy companies**

EDP Renováveis (EDPR) was spun out of parent company Energias de Portugal (EDP Group) in 2007, to operate the group's growing renewable energy assets. Today, EDPR is the world's fourth largest producer of renewable energy, with operations in 15 countries across Europe, Asia, North America and South America.

The company generates energy from solar, onshore and offshore wind, with the bulk coming from onshore wind farms. While wind conditions are less favourable on land than at sea, the maturity of this technology makes it deployable globally, ideally in regions with large uninhabited areas of land. And with steady price decreases in recent years, onshore wind has also become the second-cheapest form of energy behind solar.

EDPR has announced ambitious growth plans, and the company is investing heavily in onshore wind and solar to increase its current 12.2 gigawatt total output by another 20 gigawatts between 2021 and 2025. This is good news, as global energy needs are expected to rise by 30% between today and 2040, as population growth continues and living standards improve. At the same time, fossil fuel emissions must fall drastically if we are to reach net zero by 2050 and stand a chance of achieving the goals of the Paris Agreement on climate change. Clean energy providers such as EDPR will therefore play an essential role as we transition to a low-carbon energy system.

Renewable energy will also play a part in many nations' ambitions to achieve energy security. This issue has become more prominent since Russia invaded Ukraine in early 2022. Russia is one of the world's largest fossil fuel producers, and many nations are now keen to end their reliance on Russian oil and gas for energy needs. This energy will need to come from elsewhere, and renewables have the potential to fill this gap while reducing emissions.

EDP Renováveis helps to increase the proportion of renewable energy in the wider energy mix, aligning mostly clearly to SDG 7: Affordable and clean energy.



## Impact Results Chain



### Input

Invests heavily into wind farms and clean energy technology



### Activity

Operates wind and solar farms in 14 countries



### Output

Generates clean energy for the grid



### Outcome

Avoids CO<sub>2</sub> emissions from other energy sources



### Impact

Increases the proportion of clean energy in the wider energy mix

## III framework in brief

### Investment

- Fourth-largest renewable electricity provider globally, with a strong pipeline of new projects and ambitious growth plans.

### Intention

- EDPR was spun out of EDP Group as a pure renewable energy company, and one of its four key commitments is to sustainability.

### Impact

- Generated 30.3 GWh of clean energy in 2021, helping to avoid 18.3 million metric tons of greenhouse gas emissions.

## Five Dimensions of Impact in brief

### □ What

Provides clean energy through the manufacture and maintenance of onshore wind, offshore wind and solar energy farms across the world.

### ○ Who

The beneficiaries include companies and individuals who are provided with renewable power, ultimately benefiting the environment.

### ≡ How Much

Renewable energy accounts for 100% of the output from the company's 13.6 gigawatt portfolio, and 100% of the company's revenues.

### + Contribution

One of the world's largest renewable energy companies, with high expected future growth, especially in the US where clean energy penetration is currently low.

### △ Risk

There is a risk of biodiversity loss from the company's operations. EDPR manages this by assessing environmental impacts prior to launching projects, and monitoring biodiversity indicators at sites close to protected areas.

## Impact area

# Green technology









Green technology companies include those involved in building efficiency, battery and electrification solutions, clean transport, and products that promote sustainable agriculture and plant-based foods.








Global greenhouse gas emissions continue to rise at a time when they need to be falling rapidly. According to the Intergovernmental Panel on Climate Change (IPCC), there must be 'immediate and deep emissions reductions across all sectors' to limit global warming to 1.5°C. The good news is that solutions to the challenge of climate change do exist, but significant investment is required to increase their scope, scale and reach.

Reducing energy consumption, for example, across both industry and consumer use is necessary to meet net-zero carbon emission targets. And with fuel costs rising dramatically as the world emerges from the pandemic, there are also financial advantages to doing so.

Current industrial processes must be made more efficient, or new methods of production need to be developed, in order to significantly reduce emissions from the production of many goods and materials. Reducing energy loss in industrial processes can also have a meaningful impact. This could involve reducing heat loss or increasing waste heat recovery, or simply adapting processes so that energy is only used when it is needed.

Consumers also have a significant part to play in reducing their energy use to help lower CO<sub>2</sub> emissions and combat climate change. Homes can be made more efficient through the use of effective insulation and energy-efficient appliances, lighting and heating, or the installation of energy-efficient technologies, such as smart meters.

Company	Activity	Goal	Revenue to Primary SDG*	Primary SDG
Ansys	Global leader in engineering simulation software	Increase the modelling and efficiency of products and prototypes	100%	
Autodesk	3D design and engineering software	Facilitate the production of efficient, resilient infrastructure	78%	
Ceres Power	Unique solid oxide fuel cell technology	Hydrogen-derived energy production with low or zero CO <sub>2</sub> emissions	100%	
Equinix	Internet cloud data centres	Reduce emissions through centralised, efficient data centres run on clean energy	85%	
Horiba	Manufacture of precision instruments for measurement and analysis	Improve safety and reduce emissions while bettering environmental practices	73%	
Infineon Technologies	Semiconductor manufacturer	Increase efficiency and reduce energy loss across electronic products	65%	
IPG Photonics	Distribution of highly efficient fibre lasers	Meaningful electricity savings	91%	
ITM Power	Designs and manufactures products which generate green hydrogen gas	Reduce emissions and energy loss by converting excess energy into hydrogen fuel	100%	

Company	Activity	Goal	Revenue to Primary SDG*	Primary SDG
Johnson Controls	Produces building management equipment and systems	Allow building systems to run more efficiently and use less energy	61%	
Linde	Industrial gas producer	Contribute towards energy conservation and emission reductions	55%	
onsemi	Manufacture and distribution of efficient semiconductor products	Provide energy-efficient solutions for millions of products	75%	
Rockwool	Leading supplier of fire-resistant stone wool insulation	Provide a range of energy-efficient solutions designed for buildings and infrastructure	90%	
Schneider Electric	World leader in low voltage electrical components	Enable transition to a sustainable future in buildings, data centres and the grid	80%	
Spirax-Sarco Engineering	Produces steam management systems	Reduce emissions through the use of efficient industrial steam systems	87%	
Wabtec	Produces critical components for rail transit	Improve the efficiency of rail transit over higher-emitting alternatives	80%	

\*SDG = UN Sustainable Development Goal. Figures are based on latest information available from company literature.

# Infineon Technologies



## **Infineon Technologies is a leading global manufacturer of semiconductors**

Infineon Technologies produces semiconductors that are used in the manufacturing of various electronic components, including diodes, transistors and integrated circuits. The company splits its operations into four segments – Automotive, Industrial Power Control, Power & Sensor Systems and Connected Secure Solutions.

Automotive is the largest of the four segments, accounting for nearly half of the company's revenue. Infineon is the leading supplier of semiconductors to the automotive industry, and its products have varying applications in vehicles, from engines and driver assistance systems to alarms and dashboard displays. The company is well-placed to benefit from the shift towards hybrid and electric vehicles announced by many governments, as these vehicles require many more semiconductors than those with internal combustion engines. A greater number of electric vehicles on the road will also require more charging points, which also contain semiconductors.

Similarly, the structural transition towards clean energy should also benefit semiconductor manufacturers such as Infineon. Wind and solar power require significantly more semiconductors per gigawatt of power generated than conventional power plants, and Infineon supplies many of the largest manufacturers of wind turbines and photovoltaic (solar) inverters. Furthermore, because renewable energy sources aren't constant, there will be increased demand for battery storage – another area of the market that Infineon serves.

Elsewhere, the growth of digitalisation should continue to drive demand for semiconductors. One particular area is the Internet of Things, where increasing numbers of devices are connected to the internet and provide smart functionality. Many examples can be found around the home. For example, a light that can be switched on from a phone, or a fitness tracker worn on your wrist. And on a larger scale, factories or even whole cities are becoming 'smart'. But of course, as the world becomes increasingly digital, there is also a growing need for improved security. Infineon's security solutions aid in contactless payments, home and vehicle security, and the safe handling of the 'big data' that is collected as we go about our daily lives, to name but a few.

Infineon Technologies' production of semiconductors aligns most closely with SDG9: Industry, innovation and infrastructure.

## Impact Results Chain



### Input

50,000 staff working across 80 global sites



### Activity

Manufactures semiconductors for various industries



### Output

Revenue generated from semiconductor sales



### Outcome

Improved energy efficiency and lower emissions



### Impact

Promoting and enabling efficient, sustainable technology

## III framework in brief

### Investment

- A market leader whose strong size and scale offer competitive advantages, with strong internal R&D.
- Positioned to grow with the market, as demand for semiconductors increases due to structural shifts.

### Intention

- Infineon's mission statement claims they are aiming to solve economic and social challenges.
- They also aim to make the world 'greener' with their technology, and to reduce energy consumption.

### Impact

- Infineon's semiconductors help to improve energy efficiency across industries and enable the delivery of renewable energy.
- Their products helped to save 10.3 million tonnes of CO<sub>2</sub> equivalents in 2020.

## Five Dimensions of Impact in brief



### What

Manufactures semiconductors for use in electronic devices, helping to improve energy efficiency.



### Who

Infineon's semiconductors are present in a huge variety of products across industries such as automotive and energy, working with companies including Bosch, Samsung, Siemens and Hyundai.



### How Much

Infineon is a market leader in the automotive, power and security segments, with a presence across the globe. The company has been operating since 1999.



### Contribution

Helps to reduce CO<sub>2</sub> emissions by improving energy efficiency and enabling clean energy generation.



### Risk

Semiconductor manufacturing is a water intensive process, however Infineon is more efficient in their water use than the industry average.

## Impact area

# Circular economy









Circular economy companies include those whose business models are based on reusing, recycling and reducing waste. They can be found across multiple sectors, in addition to traditional waste companies.

In a circular economy, waste from production and consumption becomes a resource to be recycled, repaired and reused – offering an alternative to the linear model that we have become so used to. Importantly, a circular, sustainable economy can help the world reach its biodiversity goals at the same time as benefiting society and combating climate change.

The UN's SDG 12 calls for responsible consumption and production. Progress has been made against this goal in some parts of the global economy, but a lot more is needed. The unsustainable use of natural resources is driving up pollution levels, accelerating climate change and wiping out nature. Take single-use plastic, for

example. The UN's latest Sustainable Development Goals Report highlights that one million plastic drinking bottles are purchased every minute, and five trillion single-use plastic bags are thrown away each year. Plastic pollution drastically affects wildlife and marine ecosystems, as well as the livelihoods associated with these.

Circularity has become a hot topic, but confusion remains over what it really means to 'close the loop'. While recycling and reusing are important factors, a 'real' circular economy goes one step further by not creating waste in the first place. Companies that embrace the circular economy should be better placed to make the most of long-term trends and deliver competitive returns for investors. Furthermore, they have the potential to generate a material positive impact for the global environment.

Company	Activity	Goal	Revenue to Primary SDG*	Primary SDG
Ball Corporation	Producing and recycling aluminium cans	Reduce waste and pollution by recycling aluminium into new cans	84%	
Brambles	Perpetuating the sharing and reuse of reusable pallets	Sustainable supply chain and logistics practices	100%	
Darling Ingredients	Recycling meat-based products and cooking oils	Reduce waste by recycling by-products into animal feed, fertiliser, fuel and other products	100%	
DS Smith	Corrugated packaging services, focused on closed-loop recycling	Provide truly sustainable packaging solutions, while protecting the environment	100%	
Republic Services	Non-hazardous solid waste collection, transfer, disposal, recycling and energy services	Sustainable solutions for growing waste levels amid expanding populations	78%	
Trex	Manufactures sustainable composite decking	Reduce wood and plastic waste by recycling it into composite decking	100%	
Umicore	Clean transportation and recycling	Manufacture components for use in clean transport and technologies	79%	
UniFirst	Centralised workwear and textile services	Improve energy and water efficiency by the scale manufacture, collection and laundry of workplace uniforms	89%	

# Darling Ingredients



## **Darling Ingredients is a leading recycler of meat-based products and cooking oils**

Darling Ingredients was founded in 1882 in Chicago as a meat renderer. Today, it is one of the largest developers and processors of sustainable natural ingredients, using recycled and waste materials to help feed and fuel the world.

The process begins with the company collecting a broad range of animal by-products from slaughterhouses, grocery stores and butchers of all sizes. Darling also collects food waste from commercial bakeries producing the likes of bread and cereal, and used cooking oil from approximately 120,000 restaurants and other food outlets. These by-products and materials are then refined and recycled, before being used in an even broader range of ingredients and products. Many would otherwise end up in landfill, where they would decompose, releasing carbon dioxide into the atmosphere. Darling therefore helps to capture the carbon and reduce emissions.

Through its 'Feed' segment, Darling repurposes by-products and waste into the likes of animal feed, pet food and non-food grade oils. The company also produces organic fertilisers which are sold to farms, landscaping companies, golf courses and other sporting outlets.

Darling's 'Food' segment produces food grade fats and natural casings to be used in other food products. The company is also a leading provider of collagen, which it sells to third parties across a huge range of industries. Small amounts of collagen are found in many products that we encounter in daily life, such as medicines, nutritional supplements, sweets and skincare products. It also has a number of technical applications, for example as a binder in the production of photographic paper and X-ray films.

The company's 'Fuel' segment focuses on the production of biofuels and biogas. Darling uses rendered animal fats and recycled cooking oils, alongside other additives, to create biodiesel in the US and Canada. This is sold to the company's other internal divisions and to commercial biodiesel blenders, to be used as biodiesel fuel, a clean burning additive for diesel fuel, or as a biodegradable solvent or cleaning agent. The company also produces renewable diesel, which is interchangeable with diesel produced from petroleum but releases up to 85% less emissions. And in Europe, Darling uses organic sludge and food waste to produce biogas and generate clean energy.

Darling Ingredients' recycling of food and animal by-products aligns most clearly to SDG 12: Responsible consumption and production.



## Impact Results Chain



### Input

More than 10,000 staff working across 200 facilities worldwide



### Activity

Processing of animal and food by-products, and used cooking oil



### Output

Production of new ingredients and materials



### Outcome

Reduced waste in landfill and lower emissions



### Impact

Promotes sustainable consumption and clean energy

## III framework in brief

### Investment

- A world leader in the recycling of meat-based products and used cooking oils.
- Operates globally, at a far greater scale than its competitors.

### Intention

- The company highlights its intention to create 'sustainable food, feed and fuel' in its mission statement.

### Impact

- Reduces waste generation and CO<sub>2</sub> emissions from landfill by recycling by-products.
- Reduces emissions by producing clean fuels and energy.

## Five Dimensions of Impact in brief

### □ What

The recycling of by-products and other waste into new ingredients, materials and products.

### ○ Who

Darling's output is used by customers across a broad range of industries, such as pet food producers, golf courses and commercial biofuel blenders.

### ≡ How Much

100% of revenues stem from circular economic activities. It is a world-leading processor of animal by-products, with 200 sites across the globe.

### + Contribution

Reducing waste by re-using products and materials that would otherwise be discarded or sent to landfill, where they may release carbon emissions through decomposition.

### △ Risk

Consolidation in the meat industry has resulted in more efficient operations with less waste, which could reduce the impact made by Darling Ingredients.

# Company engagements

Impact investors can encourage positive change by engaging with investee companies on a number of issues, not least supporting responsible corporate behaviour and long-term thinking, but also pushing the company to improve disclosure or set more testing sustainability objectives. This is important as impact investing can present dilemmas and paradoxes. A company with a clear environmental purpose, like a wind-turbine maker, can have a relatively large CO<sub>2</sub> footprint (because it produces large steel structures), but also equality, workers' rights or safety issues like any other company.

Furthermore, even impactful companies can improve. There will always be reasons for investors to engage to improve company practices – alone or as part of a group – and advocate diversity, equality, safety and decent working conditions, as well as improved disclosure and target setting, particularly around climate issues.

Here are several examples of our engagements with investee companies over the past year.

## Republic Services

**Objective:** To discuss US waste specialist Republic Services' acquisition of hazardous waste specialist US Ecology, and its joint venture with Archaea Energy to develop renewable natural gas projects at its landfill sites. We also discussed its Republic Polymer (plastics) centres, and asked the company to engage with ESG ratings agencies in light of its US Ecology acquisition, to avoid a potential rating downgrade which could act as a drag on the company's share price.

**Action:** We met with the company's Chief Executive and Chief Financial Officer to discuss these developments.

**Outcome:** The company gave an update on the nuances of its US Ecology acquisition, including the extent of due diligence undertaken to ensure its approach to compliance and its ongoing licence to operate. The acquisition allowed for vertical integration (where a company expands to take ownership of several stages of its production process), and a single servicing point

for customers, which the company claims has created the broadest single-source waste servicing business in North America. Republic Services understood the nature of ESG ratings and the potential for downgrades based on the nuances of an acquisition, and was receptive to our recommendation to engage with rating agencies. After the meeting, Republic published its updated suite of sustainability reports, showing the company's progress against its goals.

## Westinghouse Air Brake Technologies (Wabtec)

**Objective:** To encourage a refreshment of the board at US rail transport specialist Westinghouse Air Brake Technologies (Wabtec). We had concerns over the board's gender diversity, and the tenure length of certain board members considered 'independent'. We also encouraged the annual election/re-election of board members, in light of the company's 'classified' board structure (where members have different, overlapping tenures). Furthermore, we informed the company that we would vote against the re-election of a long-tenured director.

**Action:** We wrote to Wabtec's chair to highlight our concerns and expectations ahead of the company's Annual General Meeting (AGM).

**Outcome:** At Wabtec's AGM we voted against the re-election of the director in question. We will seek to further engage with the company on our suggestions for board refreshment and improving its level of gender diversity.

# Portfolio emissions

As every holding in the fund must make a net-positive climate impact, it is important that we can measure the CO<sub>2</sub> emissions that companies save/avoid. Over the following pages, we have listed the emissions from each investee company, alongside the amount of avoided/saved emissions, and the net impact. As most third party data providers don't cover positive climate impacts, investors must often rely on company reporting, and wherever possible we will source data directly from investee companies. This also means that the data is backward looking, which is why we are reporting on 2021 figures (or the latest available).

There are several companies in the fund where it has been difficult to measure the amount of carbon emissions avoided/saved. This is because the companies provide solutions for other companies to reduce emissions, or because they report data as a percentage relative to other, more carbon-intensive alternatives. We continue to work with these companies to improve disclosure, but in the meantime, we have provided case studies on [page 27](#) to highlight what we believe to be the impactful nature of these companies.

## Clean energy

Company	Scope 1 emissions (tCO <sub>2</sub> e)	Scope 2 emissions (tCO <sub>2</sub> e)	Scope 1 and 2 emissions (tCO <sub>2</sub> e)	KPI	Avoided/saved emissions (tCO <sub>2</sub> e)	Net CO <sub>2</sub> avoided/saved (tCO <sub>2</sub> e)
AES Brasil Energia	-	-	2,100	CO <sub>2</sub> emissions saved	1,205,063	1,202,963
Atlantica Sustainable Infrastructure	1,795,000	237,000	2,032,000	CO <sub>2</sub> emissions avoided	5,900,000	3,868,000
Boralex*	24,991	2,956	27,947	CO <sub>2</sub> emissions avoided	352,666	324,719
Brookfield Renewable	134,870	51,821	186,691	CO <sub>2</sub> emissions avoided	29,000,000	28,813,309
EDP Renováveis*	2,620	28,083	30,703	CO <sub>2</sub> emissions avoided	18,316,000	18,285,297
Ørsted	2,142,000	53,000	2,195,000	CO <sub>2</sub> emissions avoided	15,100,000	12,905,000
SolarEdge Technologies**	1,056	12,864	13,920	CO <sub>2</sub> emissions saved	4,750,000	4,736,080
Verbund	454,000	146,000	600,000	CO <sub>2</sub> emissions saved	22,055,000	21,455,000
Vestas Wind Systems	99,000	3,000	102,000	CO <sub>2</sub> emissions avoided	210,000,000	209,898,000
Weyerhaeuser	380,000	640,000	1,020,000	CO <sub>2</sub> emissions saved	32,000,000	30,980,000

## Green technology

Company	Scope 1 emissions (tCO <sub>2</sub> e)	Scope 2 emissions (tCO <sub>2</sub> e)	Scope 1 and 2 emissions (tCO <sub>2</sub> e)	KPI	Avoided/saved emissions (tCO <sub>2</sub> e)	Net CO <sub>2</sub> avoided/saved (tCO <sub>2</sub> e)
Ansys	2,056	14,117	16,173	CO <sub>2</sub> emissions avoided	Case study	Case study
Autodesk	589	9,000	9,589	CO <sub>2</sub> emissions avoided	Case study	Case study
Ceres Power	368	861	1,229	CO <sub>2</sub> emissions avoided	~10,100,000 (based on first full year of results in 2024-25)	10,098,771

Company	Scope 1 emissions (tCO <sub>2</sub> e)	Scope 2 emissions (tCO <sub>2</sub> e)	Scope 1 and 2 emissions (tCO <sub>2</sub> e)	KPI	Avoided/saved emissions (tCO <sub>2</sub> e)	Net CO <sub>2</sub> avoided/saved (tCO <sub>2</sub> e)
Equinix	50,700	254,800	305,500	CO <sub>2</sub> emissions avoided	450,000	144,500
Horiba*	-	-	31,473	CO <sub>2</sub> emissions avoided	Case study	Case study
Infineon Technologies	298,246	695,432	993,678	CO <sub>2</sub> emissions saved	10,280,000	9,286,322
IPG Photonics	16,302	52,714	69,016	CO <sub>2</sub> emissions avoided	7,000,000	6,930,984
ITM Power*	854	1,211	2,065	CO <sub>2</sub> emissions avoided	~29,000,000	28,997,935
Johnson Controls	549,358	229,809	779,167	CO <sub>2</sub> emissions saved	1,200,000	420,833
Linde	16,247,000	20,969,000	37,216,000	CO <sub>2</sub> emissions saved	85,000,000	47,784,000
onsemi	2,485,870	782,790	3,268,660	CO <sub>2</sub> emissions avoided	Case study	Case study
Rockwool	1,500,000	410,000	1,910,000	CO <sub>2</sub> emissions avoided	210,000,000 over the lifetime of insulation sold in one year	208,890,000
Schneider Electric	140,936	153,115	294,051	CO <sub>2</sub> emissions saved	83,639,228	83,345,177
Spirax-Sarco Engineering	21,781	18,112	39,893	CO <sub>2</sub> emissions saved	18,200,000	18,160,107
Wabtec	-	-	273,422	CO <sub>2</sub> emissions saved	1,650,000	1,376,578

## Circular economy

Company	Scope 1 emissions (tCO <sub>2</sub> e)	Scope 2 emissions (tCO <sub>2</sub> e)	Scope 1 and 2 emissions (tCO <sub>2</sub> e)	KPI	Avoided/saved emissions (tCO <sub>2</sub> e)	Net CO <sub>2</sub> avoided/saved (tCO <sub>2</sub> e)
Ball Corporation	466,784	444,792	911,576	CO <sub>2</sub> emissions avoided	12,100,000 in the US market only	11,188,424
Brambles	29,414	12,952	42,366	CO <sub>2</sub> emissions saved	2,400,000	2,357,634
Darling Ingredients	1,389,803	351,768	1,741,571	CO <sub>2</sub> emissions saved	2,500,000	758,429
DS Smith	-	-	2,974,165	CO <sub>2</sub> emissions avoided	4,000,000	1,025,835
Republic Services	-	-	13,860,000	CO <sub>2</sub> emissions avoided	18,480,000	4,620,000
Trex*	-	-	124,095	CO <sub>2</sub> emissions avoided	Case study	Case study
Umicore	372,699	473,738	846,437	CO <sub>2</sub> emissions saved	7,000,000	6,153,563
UniFirst*	17,404	15,602	33,006	CO <sub>2</sub> emissions saved	Case study	Case study

Emissions data is metric tonnes CO<sub>2</sub> equivalent (tCO<sub>2</sub>e), for 2021 (or the latest available data).

\*Scope 1 and 2 emissions data sourced from ISS. Other emissions data sourced from latest available company literature.

\*\*This year, we have sourced annual data for SolarEdge's saved emissions. This is why the figure is much lower than in last year's report, where only cumulative data was available.

# Measurement case studies



## Case study: Ansys

Ansys is the world leader in engineering simulation software. Its unrivalled ability to integrate various branches of physics (thermodynamics, electromagnetism, quantum, optics, atomic) allows its customers to perform complex simulations within a real world environment.

Ansys has, for example, designed a system for Climeworks – creator of the first commercially available carbon-capture technology. Climeworks' CO<sub>2</sub> collector system captures, filters and concentrates the gas, which can then be used by greenhouses, the food and beverage industry, and manufacturers of renewable products. To optimise the system, Climeworks used computational fluid dynamics and structural simulation obtained through Ansys.

Ansys simulation can also be used in complex emission reduction technologies, for example, as simulations offer accurate modelling for sprays and atomisation, solidification and decomposition.



## Case study: Autodesk

Autodesk's 3D simulation software and advanced design tools allow companies to reduce their carbon emissions, materials used and waste. Users can model their projects using Autodesk software before they begin, which increases energy and material efficiency and allows for more environmentally conscious decisions to be made. The company itself has a very low CO<sub>2</sub> footprint, with its buildings, data centres and cloud services powered by 100% renewable energy.

Autodesk has assessed the embodied carbon in buildings by serving as a lead sponsor of the Embodied Carbon in Construction Calculator (EC3), incubated at the Carbon Leadership Forum with input from nearly 50 industry partners. EC3 takes data from Environmental Product Declarations to align, assess and present the embodied carbon impacts in a way that is easy to use and act upon during material specification and procurement.

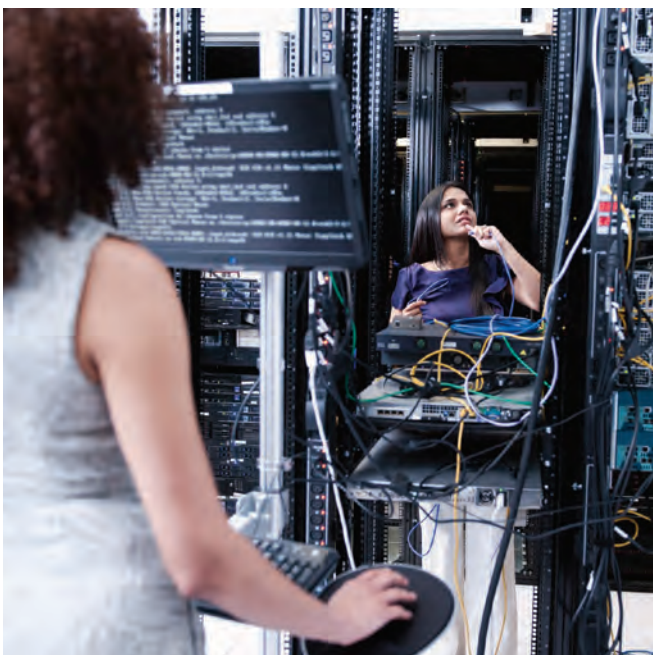


## Case study: Horiba

Horiba specialises in state-of-the-art measuring equipment and analytical devices that are used across a wide range of medical, environmental and automotive applications.

Horiba has designed and manufactured a motor exhaust gas analysis system that measures masses of pollutants in exhaust gas. This system is used by major automobile manufacturers, as well as testing and research agencies, around the world. Horiba also designs and builds emission testing facilities, including the laboratory and peripheral equipment.

Horiba's measuring equipment can also be used to measure CO<sub>2</sub> in ambient air. The Japan Meteorological Agency has been using Horiba's ambient air carbon dioxide analysers at monitoring stations on the Minamitorishima Island in the Pacific Ocean and Yonagunijima Island in the Okinawa Islands.





### Case study: **onsemi**

onsemi is a US-based semiconductor manufacturer. The company enables climate solutions through the design and manufacture of components that reduce CO<sub>2</sub> emissions in autos and power (generation, transmission and usage). It is also a leader in vehicle electrification, and as transport accounts for a large portion of the world's total energy consumption, electric vehicles will play a significant role in the reduction of global CO<sub>2</sub> emissions. Furthermore, onsemi's technological expertise in high-efficiency power semiconductors directly helps the reduction in energy lost during electricity transmission.



### Case study: **UniFirst**

UniFirst is a uniform rental company that manufactures, sells and rents uniforms and protective clothing. UniFirst helps improve energy and water efficiency through the scale manufacture, collection and laundering of workplace uniforms.

The company's advanced laundering process uses 64% less water, 73% less energy and 90% less chemicals than traditional laundering. At Unifirst's 260 facilities, the company utilises only 'green' environmentally-friendly laundry detergents that are biodegradable, made from renewable sources and free of phosphates and other chemicals.



### Case study: **Trex**

Trex is the largest composite decking producer in the world. Composite decking is more durable and has better sustainability credentials than lumber alternatives, which make up a majority of the decking market. Trex also has its own network to collect used plastic and wood, which stops materials being placed in landfill.

Compared to wood decking, Trex composite decking is more durable, longer-lasting and easier to maintain. It also avoids many of the resource intensive production and maintenance aspects associated with wood decking. According to the company, Trex decking emits 42% fewer greenhouse gas emissions compared to Alkaline Copper Quaternary (ACQ) treated wood decking.

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# Comparing portfolio and benchmark emissions

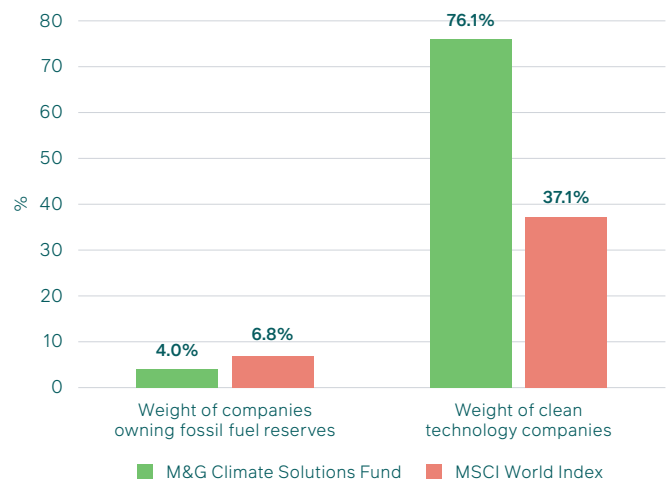
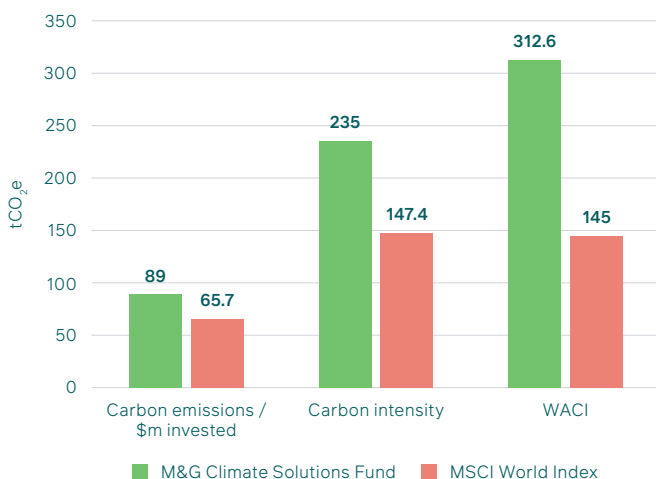
As a climate solutions strategy (not a low-carbon or climate transition strategy), the M&G Climate Solutions Fund currently has higher total carbon emissions, carbon intensity and Weighted Average Carbon Intensity (WACI) than its benchmark, the MSCI World Index\*. This is because these metrics look at each company's carbon footprint without accounting for carbon saved or avoided through the use of the company's products and/or services. Also, the fund doesn't invest in several of the benchmark's low-emitting sectors, such as technology, financials and consumer discretionary, because it is difficult to find climate solutions companies in these areas. Here, we compare the portfolio and benchmark emissions data, and also highlight the difference between the two when it comes to companies owning fossil fuel reserves and those providing clean technology solutions.

Carbon reporting: key metric definitions	
Carbon emissions	What is the portfolio's normalised carbon footprint per million dollars invested?
Total carbon emissions	What is the portfolio's total carbon footprint?
Carbon intensity	How efficient is the portfolio in terms of emissions per unit of output?
Weighted Average Carbon Intensity (WACI)	What is the portfolio's exposure to carbon-intensive companies?

	Carbon emissions	Total carbon emissions	Carbon intensity	(WACI)	Carbon emissions data availability
M&G Climate Solutions Fund	89.0	88,997	235.0	312.6	100%
MSCI World Index*	65.7	65,710	147.4	145.0	99.9%
	tCO <sub>2</sub> e / \$m invested	tCO <sub>2</sub> e	tCO <sub>2</sub> e/\$m sales		Market value

Data sourced from MSCI ESG Research as of July 2022. Please see definitions in the glossary (page 31).

## The fund and benchmark compared



Data sourced from MSCI ESG Research as of July 2022.

\*The benchmark is a target against which the fund's financial performance can be measured. The index has been chosen as benchmark as it best reflects the financial aspects of the fund's investment policy. The benchmark does not constrain the fund's portfolio construction.



# The biggest emitters

Here, we take a closer look at the fund's five biggest emitters, which together account for 59% of portfolio emissions. While these companies have high Scope 1 and 2 emissions, the emissions that they avoid/save are far higher. For each company we list the emissions

produced, emissions avoided/saved and their net positive climate impact. Encouragingly, all except onsemi have now set or committed to Science Based Targets (see [page 12](#)), demonstrating their commitment to reducing emissions. □

Company	Activity	Impact	Impact calculation	Net impact
DS Smith	Recycling and waste management	Europe's largest cardboard and paper recycler and a leading full-recycling and waste company.	4m tonnes of CO <sub>2</sub> avoided in 2020 versus 3m tonnes of CO <sub>2</sub> emissions.	Net 1m tonnes of CO <sub>2</sub> avoided.
Linde	Industrial gas production	Provides solutions to businesses that help reduce energy use. It also operates infrastructure for the safe and efficient transportation of hydrogen (a CO <sub>2</sub> -free fuel that is displacing fossil fuels).	85m tonnes CO <sub>2</sub> benefits enabled by Linde applications for customers and end-users versus 37.2m tonnes of emissions.	Net 47.8m tonnes CO <sub>2</sub> saved.
onsemi	Semiconductor manufacturing	Produces energy-efficient semiconductors to be used for a variety of end markets.	Generates a large amount of emissions through the manufacture of semiconductors, but more than offsets this with the energy savings from their products.	Provides energy savings from efficient semiconductors, and facilitates the adoption of clean energy by producing necessary components for power management and energy storage.
Ørsted	World's largest operator of offshore wind farms	Helps to reduce emissions through the generation of clean energy from renewable sources.	15.1m tonnes of CO <sub>2</sub> avoided in 2020 versus 2.2m tonnes of CO <sub>2</sub> emissions produced.	Net 12.9m tonnes of CO <sub>2</sub> avoided.
Republic Services	Waste management services	Provides a solution to growing waste levels from population growth while promoting sustainable waste collection practices.	Measures aimed at reducing emissions from landfill by innovative collection of biogas and recycling (75 landfill gas and renewable energy projects and 71 recycling centres).	4.6m tonnes of cardboard, metals, plastics, organics, biogas and oil recovered in 2020, out of ~110m tonnes of waste collected each year.

## Glossary

**Additionality** Whether the impact being measured would be achieved if the company did not exist or were not adequately funded – ie, could another company equally deliver that impact?

**Asset** Anything having commercial or exchange value that is owned by a business, institution or individual.

**Asset class** Category of assets, such as cash, company shares, fixed income securities (bonds) and their subcategories, as well as tangible assets such as real estate.

**Benchmark** Measure, such as an index or sector, against which a portfolio's performance is judged.

**Capital Growth** Occurs when the current value of an investment is greater than the initial amount invested.

**Carbon Disclosure Project (CDP)** CDP is an independent, non-profit organisation that maintains a database of corporate climate change data, incorporating disclosures of individual organisations' greenhouse gas emissions and climate change strategies.

**Carbon footprint** The total amount of greenhouse gases produced to support human activities, both directly and indirectly. It can be attributed to an individual, organisation, country etc, and is usually expressed in equivalent tonnes of carbon dioxide (CO<sub>2</sub>). Activities like driving, heating and food production have associated CO<sub>2</sub> emissions. The carbon footprint is then the sum of all these emissions that were induced by activities within a given timeframe (usually a year).

**Carbon intensity** Expresses the carbon efficiency of the portfolio and allows institutional investors to measure the volume of carbon emissions per million dollars of sales generated by portfolio companies over a specified

timeframe. This metric adjusts for company size and is a more accurate measurement of the efficiency of output, rather than a portfolio's absolute footprint.

**Carbon target** A carbon target is a defined value used as a quantitative goal for a company's carbon footprint or net carbon emissions (footprint minus any carbon offset activities) to meet within a given timeframe. These targets can be absolute, or based on a comparison with industry averages.

**Climate change** A change in global or regional climate patterns and largely attributed to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

**Climate risks** Risks stemming from climate change that have the potential to affect companies, industries and whole economies. There are a range of business risks associated with climate change, including regulatory developments, growing natural resource scarcity and potential reputational damage. These are all risks that need increasingly to be proactively managed.

**Engagement** Interaction with company management on various financial and non-financial issues, including ESG. Engagement allows investors to advise on and influence company behaviour and disclosures where appropriate. Meetings are also held with management to better understand how a company operates and how it interacts with its stakeholders.

**Environmental, Social and Governance (ESG)** An investment approach that incorporates environmental, social and governance factors into the investment process.

**ESG integration** The explicit and systematic inclusion of Environmental, Social and Governance (ESG) factors in investment analysis and decisions. It underpins a responsible investment approach and, in our view, allows investors to better manage risk and generate sustainable, long-term returns.

**Exclusions** Excluding or restricting investment in companies based on the sector in which they operate or for other specific criteria, ie, they are deemed to be in breach of the United Nations Global Compact principles on human rights, labour, the environment and anti-corruption.

**Fossil fuels** A natural fuel such as coal or gas formed in the geological past from the remains of living organisms. Burning fossil fuels emits a number of air pollutants that are harmful to both the environment and public health.

**Global warming** The gradual increase in the overall temperature of earth's atmosphere, generally attributed to the greenhouse effect caused by increased levels of carbon dioxide and other pollutants.

**Greenhouse gas emissions** Gases and other particles that are released into the atmosphere as a result of burning fuels and other processes. Generally, these emissions are most likely to come from vehicles, power generation and industrial processes. A greenhouse gas, then, is a classification of gases that, when released into the atmosphere, are capable of absorbing infra-red radiation. Consequently, this process will trap and hold heat in the Earth's atmosphere. This is called the greenhouse effect, and ultimately is what leads to global warming. Greenhouse gases include carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>) and Nitrous Oxide (N<sub>2</sub>O).

**Ill approach** Examining the Investment case, the Intentionality and the Impact of a company to assess its suitability for the fund. The Investment case considers several factors such as the business model, competitive position and business risk, Intentionality means a company specifically sets out to deliver a particular impact, and Impact is the measurable impact of a company on society or the environment.

**Income** Money paid out by an investment. Dividends are income from shares. Income from bonds is called interest or a coupon.

**Index** An index represents a particular market or a portion of it, serving as a performance indicator for that market or segment.

**Impact** Investment with the purpose of generating a measurable social or environmental return, alongside a financial return.

**Materiality** The percentage of a company's revenue that contributes to the impact being measured.

**MSCI World Index** The MSCI World Index is a market cap weighted stock market index of around 1,600 companies throughout the world. It is maintained by MSCI and is used as a common benchmark for equity funds intended to represent a broad cross-section of global markets.

**Ongoing Charges Figure** The ongoing charges figure represents the operating costs investors can reasonably expect to pay under normal circumstances.

**Paris Agreement** The Paris Agreement resulted from the Paris Climate Conference (COP 21) in December 2015 and brought together all COP member nations in an agreement to undertake ambitious efforts to tackle climate change and limit the rise of global temperatures (from pre-industrial levels) to below 2°C, and ideally below 1.5°C.

**Renewable energy** Energy that comes from natural sources or processes that are constantly replenished, such as sunlight, wind, rain, tides, waves and geothermal heat.

#### **Scope 1, 2 and 3 emissions**

Developed by the Greenhouse Gas Protocol to help define how companies manage and report greenhouse gas emissions.

Scope 1: All direct emissions from the activities of an organisation or under their control.

Scope 2: Indirect emissions from electricity purchased and used by the organisation.

Scope 3: All other indirect emissions from activities of the organisation, occurring from sources that they do not own or control.

**Screening** An approach taken to filter investment opportunities based on specific pre-defined criteria. These can be negative screens which 'screen out' or remove companies based on an involvement in an undesirable activity or sector, or positive screens which 'screen in' or filter companies specifically due to their involvement in beneficial activities.

**Stewardship** The act of being a responsible and engaged investor, pursuing an active investment policy through portfolio management decisions, maintaining a constructive dialogue with management and voting on resolutions at general meetings. Stewardship aims to ensure long-term protection and enhancement of the value of investments.

**Sustainable** The investment universe is driven by sustainability-themed considerations, which might include climate change mitigation, pollution prevention, sustainability solutions (environmental, social) and approaches that address one or more of the UN Sustainable Development Goals (SDGs);

there is a clear ambition, supported by explicit targets, to drive sustainability across the portfolio; an investment approach that selects companies/ issuers with strong ESG credentials.

**Sustainable investing** Long-term investment in a company, asset or sector that makes a positive contribution to the environment, economy or society, in order to support or boost that positive contribution over time.

**Total carbon emissions** Measures the absolute tonnes of CO<sub>2</sub>e (Scope 1 and 2) for which an investor is responsible. This metric calculates the 'owned' emissions from each position in the portfolio and sums those emissions' yields for the total carbon emissions for the portfolio.

#### **United Nations Global Compact**

A United Nations initiative to encourage businesses worldwide to adopt sustainable and socially responsible policies and to report on their implementation.

#### **United Nations Sustainable Development Goals (UN SDGs)**

A set of 17 goals which seek to address the most challenging social, environmental and economic issues facing the world today.

#### **Weighted Average Carbon**

**Intensity** Measures a portfolio's exposure to carbon-intensive companies. This metric can serve as a proxy for a portfolio's exposure to potential climate change-related risks relative to other portfolios or relative to a benchmark. Weighted Average Carbon Intensity is calculated by taking the carbon intensity (Scope 1 and 2 emissions/\$m sales) for each portfolio company and calculating the weighted average by portfolio weight.

The fund holds a small number of investments, and therefore a fall in the value of a single investment may have a greater impact than if it held a larger number of investments.

The fund can be exposed to different currencies. Movements in currency exchange rates may adversely affect the value of your investment.

Investing in emerging markets involves a greater risk of loss due to greater political, tax, economic, foreign exchange, liquidity and regulatory risks, among other factors. There may be difficulties in buying, selling, safekeeping or valuing investments in such countries.

In exceptional circumstances where assets cannot be fairly valued, or have to be sold at a large discount to raise cash, we may temporarily suspend the fund in the best interest of all investors.

The fund could lose money if a counterparty with which it does business becomes unwilling or unable to repay money owed to the fund.

Operational risks arising from errors in transactions, valuation, accounting, and financial reporting, among other things, may also affect the value of your investments.

Further details of the risks that apply to the fund can be found in the Fund Prospectus.