

T8 Energy Vision

Responsible Investment Report 2023

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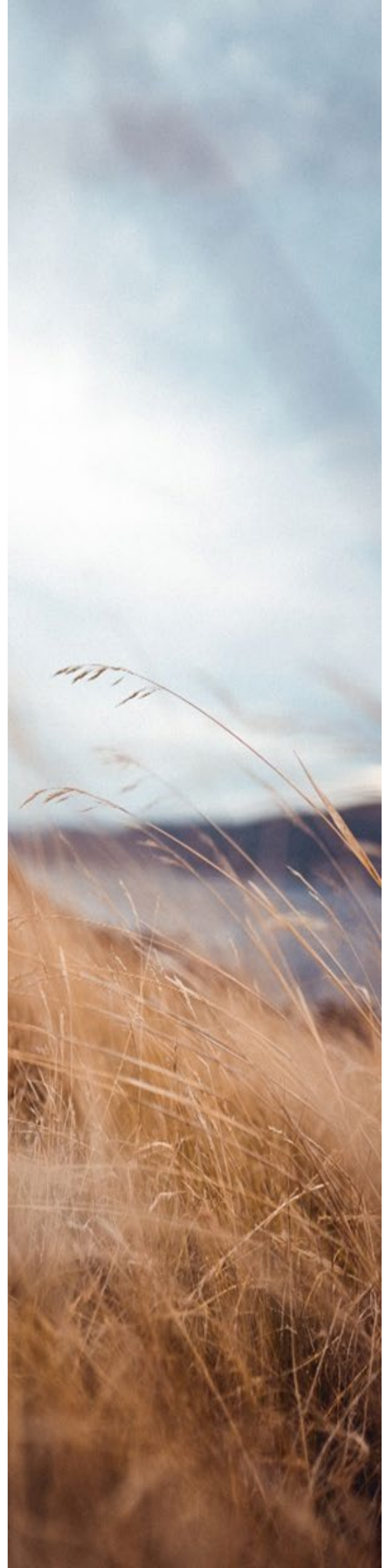


Acknowledgment of country

T8 acknowledges Traditional Custodians of Country throughout Australia. We pay our respects to Aboriginal and Torres Strait Islander Elders past and present.

We acknowledge that we work on traditional lands where Aboriginal and Torres Strait Islander peoples have lived for many thousands of years. We honour their ongoing connection to these lands and strive to respect the Traditional Custodians in our work.

We accept the invitation in the Uluru Statement from the Heart to walk together with Aboriginal and Torres Strait Islander peoples in a movement of the Australian people for a better future.



Letter from the Founder

Dear Investor,

We are proud to publish our second annual responsible investment report, following on from our inaugural Shared Value Report last year. We intend for these reports to provide a comprehensive disclosure on a broader range of issues than our monthly reports which are focused on the investment performance of T8 Energy Vision.

While remaining focused on our core activity of researching, investing in and managing a portfolio of listed equity investments in clean energy companies, we continue to innovate and explore the ways in which we can enhance our processes and capabilities.

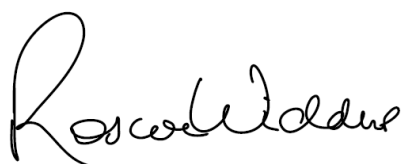
One way in which we have approached this is undertaking a number of additional affiliations which will contribute to ensuring that our processes remain best-in-class in an evolving world, and investment markets:

- We joined the Investor Group for Climate Change (IGCC) and also became a signatory to the Net Zero Asset Managers Initiative and thereby committed to aligning our portfolio with net-zero emissions by 2050 or sooner;
- We adopted the UN Principles of Responsible Investment (PRI), underscoring our commitment to ensure environmental, social and governance factors are incorporated within our investment decision making process and practices; and
- We became a member of the Responsible Investment Association of Australia (RIAA).

The processes, insights and networks in relation to each of these commitments has contributed to improving our investment and business processes, benefitting all our investors.

We are proud that our efforts have been recognised by various independent bodies. During 2022, T8 was rated as 'highly commended' in the investment category of the Shared Value Awards and T8 Energy Vision was awarded a place on the 'watchlist' of Australian Impact Investments following its annual review of listed equity funds. Subsequently in 2023, T8 was recognised by RIAA as a 'Responsible Investment Leader'.

At T8, above all we remain passionate about investing our investors' capital into companies seeking to generate outstanding investment returns over our investment horizon while making a genuine contribution to the goal of achieving net zero by 2050. We thank all of our investors for their support on this journey as we seek to play a role in the world's transition to a more sustainable energy future.



Roscoe Widdup
Managing Director
Triple Eight Capital

Executive summary

T8 Energy Vision is a global equities fund dedicated to investing in the greatest beneficiaries of the transition to clean energy: renewables, energy storage and electrification (and their associated value chains, including critical raw materials).

We avoid the suggestion that T8 Energy Vision is an 'impact fund'. We believe that T8 Energy Vision can achieve a positive influence on the basis of its dedicated investment focus (investing in clean energy solutions) and our commitment to company engagement.

We are focused on these solutions. Focused on investing in companies that have the capacity to positively impact the world's reliance on traditional forms of energy and increase the adoption of more sustainable forms of energy. We believe that the energy sector requires a complete transformation to the way in which we have produced, transported, stored and consumed energy for the last century or more. We believe that capital flows will be critical to driving these changes.

Every company in our portfolio is making a tangible contribution to these solutions, for example during 2022 investee companies generated a total of 243 terawatt hours of zero emission electricity, manufactured 1.5 million electric vehicles and produced an array of critical raw materials (including 1.9 million tonnes of copper, 2 million tonnes of aluminium, 19 million ounces of silver and 42 thousand tonnes of rare earths).

Why have we published this report?

Our investment process (the process of identifying, evaluating and managing a portfolio of investments in publicly listed clean energy companies) has been designed and is executed in an institutional grade manner. ESG factors are considered at every stage of our process. We see reporting is an integral step in the investment process. This report aims to be fully transparent in disclosing the evidence of and key outputs from this process, including:

- Our proprietary ESG risk assessments (including a comparison to independent third party assessments);
- A record of company engagements including research meetings and our voting records at shareholder meetings;

- Portfolio greenhouse gas emissions (including an estimate of avoided emissions resulting from our investments in companies which directly generate zero emission electricity);
- A climate risk assessment of all portfolio positions; and
- An assessment of T8 Energy Vision's contribution to the United Nations Sustainable Development Goals.

2022 was a challenging year for clean energy stocks

Notwithstanding an experienced team and a proven process, investing in this space has required fortitude and long-term conviction. The year 2022 witnessed significant economic and geopolitical challenges. The sharp increase in global interest rates (in response to elevated inflation) has had a significant negative impact on the stock prices of energy utilities and their associated supply chain of solar, wind and energy storage companies. These industries are highly sensitive to interest rates and in 2022 the United States Federal Reserve and other major central banks raised interest rates with a level of aggression that hadn't been experienced since the 1970's.

Outlook

Despite these challenges we strongly believe that the key clean energy industry fundamentals remain strong. For example, in the foreseeable future, it is inevitable that the economics of renewables combined with energy storage (baseload equivalent electricity generation capacity) will be the cheapest form of new electricity generation capacity and electric vehicles will be cheaper to purchase than their internal combustion engine equivalent (they are already cheaper to operate).

At T8, we believe energy is the axis around which the global economy turns, and that energy is the engine of life itself. In clean energy, we see the biggest transformation the world has ever seen. We see how it will impact everything. From how we fuel our economy to the materials that we value. The energy transition will impact every aspect of our life. We don't see clean energy as a commodity but as a full system change, a rebuild from the ground up. When we see clean energy, we see a planet sized opportunity.

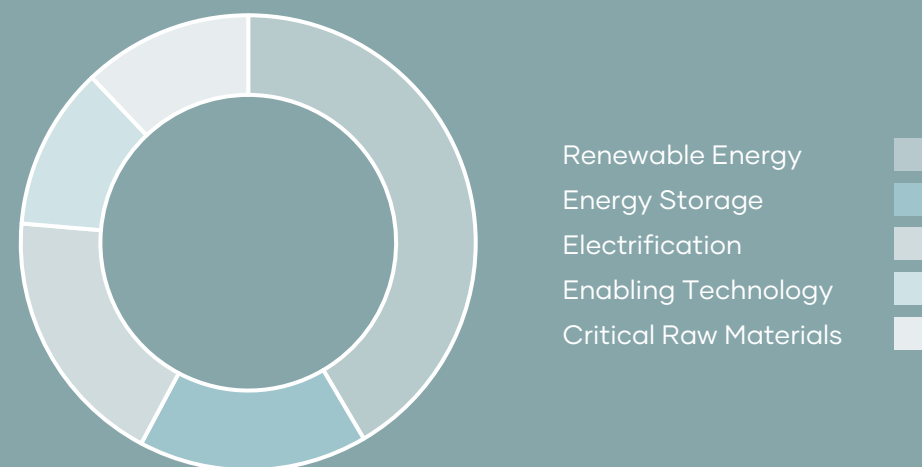
T8 Energy Vision by the numbers

Investee company contribution highlights during 2022

(This non-exhaustive list of contributions was estimated based on entire reported company output and assuming holdings of 31 December 2022 were held for all of 2022)

- Operations on six continents
- Contribution to 7 UN Sustainable Development Goals
- 243 terawatt hours of zero emission electricity (roughly Australia's annual electricity demand)
- 1.5 million electric vehicles and over 800 thousand electric bikes and scooters manufactured
- Various solar equipment manufactured including panels (9 gigawatts), inverters (20 gigawatts) and axis tracking (15 gigawatts)
- 5.5 gigawatts of solar capacity deployed (utility scale and rooftop)
- 1,129 wind turbines produced
- 2.3 gigawatts of hydrogen electrolyser manufacturing capacity
- Production of critical raw materials including 1.9 million tonnes of copper, 2 million tonnes of aluminium, 19 million ounces of silver and 42 thousand tonnes of rare earths

Figure 1 – Portfolio composition as of 31 December 2022



Source: T8

Clean energy: We see the biggest transformation the world has ever seen.

We see how it will impact everything. From how we fuel the economy to the materials that we value.

The energy transition will impact every aspect of our life.

Table 1 – Key portfolio metrics for 2022

-27%	Portfolio emissions intensity compared to 2021
502	Tonnes of avoided CO ₂ emissions (for every million US dollars invested in T8 Energy Vision – refer page 42)
100%	Assets in T8 Energy Vision portfolio managed under net zero framework and targets.
28%	Companies with net zero commitments
13%	Companies with 'ambitious' net zero targets (incorporating companies with targets approved by the Science Based Target Initiative (SBTi))
24	Direct company engagements
46	Investee company shareholder meetings voted at (92% of meetings held)

Source: T8

About T8

Philosophy

At T8, when we see clean energy, we see opportunity. We see the axis around which the global economy will turn. We see the engine of life itself. We see the biggest transformation the world has ever seen. We see how it will impact everything. From how we fuel the economy to the materials that we value. How it will flow through every aspect of our life. We don't see clean energy as a commodity but as a full system change, a rebuild from the ground up. We see a planet sized opportunity.

About

T8 is a manager of unique investment products. T8 Energy Vision is our flagship fund. The investment strategy for this fund is very much centred around the following theory of change: The global transition to low carbon energy is gaining momentum. A successful transition will require not only the decarbonisations of our economy but also increased investment in a range of climate solutions that will facilitate that goal.

We are focused on these solutions – on investing in companies that have the capability to positively impact the world's reliance on traditional forms of energy and increase the adoption of cleaner, greener forms of energy.

Investors have the key role of financing, and ultimately profiting from the innovation and technology that the world needs to win the climate race. The current transition to a zero-carbon economy will provide some of the greatest investing opportunities in history.

At T8, we are focused on investing in companies that have the capacity to change the world.



**Energy is the axis around which the global economy turns.
Energy is the engine of life itself.
We don't see clean energy as a commodity but as a full system change, a rebuild from the ground up. We see a planet sized opportunity.**

Our team

Executive team



Roscoe Widdup
Portfolio management



Dimitri Tsangalis PhD
Portfolio management



Tonya Payne
Research



Timothy McIntyre
Research



Georgia Widdup
Co-Managing Director



Andrew Kellaway
Research intern

Industry technical analysts



Alex Zadnik
Engineering



Stuart Brown
Energy

Advisory Board



Andrew Michelmore AO
Metallurgy



Leigh Clifford AC
Engineering



Mark Harland
Consumer behaviour



Mark Preston
Energy technology



Erin Grover
Sustainability technology



Jim Askew
Critical minerals

Responsible investment committee



Roscoe Widdup
Portfolio management



Tonya Payne
Research



Erin Grover
Sustainability technology



Rob Tandy
Responsible investment



Georgia Widdup
Co-Managing Director

Our associations



Signatory of:



**NET ZERO ASSET
MANAGERS
INITIATIVE**



Awards and recognition

In 2023 T8 was recognised as a 'Responsible Investment Leader 2023' by the Responsible Investment Association Australasia (RIAA). T8 has therefore been placed in the top 20% of organisations assessed, demonstrating:

- leading practice in our commitment to responsible investing;
- our explicit consideration of environmental, social and governance factors in investment decision making;
- our strong and collaborative stewardship; and
- our transparency in reporting activity, including the societal and environmental outcomes being achieved.







T8 Energy Vision

T8 Energy Vision is a global equities fund dedicated to investing in the biggest winners during the energy transition: clean energy – renewables, energy storage and electrification and associated value chains including critical raw materials. The present stage of evolution of this secular growth thematic means typical exposures are high-growth, small-mid cap, earlier stage companies. We target returns of greater than 20% over a rolling 3–5-year investment horizon with annualised volatility of 15–25%.

Within our investment themes (renewables, energy storage and electrification and associated value chains including critical raw materials), we focus on 10 individual industry building blocks relevant to the theme. Each of the building blocks represents an industry that is critical to the goal of the investment theme (Table 2).

Table 2 – Building blocks, positive impacts and example holdings

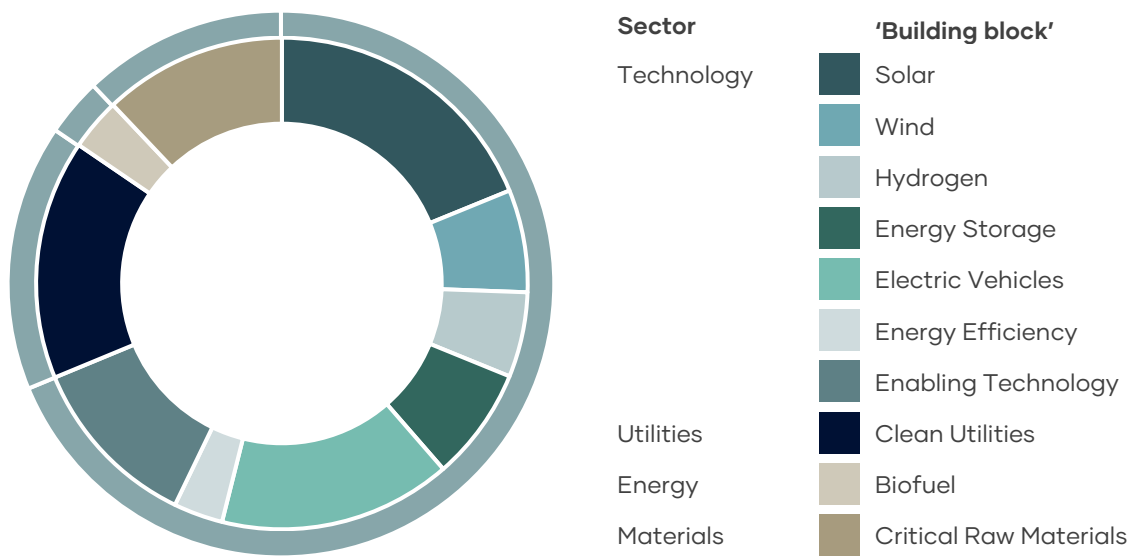
Building block	Example holdings	Impacts
 <p>Solar</p>	<ul style="list-style-type: none"> SolarEdge (SEDG US) Sunrun (RUN US) 	<ul style="list-style-type: none"> Greater than 90% reduction of carbon emissions over entire life cycle compared to coal power Average CO₂ equivalent emissions of 44g/kwh, with a CO₂ payback period of 4–8 months
 <p>Wind</p>	<ul style="list-style-type: none"> Nordex (NDX1 GY) 	<ul style="list-style-type: none"> Greater than 97% reduction of carbon emissions over entire life cycle compared to coal power Average CO₂ equivalent emissions of 11g/kwh, with a CO₂ payback period 5–9 months In 2022 Nordex installed 1,129 wind turbines and TPI Composites produced 8,800 wind blades
 <p>Hydrogen</p>	<ul style="list-style-type: none"> Nel (NEL NO) Plug Power (PLUG US) 	<ul style="list-style-type: none"> Hydrogen produced using renewable energy is a versatile alternative zero-emission form of energy storage that can be readily transported and used as fuel for power or in industry as feedstock
 <p>Energy Storage</p>	<ul style="list-style-type: none"> EnerSys (ENS US) QuantumScape (QS US) Wartsila (WRT1V FH) 	<ul style="list-style-type: none"> Effective energy storage is a necessary contributor to making renewable energy base-load competitive

Building block	Example holdings	Impacts
<p>Electric Vehicles</p> 	<ul style="list-style-type: none"> • Tesla (TSLA US) • Niu Technologies (NIU US) 	<ul style="list-style-type: none"> • EVs have 66%–69% lower lifecycle carbon emissions in Europe, 60%–68% in the United States, 37%–45% in China (EV lifecycle emissions are grid dependent) • Lower levels of transport-related air pollution. No fine particulate air pollution is emitted from EVs (approximately 40% of PM2.5 pollution in developed markets comes from conventional internal combustion engine vehicles. Fine particulate matter (PM2.5) can have significant impacts on human health) • During 2022 electric vehicle companies we invested in (as at 31 December 2022) manufactured 1.5 million electric vehicles and over 800 thousand electric bikes and scooters.
<p>Energy Efficiency</p> 	<ul style="list-style-type: none"> • Cleanspark (CLSK US) • Stem (STEM US) 	<ul style="list-style-type: none"> • Varied and significant opportunities exist for energy efficiency gains that will result in reduced energy usage and therefore a reduction in carbon emissions • It is estimated that 66% of primary energy used to create electricity is wasted by the time the electricity reaches the end customer
<p>Enabling Technology</p> 	<ul style="list-style-type: none"> • ASML (ASML NA) • Micron Technology (MU US) • Qualcomm (QCOM US) 	<ul style="list-style-type: none"> • A number of enabling technologies play a key role in facilitating the integration of renewable energy. For example, one of the most critical enabling technologies underpinning clean energy is microchips (due to the high intensity of use in clean energy technology)
<p>Clean Utilities</p> 	<ul style="list-style-type: none"> • Algonquin Power (AQN CN) 	<ul style="list-style-type: none"> • Providers of large-scale renewable energy generation (e.g. utility-scale solar installations and wind farms), electricity distribution infrastructure and grid-scale energy storage • During 2022 clean utilities companies we invested in (as at 31 December 2022) generated 243 terawatt hours of zero emission electricity
<p>Biofuel</p> 	<ul style="list-style-type: none"> • Neste (NESTE FH) 	<ul style="list-style-type: none"> • Sustainable alternatives to gasoline and diesel, especially for aviation
<p>Critical Raw Materials</p> 	<ul style="list-style-type: none"> • Alcoa (AA US) • Freeport-McMoRan (FCX US) • Pan American Silver (PAAS US) 	<ul style="list-style-type: none"> • Manufacturing of clean energy technology will require a significant increase in the supply of critical raw materials • In 2022 critical raw materials companies we invested in (as at 31 December 2022) produced 2 million tonnes, 1.9 million tonnes and 19 million ounces of aluminium, copper and silver, respectively

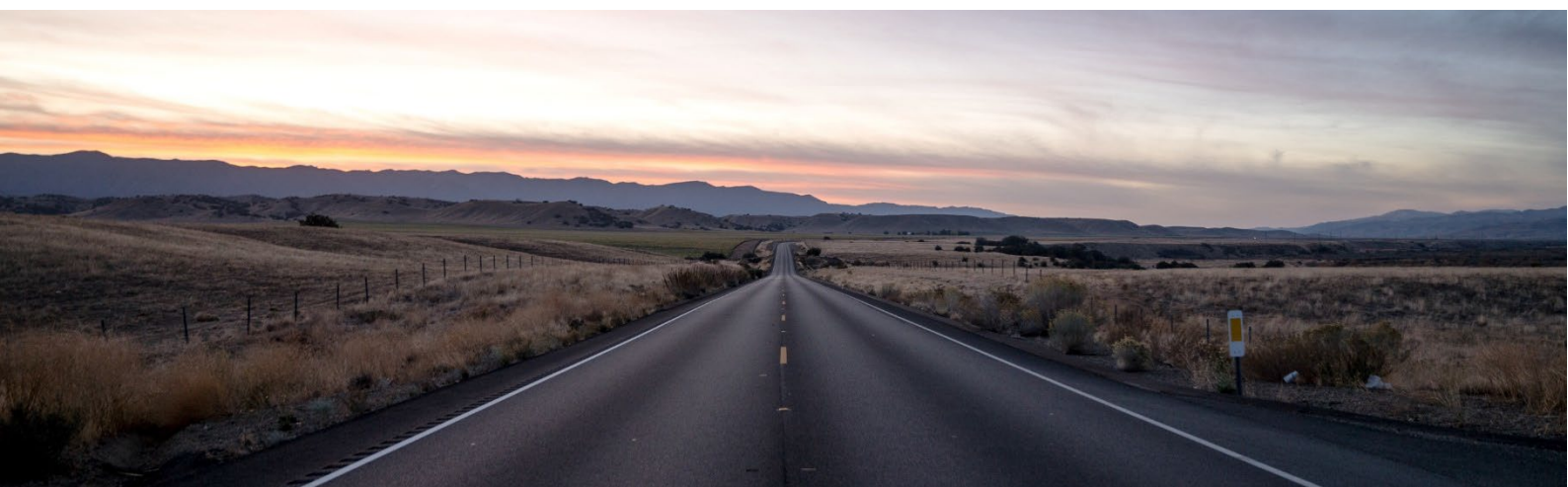
Source: T8

The composition of the portfolio varies over time, however the following is a summary of the portfolio allocations across individual building blocks at the end of 2022.

Figure 2 – T8 Energy Vision building block allocations (as of 31 December 2022)



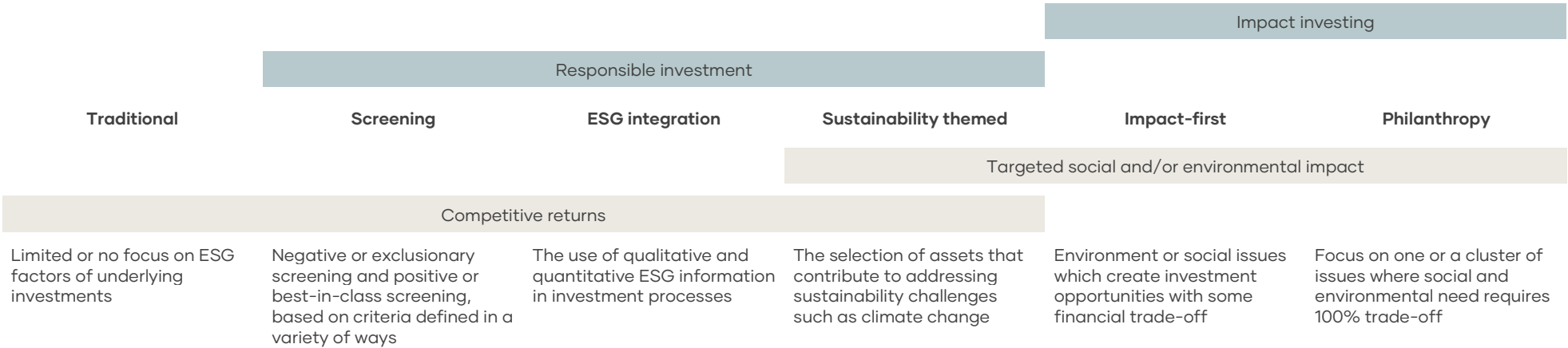
Source: T8



The responsible investment spectrum

Investing responsibly is at the heart of what we do. T8 Energy Vision sits in the ‘**sustainability themed**’ investment category of the responsible investment spectrum on the basis of its dedication to investing in clean energy solutions.

Figure 3– The responsible investment spectrum



Source: UN PRI

How do we achieve a positive influence?

Traditional impact investing has been focused on investments in private markets where the individual contribution that an investor makes can be easily identified and measured. While we believe that all investments have an impact, we recognise the challenge of identifying and measuring the specific impact of an investment in public markets. For this reason and to avoid the suggestion that T8 Energy Vision is an 'impact fund', we have adopted the nomenclature of 'influence' rather than 'impact'.

We believe that T8 Energy Vision can achieve a positive influence on the basis of its:

1. **Dedicated investment theme (investing in clean energy solutions):** investing in those companies that can have a positive influence on the shift to cleaner forms of energy (the 'Enterprise Influence'); and
2. **Commitment to company engagement:** by influencing companies to increase their ambition and adopt improved operating processes from an environmental, social and governance perspective (our 'Investor Influence')

Enterprise influence (investing in the solutions)

At T8, we believe that capital flows have the power to drive change.

Our intention is to invest in companies whose activities make a positive contribution to the shift toward clean energy. Intentionality is embedded in our investment approach as investee companies are screened to ensure that they have a 'clean energy purpose' and are 'clean enough'. Companies that meet this threshold are, of their very nature, making a positive contribution to the United Nations (UN) Sustainable Development Goals (SDGs). In particular:

- SDG 7 – affordable and clean energy; and/or
- SDG 13 – climate action.

It is very difficult to empirically measure the 'impact' that any one company or investment has on the transition to cleaner forms of

energy. While we have obviously contributed capital to companies that are contributing to the shift to cleaner forms of energy, the fact of the investment having been in a public market, means that it is not possible to credibly say that the investment contributes 'beyond what would otherwise have occurred'.

Investor (engagement) influence

At T8, we believe that we can achieve a positive influence as investors when we proactively engage with companies to advocate for improved:

- sustainability in their operating practices; and
- ESG disclosure and ambition.

We believe that we can achieve the greatest influence when we implement a clear process around our engagement with investee companies. To this end, we utilise the following structured process:

- using the due diligence process (and the 23 ESG Factors), we identify specific ESG risks or issues; and
- utilise these identified issues and risks as a focus for our company engagement. The focus of these meetings will depend on the individual circumstances. For example, in some circumstances we are seeking further information and context around a particular issue, in others we may be seeking a specific commitment or a change in relation to operating processes.

Later in the report we detail the various topics we have raised with company's during our engagements. While we cannot be sure that our engagements have achieved impact (we are only ever one voice amongst many), we believe that our engagement and advocacy on these issues is nevertheless a contributing factor to improved company policy and process and increased ambition. We maintain a register of company performance and progress on these issues.

SDG to measure enterprise influence

By focusing our investments on companies that are contributing to the clean energy evolution, our investment strategy can achieve an Enterprise Influence by making a positive contribution to several of the UN SDG's including:

- SDG 7 and 11 which directly relate to a company's key products and services in relation to clean energy (e.g. manufacturing solar equipment);
- SDG 5, 12, 13 and 16 which relate to how a company conducts itself (e.g. promotes diversity; good corporate governance; sustainable business practices); and
- SDG 9 which relates to the level of expenditure disclosed by a company in relation to technology research and development.

SDG to measure investor influence

By engaging with companies to advocate for improvements to operating practices, we believe our activities can achieve a positive investor influence by making a positive contribution to the following SDGs:

- SDG 5 – gender equality;
- SDG 13 – climate action; and
- SDG 16 – peace, justice and strong institutions (specifically sub-goal 16.6 related to effective, accountable and transparent institutions and 16.7 related to responsive, inclusive, participatory and representative decision-making) which relates to shareholder alignment.

By engaging with companies to advocate for improvements to operating practices, we believe our activities can achieve a positive investor influence



The landscape for clean energy and responsible investment in 2022

2022 witnessed significant economic and geopolitical challenges. The rise in global interest rates (in response to elevated inflation) has had a significant negative impact on the stock prices of energy utilities and their associated supply chain of solar, wind and energy storage companies. These companies are highly sensitive to interest rates and in 2022 the United States Federal Reserve and other major central banks took aggressive steps to raise interest rates in an effort to combat inflation which spiked to 40-year highs. This was one of the most aggressive rate hiking cycles of all time, moving interest rates from close to zero to 4.25% in less than a year.

The Russian invasion of Ukraine in February 2022 and the subsequent energy crisis prompted governments, businesses, and investors to re-evaluate energy security.

The impacts of the Russian invasion also reverberated in other aspects of the responsible investment landscape. Influenced by the energy crisis, oil and gas was one of the few sectors of global equities to post a positive return in 2022. Metals and mining companies also performed well, which along with oil, gas and energy producers are often excluded from responsible investment funds due to the high carbon emission intensity of these supply chains. Weapons manufacturers, which are also often screened out of responsible investment funds (including T8 Energy Vision), were another sector that benefited from the war in Ukraine.



The performance of oil and gas companies in comparison to other sectors contributed to the flow of capital out of responsible investment funds (especially those which target companies with lower emissions intensity).

T8 Energy Vision benefitted from exposure to metals and mining companies (those that produce materials that are a critical input in the supply chain of clean energy).

The United States saw the rise of an anti-ESG investment movement where a number of institutions publicly divested from investment products prioritising investment in companies solely on the basis of their contribution to environmental, social or governance factors ahead of their financial performance. This contributed to capital flows into responsible investment products declining year-over-year. RIAA reported that the Australian responsible investment market (\$1.3 trillion at the end of 2022) experienced a 16% decrease from the previous year.

Clean energy's investment prospects were boosted in August 2022 when the United States Congress passed the Inflation Reduction Act (IRA). IRA is one of the most significant pieces of economic policy in United States' history and includes nearly US\$400 billion in tax credits, rebates, investments, and subsidies all aimed at accelerating the adoption of clean energy. While the impact of IRA is still to filter down to company revenues, it is likely to have global ramifications on the energy transition. Energy consultancy Wood Mackenzie estimates that IRA will increase total spending on renewables to US\$1.2 trillion by 2035.



Energy consultancy Wood Mackenzie estimates that IRA will increase total spending on renewables to US\$1.2 trillion by 2035

Despite the challenges in 2022 we strongly believe that key clean energy industry fundamentals remain strong and that the sector is positioned to benefit from predicted interest rate cuts in 2024.

The growth outlook for clean energy companies is also bright, reflecting the current reality that solar and wind electricity generation technologies produce electricity cheaper than burning fossil fuels (e.g. coal and natural gas), nuclear and even hydroelectric.

In the foreseeable future, it is inevitable that the economics of renewables combined with energy storage (baseload equivalent) will be the cheapest form of new electricity generation capacity and electric vehicles will be cheaper to purchase than their internal combustion engine equivalent (electric vehicles already have a total cost of ownership comparable to gasoline or diesel-powered vehicles, notwithstanding a higher purchase price). While the energy transition will be a period of disruption, it is without doubt that the future will feature a cheaper, more abundant, more secure energy system.

While the energy transition will be a period of disruption, it is without doubt that the future will feature a cheaper, more abundant, more secure energy system



T8 Energy Vision: 2022 updates

In 2022 we joined the Investor Group for Climate Change (IGCC) and also became a signatory to the Net Zero Asset Managers Initiative and thereby committed to aligning our portfolio with net-zero emissions by 2050 or sooner, in line with global climate goals. By signing up to this initiative, we have committed to a framework for addressing climate change and transitioning to a low-carbon economy through targeted actions, engagement with investee companies and reporting on progress. Our interim targets for 2030 will be finalised in early 2024.

We adopted the UN Principles of Responsible Investment (PRI) and thereby committed to incorporating environmental, social and governance factors into our investment decision making process and practices.

We developed and implemented a pilot program around measuring alignment of companies we invest in with the goals and sub-goals of the UN's Sustainable Development Goals as a way of measuring and tracking the positive outcomes that have been achieved because of our investments.

In 2022 T8 became a signatory to the Responsible Investment Association of Australia (RIAA). In 2023 T8 was recognised by RIAA as a 'Responsible Investment Leader'.

For the second year in a row, T8 Energy Vision, has been awarded a place on the 'watchlist' of Australian Impact Investments review of listed equity funds. Australian Impact Investments is a dedicated impact asset consultant providing speciality advice to clients who are seeking to mobilise capital for positive environmental and social impact alongside financial value. Of the 114 funds that were specifically identified as having a clear and genuine 'responsible' mandate, T8 is proud to have been one of only 27 funds awarded shortlist or watchlist status.



Investment beliefs

We accept the scientific evidence that shifts in global temperatures are, at least in part, due to human activities (primarily the burning of fossil fuels such as coal, oil, and gas).

We believe that the energy sector holds the key to averting the worst effects of climate change and that there needs to be complete transformation in the way that we produce, transport, and consume energy.

We believe that capital flows have the power to drive change. We can have a positive influence if we invest capital in those companies that have the capability to make a genuine contribution to this energy transformation.

We believe that integration of consideration of ESG risks into our investment process can lead to better informed investment decisions.

We believe that companies with higher ESG standards will have more sustainable business models and that by actively engaging with companies, we can encourage them to:

- Adopt improved operating processes (from an environmental, social and governance perspective); and
- Increase their ambition in respect of environmental, social and governance processes and procedures.

At T8, our energy vision is one of secure, abundant, low emission energy. We believe that will usher in a period of prosperity and unparalleled value creation.



While manufacturing a solar module is emissions intensive, it has an emissions 'payback' of 4-8 months

Investment process

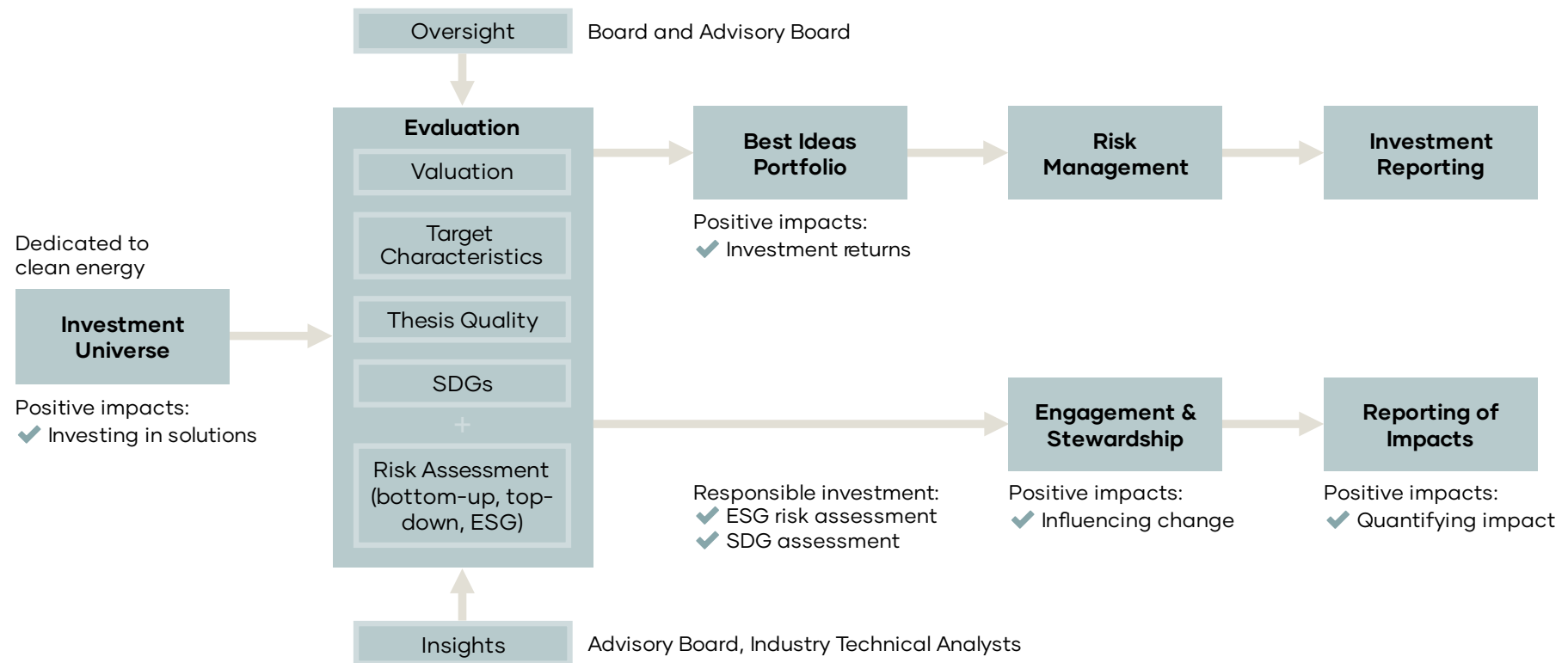
We have a structured approach to incorporating ESG considerations throughout our investment process (Figure 4). This comprises the following four key pillars:

1. Filtering and screening – we have a structured screening process that not only narrows our investment universe but also ensures that all companies meet our proprietary 'clean energy purpose' and (clean enough screening criteria, refer below).
2. Research and evaluation – our experienced team performs comprehensive, bottom-up research. Included within this process is a robust evaluation of a company's processes and controls against a proprietary ESG 23 factor methodology.
3. Stewardship – we view company engagement as an integral part of our investment strategy. In addition to exercising our voting rights, we actively engage with companies to promote improved ESG standards and ambition.
4. Monitoring and reporting – we produce an annual ESG report, monthly financial reports, and periodic updates on various topics of interest. In addition, we also provide annual detailed disclosure of voting records and quarterly disclosure of fund holdings. We passionately believe in the importance of transparency around our investments and our engagements.

The climate crisis has made it abundantly clear that the world needs to urgently reduce greenhouse gas emissions.



Figure 4 – T8 Energy Vision overview of the investment process



Source: T8

Continuous improvement

In 2023 we enhanced T8's governance structures, increasing the level of fiduciary oversight. T8's corporate governance framework comprises:

- The Investment Committee which comprises senior members of the Investment Team together with the Chair of the Board of Triple Eight Capital Pty Ltd (also the Chair of the Advisory Board) as a non-voting observer. The committee leverages the collective experience of its members to make well informed investment decisions based on proprietary assessments of reward and risk in line with the investment process. Each voting member of the Investment Committee is empowered to veto investment decisions.
- The Advisory Board which provides deep industry insights and access to broader industry networks (as well as non-fiduciary oversight of the investment process). The Advisory Board receives weekly disclosures detailing performance; attribution; positioning; risk; as well as market and stock commentary. The Advisory Board is trained to be proactive and to respond to the weekly report when they have relevant insights or contacts which can be levered to further the investment team's research.
- The Responsible Investment Committee which provides non-fiduciary oversight over T8's responsible investment policy as well as T8's ESG strategy, due diligence, stewardship (including engagement) and reporting.
- Industry technical analysts which provide technical insights (e.g. engineering and scientific) to the investment team which ensures a sound technical basis for investment decision.
- The Board/Oversight Committee (of Triple Eight Capital Pty Ltd) which is the key oversight function within T8's corporate governance framework. The Oversight Committee meets on a quarterly basis and provides oversight over the governance of the investment process (as well as other aspects of the business which are not directly related to investment).



Pillar 1 – Filter and screening

We target an exclusion and inclusion approach when identifying the specific ESG characteristics of the companies that we invest in.

What we do not invest in – negative screens

As detailed in our responsible investment policy (publicly available on the T8 website), T8 Energy Vision's investment thesis, target universe and thematic focus is such that we will not have exposure to contentious sectors such as alcohol, gaming, weapons, tobacco, whaling, live animal exports or adult entertainment. We have a zero-tolerance approach to investing in coal mining.

What do we invest in – positive screens

We have developed a proprietary framework that enables us to screen companies to ensure that they have genuine 'clean energy intent' – this means that they:

1. have genuine 'clean energy purpose'; and
2. are 'clean enough'.

In practical terms, a company with a 'clean energy purpose' will, either produce clean energy (for example, an electricity or biofuels) or will produce a critical input into the value chain thereof (for example, solar panel manufacturing, or critical raw materials for manufacturing batteries). These are the companies that can have a positive impact on the energy revolution.

Companies that meet our requirements of a 'clean energy purpose' will then have to establish that they are 'clean enough' by meeting industry specific thresholds that we have developed. We continually review these thresholds to ensure that our investments are focussed on the companies with the greatest ability to contribute to the clean energy revolution. Companies that meet the requirements of having a clean energy intent are, of their very nature, making a positive contribution to the UN Sustainable Development Goals (in particular, SDG 7 – affordable and clean energy and/or SDG 13 – Climate Action).



Pillar 2 – Research and insights

At T8 we have an experienced team who are guided by a globally significant Advisory Board.

Our team performs comprehensive, bottom-up research on every company within our portfolio and broader watchlist. This research comprises three key components:

1. Bottom-up fundamental research;
2. Top-down market and macroeconomic research; and
3. ESG due diligence based on our 23-factor methodology.

While the first two are beyond the scope of this report, they broadly involve comprehensive, bottom-up research and analysis with an eventual goal of identifying companies with strong fundamental characteristics and a compelling catalyst to growth.

ESG due diligence and our 23-factor methodology

At T8 we believe that:

- proprietary ESG research can deliver unique insights;
- ESG integration can lead to better informed investment decisions; and
- well managed companies with robust ESG practices will, over the longer term, generate better performance than those with poor ESG practices.

We therefore believe that it is imperative that we develop a comprehensive understanding of the ESG risks inherent in the operating practices of each of the companies in which we are invested. We do this by:

- performing a comprehensive desktop review of the publicly available information of individual companies to, in the first instance, understand whether the company passed our clean energy screening process (Pillar 1); and
- we utilise our proprietary 23-factor methodology (Pillar 2) to guide our review of a company and identify any ESG risks and issues.

The results of our due diligence will guide our in-house ESG risk assessment with the eventual goal of producing an individual risk

rating for every company. The risk rating guides the frequency of repeat assessments, and our approach to company engagements. To ensure consistency of risk assessment, the ESG risk ratings are standardised periodically. Companies with a standardised ESG risk of 'high' are added to our 'high priority monitoring' list. These companies are automatically included in the agenda of daily portfolio meetings. A higher priority is placed on monitoring the news flow on issues associated with these companies.

Of the ESG assessments completed in 2022:

- 32% were determined to have a high standardised ESG risk,
- 48% a medium standardised ESG risk and
- 19% a low standardised ESG risk.

An additional seven companies (to an existing three companies) were added to our high priority monitoring list. The companies on both our 'high priority monitoring' and 'engage to impact' lists, as well as a summary of the ESG assessments completed in 2022 are included in Appendix 2.

In addition to triggering more regular monitoring and review, a company's ESG risk rating is an input into the overall fundamental/bottom-up valuation of the company which in turn influences the position size of the company within the portfolio.

Although ESG rating and scoring systems are not directly comparable (since they utilise different methodologies and different criteria), as a further reasonableness check we compare our ESG risk assessment rating to other third party ESG ratings and scores. Appendix 3 compares the different ESG ratings for portfolio companies held on 31 December 2022. For example:

Table 3 – Example Comparison ESG ratings for Algonquin Power & Utilities (as of 31 December 2022)

T8 ESG Rating	Sustainalytics			MSCI	Bloomberg			
Overall (L-M-H)	Overall (100-0)	Exposure ¹	Management ²	Overall (CCC-AAA)	E (0-10)	S (0-10)	G (0-10)	Overall (0-10)
Medium	21 Medium	Medium	Strong	AAA Leader	2.4	5.5	8.1	4.7

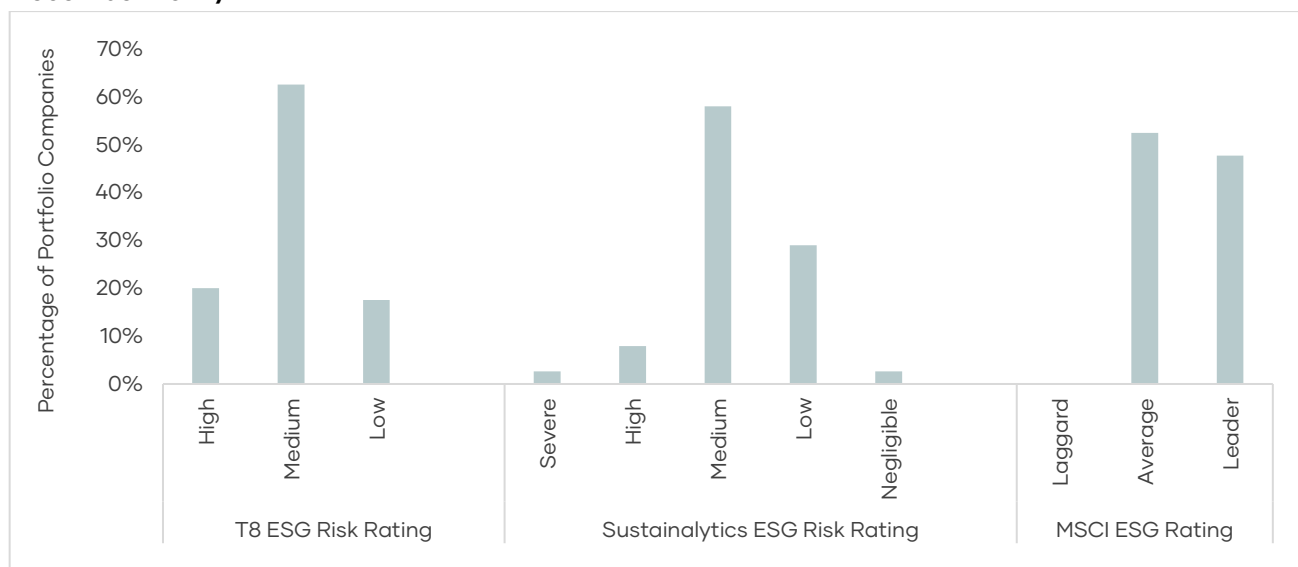
Source: T8, Sustainalytics, MSCI, Bloomberg

¹ Extent to which a company is exposed to different material ESG issues.

² How well company is managing relevant ESG issues.

A comparison of how T8 Energy Vision portfolio companies held at the end of 2022 are rated by several ESG rating methodologies is outlined in Figure 5 below.

Figure 5 – Overview of comparison of ESG rating for T8 Energy Vision portfolio companies (as of 31 December 2022)



Source: T8

While third party assessments do not provide a granular level of detail that necessarily explains the rationale behind each company's ESG assessment, we look for instances where our view is significantly different to consensus, and this can flag further review/research. Notable areas of divergence in ESG ratings for portfolio companies include:



Xinyi Solar (968 HK) – Xinyi Solar is a Chinese based solar company with manufacturing operations in China and Malaysia. Both China and Malaysia are countries with higher risks of modern slavery.

Xinyi Solar's primary business is manufacturing specialised glass for photovoltaic solar panels. A smaller part of Xinyi Solar's business involves developing solar energy projects.

While Sustainalytics' ESG risk rating for the company is medium (with a low-risk exposure), based on our detailed due diligence we determined an ESG risk rating of high. This is largely due to the high risk of exposure to forced labour within the supply chain of its solar energy project development segment (we provide more detail in case study 2, within the '2022 company engagement highlights' section).



Neste Corp (NESTE FH) – Neste is based in Finland and is the world's leading producer of sustainable aviation fuel, renewable diesel and renewable feedstock solutions for various polymers and chemicals industry uses.

MSCI has rated the company as AAA and Sustainalytics has rated the company as an overall ESG risk of low. While we would agree with Sustainalytics' assessment of 'strong' management controls, the company due to its oil refining heritage still derives a significant portion of its revenue from traditional fossil fuels. This exposure to the fossil fuel industry has in part influenced our overall ESG risk rating of 'high' for the company.



MP Material (MP US) – MP Materials is the largest producer of rare earth materials in the western hemisphere and currently accounts for approximately 15% of global supply. Rare earth elements are a critical raw material in the clean energy transition due to their use in a wide array of applications, including electric vehicles and wind turbines.

Sustainalytics ESG risk rating for the company is 'severe'. We acknowledge MP Materials faces a range of significant ESG risks which are associated with historic contamination, waste containment and water access. Our bottom-up assessment of MP Materials' ESG processes and controls, however identified innovations including implementation of a closed-loop tailings and concentrate dewatering method that enables recycled water to satisfy approximately 95% of water demand. Further, the disposal of dry tailings within lined impoundments minimises the risk of groundwater contamination. Following our ESG due diligence including direct engagement with the company we determined an ESG risk rating of 'high'.

We note that MP Materials is a relatively young company (only founded in 2017), so benchmarking it to its wider extractive industry peers we have identified definite scope for improvement. These areas include ESG related disclosure and reporting as well as alignment with global responsible mining, tailings, and net zero standards.

Pillar 3 – Stewardship and engagement

At T8 we seek not only to understand the ESG practices of companies in which we invest but also to contribute to a meaningful discussion around the improvement of ESG policies, processes, and management practices. The entire T8 Advisory Board contributes to our thinking and approach in relation to this and we very firmly believe that, by influencing companies to improve their operating practices and procedures, we can achieve a positive social and environmental influence.

Proxy Voting

Central to our company engagement is T8 actively exercising ownership rights. Proxy Voting is a key part of our Stewardship strategy, and we exercise our right to vote at company meetings. Our approach to voting is detailed in our Responsible Investment Policy.

T8 undertakes proxy voting according to a sustainability, socially responsible and ESG aligned voting (SRI) policy that is consistent with the firm's sustainability focus and considers relevant laws, customs, and best practice codes of each market and region portfolio companies are listed in. Voting recommendations are made by the Investment Team and are supported by external proxy voting research. T8's current proxy voting research provider is ISS.

ISS's SRI Voting Guidelines are accessible via the following links:

- <https://www.issgovernance.com/file/policy/active/specialty/SRI-US-Voting-Guidelines.pdf>
- <https://www.issgovernance.com/file/policy/active/specialty/SRI-International-Voting-Guidelines.pdf>

Voting decisions typically follow these guidelines, however we may vote differently on items that we consider material to economic outcomes, longer-term value creation, shareholder alignment and more sustainable outcomes.

We commenced our active voting program in 2021. In Q1 2022 we transitioned from voting at company meetings via T8 Energy Vision's custodian to voting ourselves via the ISS proxy voting portal. Our goal is to vote at 100% of meetings that T8 Energy Vision is eligible to vote at. In 2022 we voted at 92% of these company meetings. The few meetings that

were missed were due to administrative issues including those that occurred during the period of migration to a different voting portal.

We disclose full details of the T8 Energy Vision's voting record annually on our website. A summary of these shareholder meeting and T8's assessment of proposals is outlined in Appendix 4 to this report.

In summary during 2022 we:

- reviewed 547 proposals from 46 company meetings (of these: 96% were proposed by management; and 4% were proposed by shareholders)
- voted in line with management 73% of the time
- voted in line with shareholder lead proposals 71% of the time.

Some of the most frequent concerns that prompted votes against management included:

- Lack of board diversity (voted against management in 57% of shareholder meetings)
- Problematic executive compensation (voted against management in 22% of shareholder meetings)
- Concerns regarding auditor independence related to length of audit tenure and high non-audit fees (voted against management in 20% of shareholder meetings)
- Concerns regarding classified board structures and supermajority voting requirements (voted against management in 20% of shareholder meetings)

Company Engagement

In addition to proxy voting, we consider that engagement with companies (both pre and post investment) is an important action for having a positive environmental and social influence. It is also critical to being a good steward of capital.

An active dialogue offers us the opportunity to discuss sustainability risks and opportunities with companies and provides them with insights into our expectations of corporate behaviour. In addition, it provides us with the opportunity to raise issues identified during our due diligence process, (and, where appropriate,

advocating for improved disclosure or changes to operating procedures).

We engage primarily through 1:1 meetings and review/record our ESG engagement activities and outcomes/effectiveness in an internally maintained database. We have identified three areas of priority that we raise as a matter of routine in company meetings:

- net zero commitments;
- shareholder alignment; and
- workforce rights and equality.

These three areas were chosen because we believe that they represent the biggest opportunity for overall improvement in our investment universe at the present time and that we will be able to advocate for and have a positive influence on.

While counterintuitive, the solutions to sustainably reducing global emissions is actually emissions intensive in the early phases



During 2022, T8 conducted 24 meetings with companies within Energy Vision's watchlist to discuss ESG issues. These meetings included companies based in the United States, Canada, Europe, China and South America. Five broad issues dominated our discussions with companies in 2022:

- Supply chain - Workforce supply chain risks were discussed at over 70% of meetings with investee companies. Environmental supply chain risks were discussed at over 60% of meetings with investee companies
- Climate - Energy and emissions intensity (including net zero commitments) was discussed at over 60% of meetings with investee companies. Climate risk management was discussed at over 50% of meetings with investee companies
- Environmental management systems and processes were discussed at just under 40% of meetings with investee companies
- Community management was discussed at over 30% of meetings with investee companies
- Organisational governance and ethics were discussed at over 30% of meetings with investee companies

The increased manufacture of clean energy technologies such as wind turbines, solar panels and electric vehicle components will require a significant increase in the supply of critical raw materials

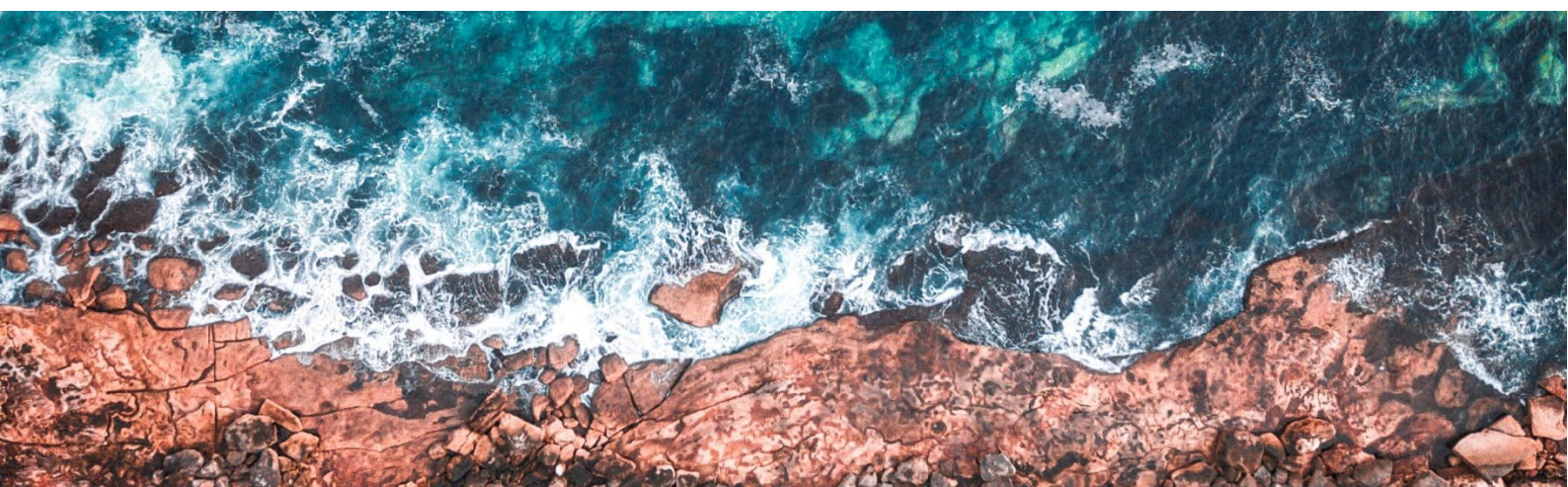
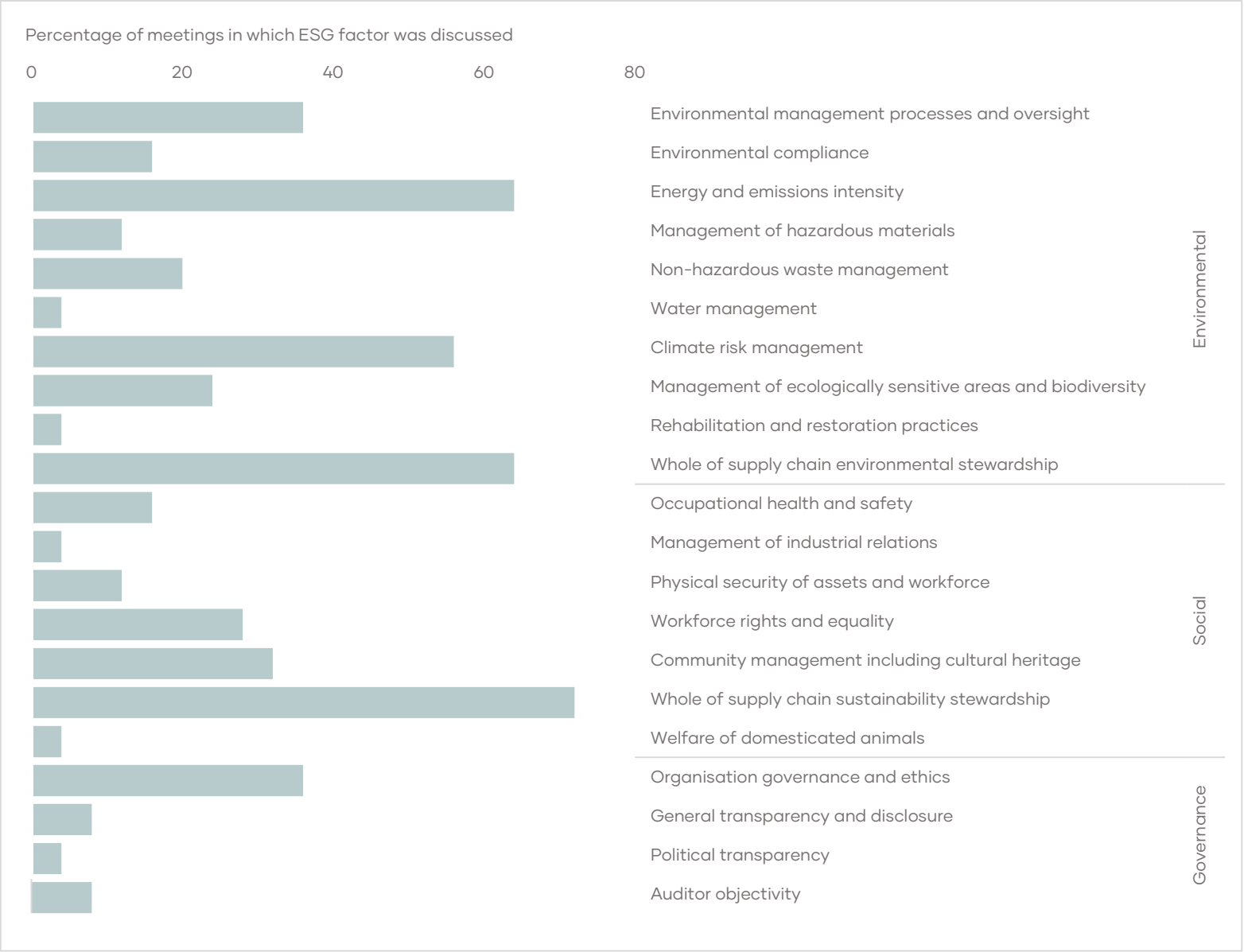


Figure 6 –Frequency of discussion of specific ESG factors in company meetings



Source: T8

A summary of the company meetings conducted in 2022 is included in Appendix 5.

In addition to these one-on-one meetings, T8 participated in company group calls, correspondence with companies on ESG issues and discussions with subject matter experts on issues including tailings disposal, modern slavery and biodiversity.

T8 is a signatory to a variety of different external initiatives, including:

- UN Principles of Responsible Investment (UN PRI);
- Investors Against Slavery and Trafficking Asia Pacific (IAST APAC) signatory;
- Net Zero Asset Managers Initiative;
- Climate Action 100+; and
- Responsible Investment Association of Australia (RIAA).

T8 is actively seeking collective engagement opportunities through our membership of IAST APAC, IGCC and PRI. We are also exploring collective engagement partnerships with other fund managers as a way of amplifying our voice.

T8 uses engagement as the first tool to drive ESG change. Where a company is not on track to meet our ESG performance and disclosure expectations, we may use other means (e.g. proxy voting) as part of our escalation process. Depending on the outcomes of engagement and escalation, this may have an impact on our investment, including divestment, decisions.

2022 company engagement highlights

Case Study 1



Freeport-McMoRan (FCX US) – Freeport is one of the world's largest copper producers. Copper is one of the critical raw materials required to enable the clean energy transition, due to its usage in the manufacture of solar, hydro, thermal and wind energy systems.

During 2022 we had a more comprehensive engagement with the company in relation to specific concerns regarding tailings disposal practices and rehabilitation planning.

Our team prepared a paper raising our thesis and making recommendations around increased disclosure that would give us (and presumably other investors) comfort regarding actions being taken. This paper (can be provided upon request) has been shared with the management team. While it is not yet clear whether this engagement has precipitated any concrete changes within the company, we believe it to be an excellent example of a company's willingness to engage with shareholders when approached in a constructive way.

Case Study 2



Xinyi Solar (916 HK) – Xinyi Solar is a Chinese based solar company with manufacturing operations in China and Malaysia. Both China and Malaysia are countries with higher risks of modern slavery.

Xinyi Solar's primary business is manufacturing specialised glass for photovoltaic solar panels.

Xinyi Solar also has an operating segment which develops solar energy projects (13.5% of revenue in the 2022 calendar year). The solar equipment for these projects is sourced from various Chinese manufacturers. While the company has not publicly disclosed the suppliers of this equipment, following direct engagement with the company we understand that it procures equipment from the whole of the Chinese solar industry. Numerous Chinese solar industry participants have production facilities (especially polysilicon) in Xinjiang (an autonomous territory in northwest China). Xinjiang is associated with allegations that since 2017 the Chinese government has committed crimes against humanity in the region, including arbitrary detention, enforced disappearances, and cultural and religious persecution, and has subjected Uyghurs and other Turkic Muslim communities to forced labour inside and outside of the territory. It is therefore conceivable that some of these suppliers are linked to Xinjiang or have supply chains linked to Xinjiang (and therefore an elevated risk of exposure to forced labour). The Chinese government officially denies the use of forced labour in the province.

We acknowledge that forced labour is a black and white issue. However, Xinyi Solar's situation has a range of elements (further complicated

by language and cultural nuance) which make it impossible to conclude on a binary basis at this point in time. For these reasons, Xinyi Solar is subjected to our highest intensity monitoring.

We have met with Xinyi Solar representatives several times and communicated our expectations regarding more detailed supplier ESG risk management including auditing/verification processes. We have also engaged with outside experts on the complex issue of modern slavery particularly companies with supplier links to Xinjiang. During 2023 we will evaluate the likelihood of being able to successfully influence the company in the next few years or whether we proceed with divestment.

Pillar 4 - Reporting

We firmly believe in the importance of recording and reporting transparently on our work and our achievements. We produce a monthly letter to investors that provides details on the financial performance of T8 Energy Vision together with an ESG dashboard.

In addition, we publish on our website detailed voting records on an annual basis and T8 Energy Vision's holdings on a quarterly basis.

In 2022 we published a 'Shared Value' report (a report dedicated to responsible investment) and an emissions report. We have now combined these into an annual responsible investment report to provide evidence of the positive environmental and social contributions that have been achieved as a result of investments made by T8 Energy Vision.

Despite the initial emissions intensity in the manufacturing process, clean energy technologies have small overall lifecycle emissions compared to fossil fuel based alternatives



Climate and carbon emissions

Net Zero Asset Managers Initiative

By joining NZAM, we pledged to make our own commitments to move our portfolios towards a net zero greenhouse gas emissions world.

During 2022 T8 joined other leading global asset managers in signing on to the NZAM Initiative, formally pledging to align our portfolios with the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5 degrees Celsius.

Through this annual report we provide information on our climate and carbon related metrics and corporate engagements as we work to measure our progress in achieving our interim and long-term targets.

Life cycle emissions: real world versus portfolio decarbonisation

Getting to net zero starts with measuring where we are at today. Companies measure, calculate and report on their organisation's carbon footprint by quantifying the total amount of greenhouse gas (GHG) emissions the organisation produces, whether directly or indirectly.

T8's approach has three key elements:

1. Stewardship – Engaging with companies to advocate for net zero commitments and associated carbon emission targets is a key part of our strategy for achieving the objective of decarbonising investment portfolios.
2. Investing in the solutions – The other element of cleaner energy future is investment in companies that are part of the solution. While not always immediately attractive from an emissions intensity perspective, there will be no clean energy future unless considerable investment is made into both the technologies and the supply chains that will facilitate this future.
3. Reporting – T8 strongly supports adoption of Task Force on Climate-related Financial Disclosures (TCFD) reporting and methodology standard for climate relevant metrics (such as emissions reporting) as this

helps to drive consistency across the industry.

We also believe that there is a very real distinction between achieving net zero in the real world versus net zero within a portfolio.

A portfolio can relatively easily reduce its carbon intensity by reducing or eliminating exposure to carbon intensive sectors. While achieving reductions in the carbon intensity of companies is clearly important, this approach – in isolation – will not ultimately lead to a net zero future.

The transition to a net zero economy is a case study in sustainability trade-offs, requiring both the rapid decarbonisation of industries and companies as well as a significant increase in investment in clean energy solutions. The increased manufacture of clean energy technologies such as wind turbines, solar panels, and electric vehicle components will also require a significant increase in the supply of critical raw materials such as copper, silver, aluminium, and lithium.

Although critical to facilitating the clean energy transition, both the critical raw materials and clean energy industries have high scope 1 and 2 emissions due to the energy intensive nature of the production process.

We therefore believe that while it is important to measure the carbon emissions metrics of individual companies and investment portfolios (and we have done so in this report), it is also important that investors are mindful of the lifecycle of emissions and have a genuine commitment to investing in companies that can facilitate the transition to clean energy solutions.

T8 Energy Vision's scope 1, 2 and 3 emissions

In addition to investing in the solutions, we also support the reduction in carbon emissions in the companies in which we invest. Getting to net zero starts with measuring (and tracking) where we are today. Companies measure, calculate and report on their organisation's total carbon footprint by quantifying the total amount of GHG the organisation produces, whether directly or indirectly.

The Greenhouse Gas Protocol provides standards on this process and has defined three main categories of GHG emissions:

Scope 1

- Company operated facilities and vehicles

Scope 2

- Purchased electricity, steam, heating and cooling for own use

Scope 3 (upstream)

- Employee commuting
- Waste generated in operations
- Fuel and energy related activities
- Purchased goods and services
- Leased assets
- Business travel
- Transportation and distribution
- Capital goods

Scope 3 (downstream)

- Franchises
- End-of-life treatment of sold products
- Processing of sold products
- Transportation and distribution
- Investments
- Leased assets
- Use of sold products

Carbon metrics can be used to provide investors with a more holistic understanding of their exposure to climate risks and opportunities. By understanding the emissions profile of their investment portfolio, investors can make informed decisions regarding allocation of capital.

Most portfolio companies are able to report scope 1 and 2 emissions with a reasonable degree of accuracy. Due to the need for supplier and product use emissions data, scope 3 data are less reliable. While acknowledging these limitations, we have included scope 3 data for our portfolio companies in this report.

We have sourced portfolio company scope 1, 2 and 3 emissions from a highly regarded, specialist external data provider (ISS). ISS review and interrogate company reported emissions data which enables us to have a high level of confidence in reported data.

ISS however were unable to provide data on two portfolio companies, QuantumScope (QS US) and Canoo (GOEV US). Details of where ISS has sourced carbon emissions data from is detailed in Appendix 8. The majority was sourced from Sustainability/Annual Reports (50%), ISS modelling of emissions data (23%) and Carbon Disclosure Project (CDP) Data (20%).

In our review of the ISS data we identified one outlier, Wolfspeed (WOLF US), with significantly larger reported scope 3 emissions than their peers, even those peers with significantly larger businesses operations. Due to this outlier status, we have chosen to report this data as a separate line item.

In reporting on portfolio GHG emissions (Tables 4 and 5), we utilise three categories of climate related disclosures (refer to Appendix 8 for detail of how these metrics are calculated):

- Total GHG emissions;
- Carbon footprint; and
- Emissions intensity.

Carbon emissions are only one part of a complex story. Investors need to look further if they want to understand the broader context of a fund's carbon footprint

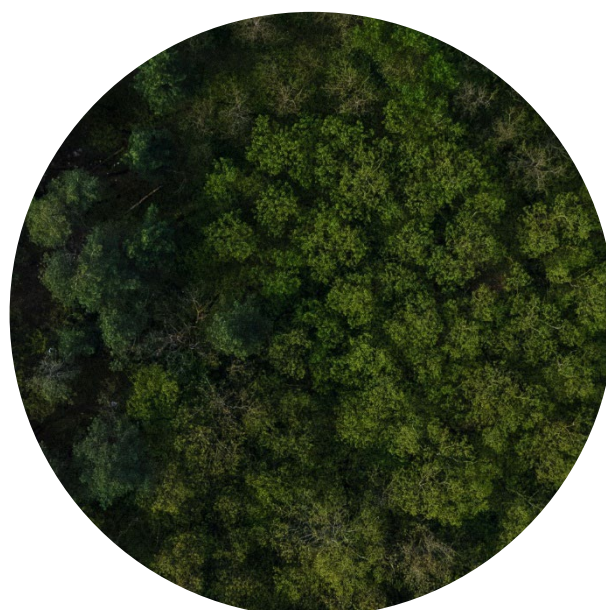


Table 4 – Summary of T8 Energy Vision 2022 GHG emission metrics

Metric	T8 Energy Vision	Purpose of metric
Total GHG emissions	2022 Scope 1 and 2: 1,646 tCO ₂ e Scope 3: 9,656 tCO ₂ e 2021 Scope 1 and 2: 1,092 tCO ₂ e Scope 3: 8,019 tCO ₂ e	Total GHG emissions aggregates the proportional amount of each portfolio company's emissions (proportional to the amount of stock held).
Carbon footprint	2022 86tCO ₂ e/US\$1 million invested 2021 98tCO ₂ e/US\$1 million invested	Carbon footprint measures the emissions intensity of an investment rather than total carbon emissions. It is the calculation of the tonnes of CO ₂ emitted per US\$1m of company sales. It then aggregates them using the percentage weight of the holding within T8 Energy Vision.
Emissions intensity	2022 264tCO ₂ e/US\$1 million of revenue 2021 363tCO ₂ e/US\$1 million of revenue	Weighted average carbon emissions intensity (WACI) measures the emissions intensity of a company rather than total carbon emissions. It is the calculation of the tonnes of CO ₂ emitted per US\$1m of company sales. It then aggregates them using the percentage weight of the holding within T8 Energy Vision.

Source: ISS

Note

This data is based on portfolio weights as at 31 December 2022. Revenue and estimated GHG emissions relate to the 2022 calendar year. For calculation purposes, total GHG emissions have been estimated assuming that holdings on 31 December 2022 were held for all of 2022 (due to factors such as the natural drift of position weights and active portfolio management, portfolio weights will not remain the same). The dynamic nature of portfolio weights means that emissions calculated at two different points in time is likely to vary.

As identified in Table 4, total emissions have increased relative to 2021. This is primarily the result of growth in T8 Energy Vision's assets under management (approximately 20%) from 2021 to 2022.

The emissions intensity (WACI) has reduced in the same time period which appears to be a result of an increase in revenue of many of the companies rather than a significant reduction in the total carbon emissions of the company.

The scope 3 emissions reported for one portfolio company, Wolfspeed (WOLF US), was excluded on the basis that its data was an extreme outlier within the dataset with a high likelihood of being erroneous. This decision was based on a comparison to comparable peers. WOLF's scope 3 emissions of 196,750,886 tonnes of CO₂e was 49 times greater than its semiconductor sector peer Micron Technology (MU US) notwithstanding the latter generating 41 times as much revenue.



These metrics are useful tools as they enable us to track the carbon footprint of the portfolio. There are however some obvious limitations in making like for like comparisons between investment portfolios given the differing sectors that investments focus on and the dynamic nature of portfolio holdings. Table 5 breaks down total portfolio emissions based on a snapshot of Energy Vision portfolio holdings on 31 December 2022.

Table 5 - Summary of T8 Energy Vision 2022 total GHG emissions

tCO ₂ e	Total GHG emissions		Scope 1 and 2 per US\$1m	
	Scope 1 and 2	Scope 3	invested	of revenue
Building block				
Solar	93	670	5	33
Wind	35	3347	2	2
Hydrogen	2	239	0	6
Energy Storage	36	471	2	4
Electric Vehicles	32	1726	2	5
Energy Efficiency	10	150	1	1
Enabling Technology	47	78	2	18
Clean Utilities	396	547	21	110
Biofuel	27	399	1	3
Critical Raw Materials	969	2030	50	82
Total	1,646	9,656	86	264

Source: ISS

Note

This data is based on portfolio weights as at 31 December 2022. Revenue and estimated GHG emissions relate to the 2022 calendar year. For calculation purposes, total GHG emissions have been estimated assuming that holdings on 31 December 2022 were held for all of 2022 (due to factors such as the natural drift of position weights and active portfolio management, portfolio weights will not remain the same). The dynamic nature of portfolio weights means that emissions calculated at two different points in time is likely to vary.

For context we have contrasted the portfolio's WACI to the intensities of two whole of market indices, the conventional energy sector as well a clean energy sector benchmark that we have developed.

The scope 3 emissions reported for one portfolio company, Wolfspeed (WOLF US), was excluded on the basis that its data was an extreme outlier within the dataset with a high likelihood of being erroneous. This decision was based on a comparison to comparable peers. WOLF's scope 3 emissions of 196,750,886 tonnes of CO₂e was 49 times greater than its semiconductor sector peer Micron Technology (MU US) notwithstanding the latter generating 41 times as much revenue.

Benchmarking to whole-of-market indices

MSCI World Index

The MSCI World Index is the industry benchmark for global equities and we use this to benchmark our investment performance. It is an index of over 1,500 large and mid-cap companies listed in 23 developed market countries. The index is weighted 69% to companies listed in the United States and typically consists of 21% information technology; 14% healthcare; 14% financials; and 10% consumer discretionary. Energy is less than 6% of the index. While we estimate that emissions intensive sectors (such as energy, materials, utilities and transportation) are less than 15% of the index, greater than 90% of GHG emissions from listed equities come from these sectors.

As illustrated in Table 5, a significant proportion of the T8 Energy Vision portfolio is invested in energy intensive sectors on the basis that investing in clean energy solutions and decarbonising these sectors is fundamental to reaching the goal of net zero. T8 Energy Vision is therefore more emissions intensive than the MSCI World because a majority of the MSCI World exposures are to very low emissions intensity sectors such as information technology, healthcare and financials.

ASX200 Index

The ASX200 Index is another whole of market index commonly used by Australian investors. Its emissions intensity is higher than the MSCI World on the basis of larger weightings to energy, materials and utilities.

Benchmarking to other clean energy companies

The disparity between the sector weightings of these whole of market indices and T8 Energy Vision, make these indices imperfect benchmarks for the emissions profile of the portfolio. We have therefore developed a Clean Energy Benchmark to represent an index of companies which either directly produce clean energy or are critical to the value chain thereof, comprising 120 equal-weighted clean energy companies. The Clean Energy Benchmark is intended to reflect the average emissions intensity of a universe of diversified clean energy stocks, with identical building block weightings (although different stock weightings) to T8 Energy Vision. The emissions intensity of every building block forms a

benchmark for itself. At some point in the future, this may become a benchmark for future portfolio carbon emission reduction targets.

T8 Energy Vision is more concentrated in terms of position sizes than the Clean Energy Benchmark. At 31 December 2022, the positions in Alcoa (AA US) in critical raw materials, China Longyuan Power (916 HK) in clean utilities and Xinyi Solar (968 HK) in the solar sector were the key contributors to T8 Energy Vision's emissions intensity (scope 1 and 2) exceeding its clean energy benchmark.

Comparing clean energy to conventional energy


Also for comparison purposes we have contrasted T8 Energy Vision's emissions intensity with several elements of the conventional energy sector:

- MSCI World Index (Energy Sector) – the emissions intensity of companies which have been classified as belonging to the energy sector within the MSCI World Index.
- Integrated Oil & Gas (e.g. XOM US) – companies which are vertically integrated from exploration and production of oil and gas to refining, marketing and distribution of petroleum products.
- Upstream Oil & Gas (e.g. EOG US) – companies which specialise in the exploration and production segment of the oil and gas industry.
- Downstream Oil & Gas (e.g. VLO US) – companies which specialise in the refining of oil.
- LNG Producer (e.g. WDS AU) – companies which specialise in the exploration and production of natural gas as well as its conversion into liquefied natural gas allowing it to be transported by ship to customers.
- Conventional Electric Utility (e.g. DUK US) – companies which generate and distribute electricity from a majority of emissions-intensive sources.

Conventional energy is extremely emissions intensive, accounting for roughly 70% of global GHG emissions. Replacing the energy source of typical fossil-fuel based electricity generation and petroleum-based transportation with

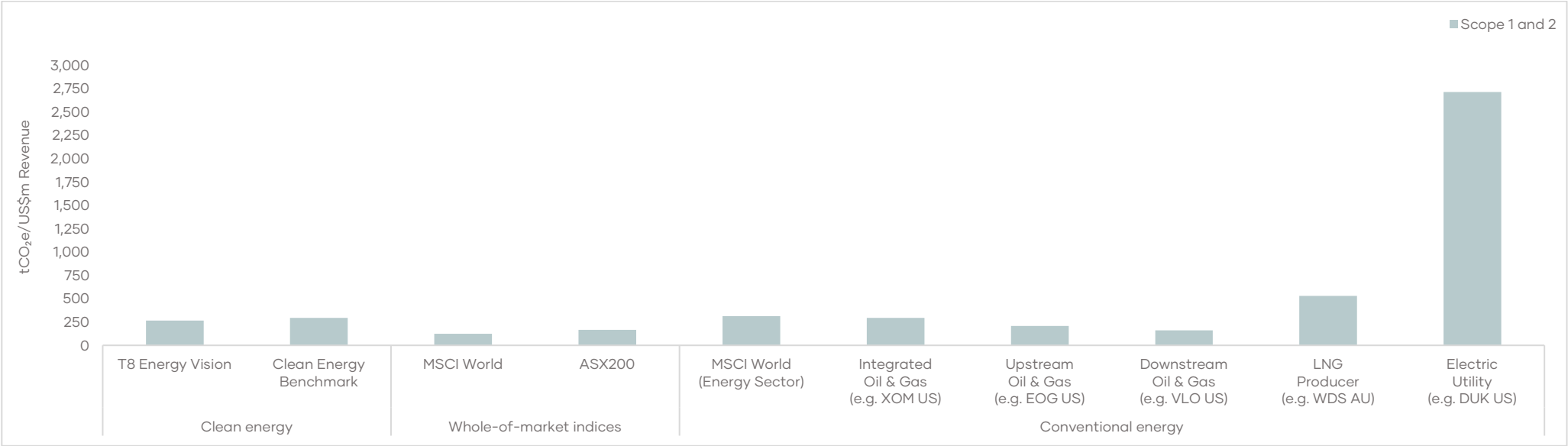
renewables and batteries is also emissions intensive on the basis that a considerable amount of capital stock must be replaced and this is emissions intensive. This however does not take into account the emissions over the whole lifecycle of both competing forms of energy.

The lifecycle emissions from clean energy is materially lower. For example, manufacturing a solar module is emissions intensive but according to the IEA it has an emissions 'payback' of 4-8 months whereby the greenhouse gasses emitted manufacturing the equipment have been surpassed by the emissions of operating the typical fossil-fuel electricity generation infrastructure after this period (once a solar panel has been installed it doesn't generate emissions).



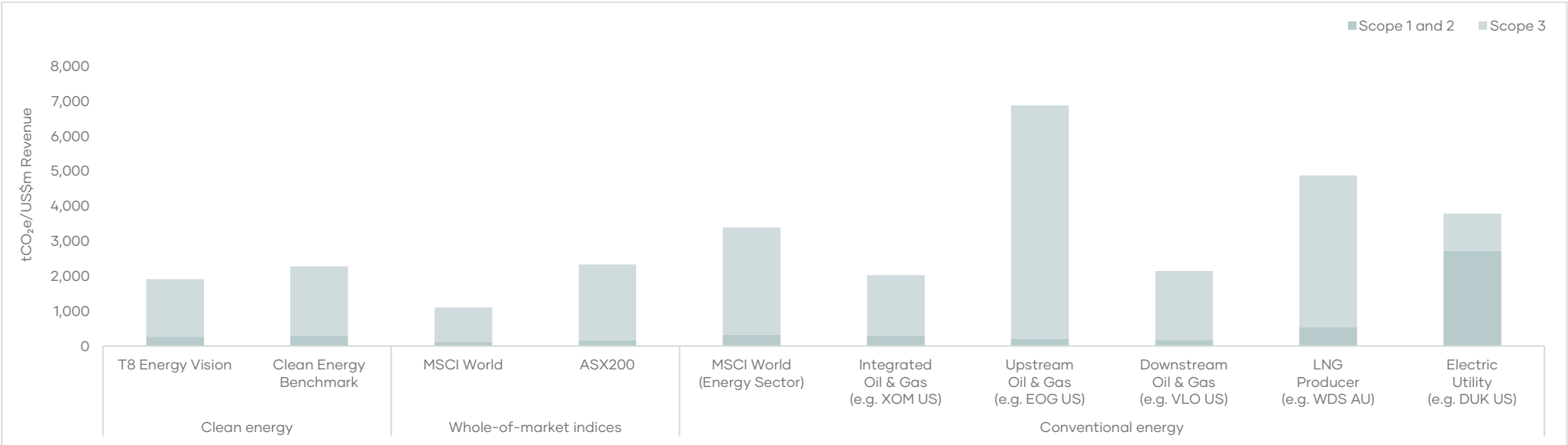
The transition to the net zero economy is a case study in sustainability trade-offs, requiring both the rapid decarbonisation of industries and companies, as well as a significant increase in investment in clean energy solutions needed to enable this decarbonisation

Figure 7 – WACI (scope 1 and 2)



Source: ISS, T8 estimates

Figure 8 – WACI (scope 1, 2 and 3)



Source: ISS, T8 estimates

Note

This data is based on portfolio weights as of 31 December 2022. Revenue and estimated GHG emissions relate to the 2022 calendar year. For calculation purposes, total GHG emissions have been estimated assuming that holdings on 31 December 2022 were held for all of 2022 (due to factors such as the natural drift of position weights and active portfolio management, portfolio weights will not remain the same). The dynamic nature of portfolio weights means that emissions calculated at two different points in time is likely to vary.

The scope 3 emissions reported for one portfolio company, Wolfspeed (WOLF US), was excluded on the basis that its data was an extreme outlier within the dataset with a high likelihood of being erroneous. This decision was based on a comparison to comparable peers. WOLF's scope 3 emissions of 196,750,886 tonnes of CO₂e was 49 times greater than its semiconductor sector peer Micron Technology (MU US) notwithstanding the latter generating 41 times as much revenue.



Case Study: Critical Raw Materials

The manufacture of solar photovoltaic plants, wind farms and electric vehicles requires significantly more critical raw materials such as copper, silver, lithium and aluminium than conventional energy technologies. The IEA has estimated that to achieve net-zero globally by 2050, a six-fold increase in critical raw materials inputs would be required by 2040 (compared to 2020).

T8 Energy Vision has several critical raw materials companies within our investment universe. To meet our 'clean intent' and 'clean enough' criteria, the material must be a critical input in the supply chain of clean energy. Of the top 100 global producers of metals, fewer than 10 pass our initial clean energy intent and clean enough assessments. All coal mining is excluded.



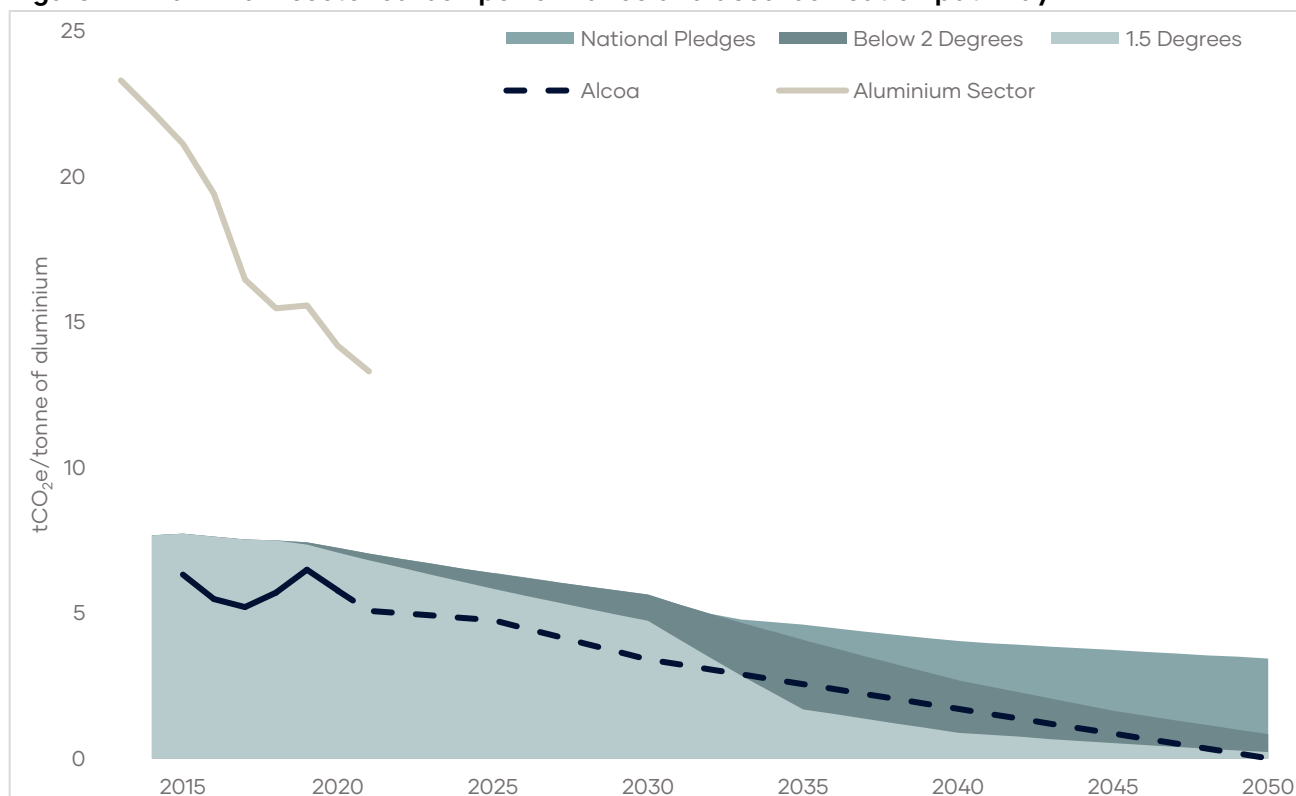
Alcoa (AA US) is an industry leader in terms of emissions intensity on the basis that nearly 80% of its electricity comes from renewable sources. It is also working on commercialising zero-emissions smelting technology, which has the potential to eliminate all direct GHG emissions from this process.

The estimated reduction of Alcoa's emissions intensity over time, also known as a decarbonisation pathway has been mapped by The Transition Pathway Initiative (Figure 9).

One of our portfolio positions at the end of 2022 was Alcoa, a global aluminium company. Aluminium is a substitute for copper in some electrical applications and can be used as a lightweight alternative to steel (which is critical in transportation to maximise energy efficiency). This is especially important in electric vehicles because the range of current battery technology is less than that of the gasoline-powered equivalent.

The energy evolution is therefore likely to require more aluminium volumetrically than any other metal. Aluminium, however, is extremely energy intensive to produce and accounts for roughly 2% of global GHG emissions (the majority of the world's aluminium is produced using emissions intensive sources of electricity).

Figure 9 – Aluminium sector carbon performance and decarbonisation pathway



Source: Transition Pathway Initiative, 2023

Case Study: Clean Utilities

The global electricity sector represents 40% of annual carbon emissions. As well as being responsible for a significant proportion of global emissions, many other industries are dependent on the decarbonisation of electricity to achieve their own net zero goals. Utilities companies represent a significant proportion of this electricity sector and are necessary to provide large-scale renewable energy generation, distribution, and storage.

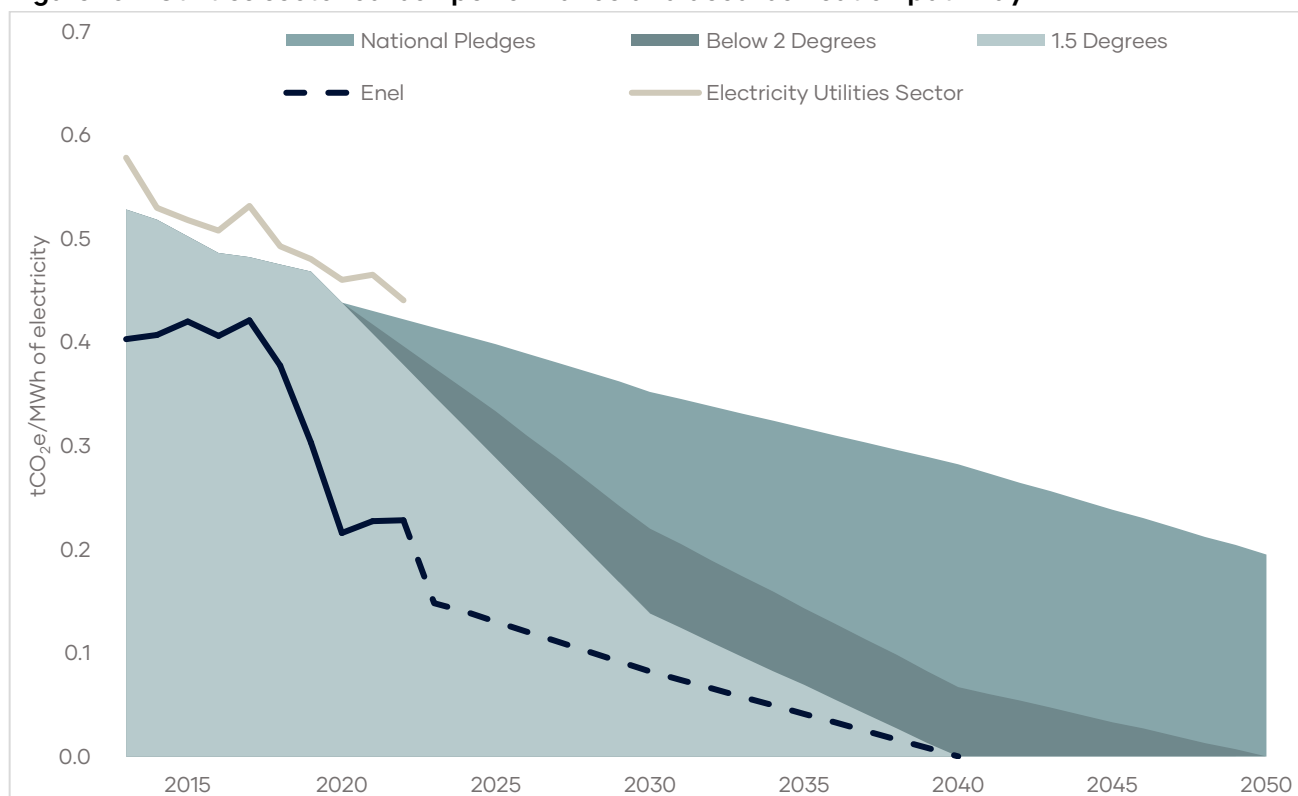
T8 Energy Vision has several clean utility companies within our investment universe. To meet our 'clean enough' criteria, a utilities company must derive more than 50% of revenue from the production/distribution of zero-emission energy (e.g. renewables and nuclear) and have a credible strategy to continue the shift to clean energy in respect of the remainder.



Enel (ENEL IM), an Italian electricity utility was a portfolio position at the end of 2022 and a significant contributor to the portfolio's total emissions. Enel is nevertheless able to make a meaningful contribution to the goal of net zero in two important ways:

- The emissions produced by Enel's activities are comparably lower than conventional utilities therefore meaning significant avoided emissions (further details outlined in the following section, 'Avoided emissions'); and
- Enel has a goal to rapidly decarbonise and be carbon neutral by 2040. The Transition Pathway Initiative has mapped the predicted decarbonisation pathway of Enel, as well as several other clean utility companies within our investment universe (Figure 10).

Figure 10 – Utilities sector carbon performance and decarbonisation pathway



Source: Transition Pathway Initiative, 2023

Avoided emissions

Avoided emissions are emissions saved indirectly by products and services through the substitution of high emissions intensity activities with lower emissions intensity alternatives as the emissions saved outside the value chain of a company's activity, they are not captured under conventional scope one, two or three emissions measures.

While clean energy is an alternative to conventional emissions intensive energy and uses for energy, we believe that drawing comparisons at portfolio level is difficult i.e. comparing the process of manufacturing solar modules to building new natural gas fired power stations is akin to comparing apples with oranges.

Of the portfolio's 10 critical building blocks, we believe that only clean utilities (and to a lesser extent biofuels) are sufficiently comparable to emissions-intensive incumbents.

For every million dollars (US dollars) invested in T8 Energy Vision at 31 December 2022, we have estimated an amount of avoided emissions associated with our exposure to the 'clean utilities' building block (15.8% of the portfolio) relative to an estimate for the emissions which would be associated with equivalent exposure to an average of the global electric utility sector. Our estimate for the emissions avoided is equivalent to:



605 tonnes of carbon dioxide emissions avoided



27,777 trees absorbing carbon dioxide for a year



131 cars taken off the road



61 households powered



233 tonnes of coal not burned

Source: ISS, T8



While counterintuitive, the solutions to sustainably reducing global emissions is actually emissions intensive in the early phases

The approach to estimating avoided emissions

The estimate for the tonnes of CO₂e emissions avoided per million US dollars invested in T8 Energy Vision was calculated by taking the total estimated scope 1 and 2 emissions provided by ISS for T8 Energy Vision's 'Clean Utility' positions as of 31 December 2022 which accounted for 15.8% of net asset value (396 tonnes of CO₂e in total or 21 tonnes per million US dollars invested), compared to an estimate for the emissions which would be associated with an equivalent investment in the global electric utility industry. This considers operational emissions for one year and does not consider lifecycle emissions. The estimate for the emissions which would be associated with an equivalent investment in the global electric utility industry was derived by estimating a WACI for the industry using the average emissions intensity of electricity sourced from Transition Pathway Initiative (transitionpathwayinitiative.org) of 0.45 tonnes CO₂e/MWh and the average cost of electricity sourced from the EIA (eia.gov) of US\$0.135/kWh, which results in an estimated WACI of 3,328 tonnes of CO₂e per million US dollars of revenue. The difference between this and the WACI for T8 Energy Vision's 'Clean Utility' positions of 110, which was sourced from ISS, was used to estimate the tonnes of CO₂e per million US dollars invested in the global electric utility industry (please note that the following numbers have been rounded: $3,328/110=30$; $30 \times 21=625$; $625-21=605$ tonnes of CO₂e emissions avoided). The emissions avoided was then expressed in equivalent terms including: the number of trees absorbing CO₂ for one year based on an estimate of the rate at which mature trees absorb CO₂ during one year (22 kilograms per year) sourced from the United States Department of Agriculture (usda.gov); the number of cars taken off the road based on the estimated emissions for the average car over one year (4.6 tonnes per year) sourced from the United States EPA (epa.gov); the number of households taken off the electricity and natural gas grids based on the emissions intensity of the electricity and natural gas consumed by the average household over one year (9.9 tonnes per year) sourced from the US Environmental Protection Agency (epa.gov); and the volume of coal not burned based on an estimate of the emissions which result from the combustion of the average tonne of energy coal (2.6 tonnes of CO₂) sourced from the EIA (eia.gov).

Three quarters of greenhouse gas emissions come from the energy sector – by allocating capital to those companies that are driving and enabling the adoption of clean energy, we can have a significant impact on reducing greenhouse gas emissions

The UN Sustainable Development Goals

The SDG's as a framework for assessing impact

The United Nations (UN) Sustainable Development Goals (SDGs) are a collection of 17 interlinked objectives that have been identified as critical for the future prosperity of the planet. They cover three dimensions of sustainable development: economic growth, social inclusion, and environmental protection.

Although the UN SDG's were not developed for investors, we find that they nevertheless provide a useful framework for assessing the positive influence of individual companies activities.

The most relevant SDGs to T8 Energy Vision

Table 6 – Reconciling investment themes to UN sustainable development goals

	Investment Themes		
	Renewable energy	Energy storage	Electrification
Building blocks	<ul style="list-style-type: none"> Clean Utilities Solar Wind Biofuel Enabling Technology Critical Raw Materials 	<ul style="list-style-type: none"> Hydrogen Energy Storage Enabling Technology Critical Raw Materials 	<ul style="list-style-type: none"> Electric Vehicles Energy Efficiency Enabling Technology Critical Raw Materials
	Impacts on UN Sustainable Development Goals		
Investing in solutions	<ul style="list-style-type: none"> SDG 7: Affordable and Clean Energy SDG 9: Industry, Innovation and Infrastructure SDG 11: Sustainable Cities and Communities SDG 12: Responsible Consumption and Production 		
ESG stewardship	<ul style="list-style-type: none"> SDG 5: Gender Equality SDG 13: Climate Action SDG 16: Peace, Justice and Strong Institutions 		

Source: T8

More detail on the SDGs which are most relevant to T8 Energy Vision



SDG 5 – Gender Equality

Ending all discrimination against women and girls is not only a basic human right, it's crucial for sustainable future; it's proven that empowering women and girls helps economic growth and development.

UNDP has made gender equality central to its work and we've seen remarkable progress in

the past 20 years. There are more girls in school now compared to 15 years ago, and most regions have reached gender parity in primary education.

But although there are more women than ever in the labour market, there are still large inequalities in some regions, with women systematically denied the same work rights as men. Sexual violence and exploitation, the

unequal division of unpaid care and domestic work, and discrimination in public office all remain huge barriers. Climate change and disasters continue to have a disproportionate effect on women and children, as do conflict and migration.

It is vital to give women equal rights, land and property, sexual and reproductive health, and to technology and the internet. Today there are more women in public office than ever before, but encouraging more women leaders will help achieve greater gender equality.



SDG 7 – Affordable and Clean Energy

Between 2000 and 2018, the number of people with electricity increased from 78 to 90 percent, and the numbers without electricity dipped to 789 million.

Yet as the population continues to grow, so will the demand for cheap energy, and an economy reliant on fossil fuels is creating drastic changes to our climate.

Investing in solar, wind and thermal power, improving energy productivity, and ensuring energy for all is vital if we are to achieve SDG 7 by 2030.

Expanding infrastructure and upgrading technology to provide clean and more efficient energy in all countries will encourage growth and help the environment.



SDG 9 – Industry, Innovation and Infrastructure

Investment in infrastructure and innovation are crucial drivers of economic growth and development. With over half the world population now living in cities, mass transport and renewable energy are becoming ever more important, as are the growth of new industries and information and communication technologies.

Technological progress is also key to finding lasting solutions to both economic and environmental challenges, such as providing new jobs and promoting energy efficiency. Promoting sustainable industries, and investing in scientific research and innovation, are all important ways to facilitate sustainable development.

More than 4 billion people still do not have access to the Internet, and 90 percent are from the developing world. Bridging this digital divide is crucial to ensure equal access to information and knowledge, as well as foster innovation and entrepreneurship.



SDG 11 – Sustainable Cities and Communities

More than half of us live in cities. By 2050, two-thirds of all humanity—6.5 billion people—will be urban. Sustainable development cannot be achieved without significantly transforming the way we build and manage our urban spaces.

The rapid growth of cities—a result of rising populations and increasing migration—has led to a boom in mega-cities, especially in the developing world, and slums are becoming a more significant feature of urban life.

Making cities sustainable means creating career and business opportunities, safe and affordable housing, and building resilient societies and economies. It involves investment in public transport, creating green public spaces, and improving urban planning and management in participatory and inclusive ways.



SDG 12 – Responsible Consumption and Production

Achieving economic growth and sustainable development requires that we urgently reduce our ecological footprint by changing the way we produce and consume goods and resources. Agriculture is the biggest user of water worldwide, and irrigation now claims close to 70 percent of all freshwater for human use.

The efficient management of our shared natural resources, and the way we dispose of toxic waste and pollutants, are important targets to achieve this goal. Encouraging industries, businesses and consumers to recycle and reduce waste is equally important, as is supporting developing countries to move towards more sustainable patterns of consumption by 2030.

A large share of the world population is still consuming far too little to meet even their basic needs. Halving the per capita of global food waste at the retailer and consumer levels

is also important for creating more efficient production and supply chains. This can help with food security, and shift us towards a more resource efficient economy.



SDG 13 – Climate Action

There is no country that is not experiencing the drastic effects of climate change. Greenhouse gas emissions are more than 50 percent higher than in 1990. Global warming is causing long-lasting changes to our climate system, which threatens irreversible consequences if we do not act.

The annual average economic losses from climate-related disasters are in the hundreds of billions of dollars. This is not to mention the human impact of geo-physical disasters, which are 91 percent climate-related, and which between 1998 and 2017 killed 1.3 million people, and left 4.4 billion injured. The goal aims to mobilize US\$100 billion annually by 2020 to address the needs of developing countries to both adapt to climate change and invest in low-carbon development.

Supporting vulnerable regions will directly contribute not only to Goal 13 but also to the other SDGs. These actions must also go hand in hand with efforts to integrate disaster risk measures, sustainable natural resource management, and human security into national development strategies. It is still possible, with strong political will, increased investment, and using existing technology, to limit the increase in global mean temperature to two degrees Celsius above pre-industrial levels, aiming at 1.5°C, but this requires urgent and ambitious collective action.



SDG 16 – Peace, Justice and Strong Institutions

We cannot hope for sustainable development without peace, stability, human rights and effective governance, based on the rule of law. Yet our world is increasingly divided. Some regions enjoy peace, security and prosperity, while others fall into seemingly endless cycles of conflict and violence. This is not inevitable and must be addressed.

Armed violence and insecurity have a destructive impact on a country's development, affecting economic growth, and often resulting in grievances that last for generations. Sexual violence, crime,

exploitation and torture are also prevalent where there is conflict, or no rule of law, and countries must take measures to protect those who are most at risk

The SDGs aim to significantly reduce all forms of violence, and work with governments and communities to end conflict and insecurity. Promoting the rule of law and human rights are key to this process, as is reducing the flow of illicit arms and strengthening the participation of developing countries in the institutions of global governance.

Source: The United Nations

T8's assessment of the SDGs

During 2022, we developed and implemented a pilot program around measuring alignment of company revenues with the goals and sub-goals of the UN's Sustainable Development Goals as a way of measuring and tracking the positive influence achieved because of our investments.

During 2023, we have taken our commitment to generating a positive contribution a step further and have developed a methodology that will incorporate the contribution that an individual company makes toward the SDGs when determining individual position sizes. A company assessed as having an overall positive contribution to the SDGs will slightly skew the investment case (for both investment and position size). In practice this means that when two companies have similar valuation upside and a similar risk profile, but one company has been assessed as making a positive contribution to the SDGs and the other not, the company making the contribution would be selected because of the SDG impact on valuation.

Related to T8 Energy Vision's focus on investing in clean energy (companies which directly produce clean energy or are critical to the value chain thereof), T8 has elected to focus on assessing:

- SDG 7 (Affordable and Clean Energy);
- SDG 9 (Industry, Innovation and Infrastructure – specifically the level of investment in relevant research and development);
- SDG 11 (Sustainable Cities and Communities – specifically sub-goals 11.2 in relation to transportation; 11.6 in relation to air quality; and 11.B in relation to resource efficiency); and
- SDG 12 (Responsible Consumption and Production – specifically waste reduction targets and programmes).

In addition, reflecting T8 Energy Vision's company engagement priorities, our company ESG stewardship program focuses on:

- SDG 5 (Gender Equality);
- SDG 13 (Climate Action); and
- SDG 16 (Peace, Justice and Strong Institutions – specifically sub-goal 16.6

related to effective, accountable and transparent institutions and 16.7 related to responsive, inclusive, participatory and representative decision-making – shareholder alignment).



We have developed an initial set of proprietary quantitative and qualitative metrics which we have used to score each company's contribution to these identified SDGs on a three-point scale - high, medium, or low (there are clear metrics that define each rating – refer Appendix 7).

For example:

Table 7 – Example SDG assessment for Algonquin Power & Utilities

Sustainable development goal	Score
SDG 5 – Gender equality	● ● ●
SDG 7 – Affordable and clean energy	● ● ●
SDG 9 – Industry, innovation, and infrastructure	● ○ ○
SDG 11 – Sustainable cities and communities	● ○ ○
SDG 12 – Responsible consumption and production	● ● ○
SDG 13 – Climate action	● ○ ○
SDG 16 – Peace, justice and strong institutions	● ● ●

Source: T8

The SDG assessment of portfolio companies held at end of 2022 is detailed in Appendix 7.

While we believe that this process assists us to understand a Company's wider impact beyond the profit and investment returns it generates, there are some obvious limitations in this approach. For example:

- The initial indicators we have selected only assess certain aspects of a company's contribution to a SDG;
- We have not assessed company contribution to SDG's more broadly (we have focussed only on this limited group of SDGs); and
- It does not take account of the negative influences of a company's activity.

Notwithstanding these limitations, we consider this work to be a starting point upon which we propose to build in the future.

The ESG footprint of our own operations

Modern slavery

T8 recognises that modern slavery is an ongoing issue worldwide. Modern slavery includes trafficking in persons, slavery, servitude, forced marriage, forced labour, debt bondage, child labour and deceptive recruiting for labour or services. Modern slavery practices are often obscured by the complexity of global supply chains.

We recognise that while certain sectors or geographical locations may give rise to a higher risk of modern slavery, modern slavery can occur in any location or sector. A thorough understanding of our supply chain is pivotal for the identification and quantification of modern slavery risk in our business.

T8 does not currently trigger reporting requirements under Australia's Modern Slavery Act, however, in 2023 we reviewed and updated the modern slavery risks associated with our own operation supply chain and associated risk management processes.

Modern slavery in our operations

Given the relatively small number of employees and the nature of our business, we believe there is a lower likelihood that modern slavery or human rights violations are present in our operations and supply chain. We have nevertheless conducted staff training and implemented appropriate organisational policies to ensure that any modern slavery risks are both reported and appropriately investigated.

Office supplies

We procure standard office supplies from Officeworks (subsidiary of Wesfarmers). Both companies have published Modern Slavery statements with action plans in place.

Cleaning services

We have one office in Melbourne that we lease. We believe that the staff employed to perform office cleaning represent the highest risk of modern slavery in our supply chain. We have raised this concern with our landlord who has advised us that the cleaning contract to the office has been outsourced a specialist third party cleaning contractor, Spree Enterprise (Spree).

Spree has been operating for over 30 years. Spree has confirmed that all employees and contractors are employed in accordance with the relevant laws and regulations. While we do not have any immediate concerns regarding the existence of modern slavery within this organisation or supply chain, we will continue to be alert to these risks.

Service providers

T8 has outsourced service providers engaged to provide the following:

- Asset custody
- Fund administration
- Market data
- Information technology
- Legal services
- External audit

These services are, for the most part, procured from within Australia (a lower-risk regulated country) and are performed by professionals with appropriate skills and experience.

T8 also has the following controls within its own policies and procedures:

- Service provider modern slavery statements are obtained and reviewed prior to engagement.
- A full risk assessment of the business type and country of operation is conducted to identify the modern slavery risk.
- New service provider contracts are reported to the Oversight Committee and reviewed in relation to the risk of modern slavery.

Supplier code of conduct

We are conscious that modern slavery exists even in low-risk geographies, sectors, and industries. On this basis, we are in the process of drafting a Supplier Code of Conduct which sets out our expectations in relation to labour rights, modern slavery, and other business integrity issues. In the future, we propose to provide a copy of this Code of Conduct to all suppliers at the point of our engagement.

Modern slavery in our investment portfolio

We recognise that our greatest risk of exposure to modern slavery is through the investments that we hold in our portfolios. Our key modern slavery risks include:

- High-risk sectors we invest in include materials and mining and technology manufacturing (in particular the solar industry);
- Vulnerable workforces include migrant, low skilled and contract/outsourced workers; and
- High-risk geographies include conflict-affected zones, countries with high corruption or a weak rule of law, lack of transparency and/or a history of human rights violations.

To understand the modern slavery exposure from portfolio investments, T8 has adopted an overarching Responsible Investment Policy which is implemented by the investment team. A copy of the Responsible Investment policy can be found on our website. Workforce rights and equality is one of T8's three ESG priority areas. As part of our ESG due diligence/assessment process, we consider modern slavery risks with the goal of ultimately forming a view as to the quality of each company's modern slavery risk management.

As part of this due diligence process, we:

- review any modern slavery policies, statements, supply chain mapping, risk assessments and other general disclosures that have been released by the company; and
- consider the quality of the company's operational and supply chain modern slavery controls to detect (including the use of independent third-party audits) and remedy modern slavery risks.

We also consider the individual circumstances of each company, such as:

- workforce composition (e.g. the number of contractors versus employees, and the use of labour hire agencies);
- the company's geographic location;
- history of news flow/controversies associated with modern slavery risks and issues;

- local laws that apply to the region; and
- industry risks.

We prioritise engagement (and ongoing monitoring) with the individual companies based on exposure to high-risk geographies and industries. During these engagements we seek further insights into company risks and controls and advocate for improved controls and disclosures.

Taskforce on Climate related Financial Disclosures

Successful transition to net zero will require a vast capital reallocation and will likely generate material risks and opportunities for companies affected by this transition. Consequently, many investor portfolios face considerable risks. The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information.

Traditionally, climate related disclosures have meant businesses reporting on their impact on the environment and society. The TCFD recommendations pivot this to understanding the impacts that climate change may have on the business, and to what extent those impacts are understood and identified within the decision-making process of an organisation.

The TCFD recommendations are designed to encourage consistent and comparable reporting on climate related risks and opportunities by companies to their stakeholders. The TCFD recommendations are structured around the content pillars of governance, strategy, risk assessment and metrics.

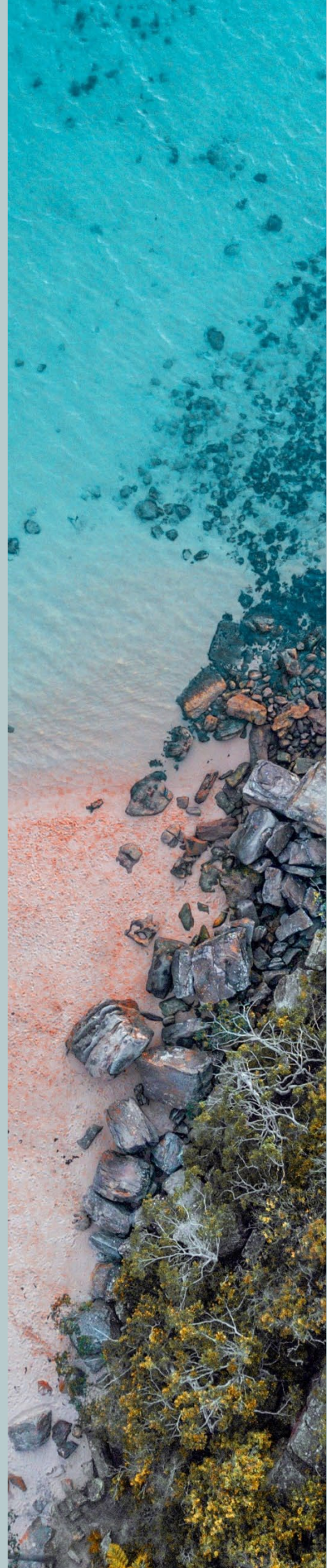
T8 strongly supports adoption of TCFD reporting and methodology standard for climate relevant metrics (such as emissions reporting) as this helps to drive consistency across the industry.

Our key responses to the TCFD recommendations are included in Appendix 8.

T8 supports the adoption of TCFD standards and reporting for climate relevant metrics (such as emissions reporting) as this helps to drive consistency across the industry



Appendices



Appendix 1 – Summary of ESG assessments completed in 2022

Company Name	Ticker	Building Block	ESG Risk	Key Issues/ESG Factors
Canadian Solar	CSIQ US	Solar	High	<ul style="list-style-type: none"> • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Water management • Auditor objectivity • Workforce rights and equality
Freeport-McMoRan	FCX US	Critical Raw Materials	High	<ul style="list-style-type: none"> • Non-hazardous waste management • Management of hazardous materials • Rehabilitation and restoration practices • Community management including cultural heritage
MP Materials	MP US	Critical Raw Materials	Medium	<ul style="list-style-type: none"> • Non-hazardous waste management • Management of hazardous materials • Water management • Rehabilitation and restoration practices • Community management including cultural heritage • Occupational health and safety
Nel	NEL NO	Hydrogen	Medium	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Occupational health and safety
QuantumScape	QS US	Energy Storage	Low	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Organisational governance and ethics (shareholder alignment)
Enphase Energy	ENPH US	Solar	Medium	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Organisational governance and ethics (shareholder alignment) • Workforce rights and equality
NIO	NIO US	Electric Vehicles	High	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Workforce rights and equality • Organisational governance and ethics (shareholder alignment) • Auditor objectivity
EnerSys	ENS US	Energy Storage	Medium	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship

Company Name	Ticker	Building Block	ESG Risk	Key Issues/ESG Factors
				<ul style="list-style-type: none"> • Whole of supply chain sustainability (social) • Organisational governance and ethics (shareholder alignment) • Auditor objectivity • Workforce rights and equality
TPI Composites	TPIC US	Wind	Medium	<ul style="list-style-type: none"> • Non-hazardous waste management • Whole of supply chain environmental stewardship • Energy and emissions intensity (net zero) • Occupational health and safety • Organisational governance and ethics (shareholder alignment)
Great Wall Motor Company	2333 HK	Electric Vehicles	High	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Workforce rights and equality • Organisational governance and ethics
TransAlta Renewables	RNW CN	Clean Utilities	Medium	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Community management including cultural heritage
Stem	STEM US	Energy Efficiency	Low	<ul style="list-style-type: none"> • Environmental management processes and oversight • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Organisational governance and ethics • Workforce rights and equality
Algonquin Power & Utilities	AQN US	Clean Utilities	Medium	<ul style="list-style-type: none"> • Community management including cultural heritage • Energy and emissions intensity (net zero) • Organisational governance and ethics
Alphamin Resources	AFM CN	Critical Raw Materials	High	<ul style="list-style-type: none"> • Whole of supply chain sustainability (social) • Whole of supply chain environmental stewardship • Physical security of assets and workforce
Enel	ENEL IM	Clean Utilities	Medium	<ul style="list-style-type: none"> • Whole of supply chain sustainability (social) • Whole of supply chain environmental stewardship • Management of ecologically sensitive areas and biodiversity • Community management including cultural heritage • Occupational health and safety

Company Name	Ticker	Building Block	ESG Risk	Key Issues/ESG Factors
SQM	SQM US	Critical Raw Materials	High	<ul style="list-style-type: none"> • Water management • Management of ecologically sensitive areas and biodiversity • Community management including cultural heritage
NextEra Energy	NEE US	Clean Utilities	High	<ul style="list-style-type: none"> • Management of ecologically sensitive areas and biodiversity • Political transparency • Energy and emissions intensity (net zero)
Canoo	GOEV US	Electric Vehicles	Low	<ul style="list-style-type: none"> • Environmental management processes and oversight • Whole of supply chain sustainability (social) • Whole of supply chain environmental stewardship • Occupational health and safety • Organisation governance and ethics • Workforce rights and equality
Sunrun	RUN US	Solar	Medium	<ul style="list-style-type: none"> • Whole of supply chain sustainability (social) • Whole of supply chain environmental stewardship • Occupational health and safety • Organisation governance and ethics
Nidec	6594 JP	Electric Vehicles	Medium	<ul style="list-style-type: none"> • Non-hazardous waste management • Whole of supply chain environmental stewardship • Energy and emissions intensity (net zero) • Occupational health and safety
Array Technologies	ARRY US	Solar	Low	<ul style="list-style-type: none"> • Energy and emissions intensity (net zero) • Organisation governance and ethics • Workforce rights and equality
Vestas Wind Systems	VWS DC	Wind	Medium	<ul style="list-style-type: none"> • Non-hazardous waste management • Whole of supply chain environmental stewardship • Energy and emissions intensity (net zero) • Occupational health and safety • Organisational governance and ethics (shareholder alignment) • Auditor objectivity • Workforce rights and equality
Plug Power	PLUG US	Hydrogen	Medium	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Organisational governance and ethics (shareholder alignment) • Auditor objectivity • Workforce rights and equality

Company Name	Ticker	Building Block	ESG Risk	Key Issues/ESG Factors
Shoals Technologies	SHLS US	Solar	Low	<ul style="list-style-type: none"> • Environmental management processes and oversight • Organisation governance and ethics • Workforce rights and equality
Darling Ingredients	DAR US	Biofuel	Medium	<ul style="list-style-type: none"> • Occupational health and safety • Management of hazardous material • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Welfare of domesticated animals • Auditor objectivity
Électricité de France	EDF FR	Clean Utilities	High	<ul style="list-style-type: none"> • Management of hazardous material • Community management including cultural heritage • Management of ecologically sensitive areas and biodiversity
Xinyi Solar	968 HK	Solar	High	<ul style="list-style-type: none"> • Organisation governance and ethics (including shareholder alignment and diversity/gender) • Whole of supply chain sustainability (social) stewardship • Environmental management processes and oversight • Energy and emissions intensity (net zero)
Pan American Silver	PAAS US	Critical Raw Materials	Medium	<ul style="list-style-type: none"> • Non-hazardous waste management • Management of hazardous materials • Rehabilitation and restoration practices • Community management including cultural heritage
Tesla	TSLA US	Electric Vehicles	High	<ul style="list-style-type: none"> • Occupational health and safety • Management of industrial relations • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) stewardship • Organisational governance and ethics (shareholder alignment)
Blink Charging	BLNK US	Electric Vehicles	Low	<ul style="list-style-type: none"> • Environmental management processes and oversight • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) stewardship • Energy and emissions intensity • Organisational governance and ethics • Auditor objectivity • Workforce rights and equality
Siemens Gamesa	SGRE SM	Wind	Medium	<ul style="list-style-type: none"> • Occupational health and safety • Whole of supply chain environmental stewardship • Non-hazardous waste management

Source: T8

Appendix 2 – Special focus ESG watchlists

High priority monitoring

Company	Ticker	Building Block	Date Added	Date Removed	Key ESG Factors
China Longyuan Power	916 HK	Clean Utilities	2021		<ul style="list-style-type: none"> • Energy and emissions intensity (net zero) • Management of ecologically sensitive areas and biodiversity • Whole of supply chain sustainability (social) stewardship • Community management including cultural heritage • Workforce rights and equality • Organisation governance and ethics
Albemarle	ALB US	Critical Raw Materials	2021		<ul style="list-style-type: none"> • Water management • Management of ecologically sensitive areas and biodiversity • Community management including cultural heritage
Tesla	TSLA US	Electric Vehicles	2021		<ul style="list-style-type: none"> • Occupational health and safety • Management of industrial relations • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) stewardship • Organisational governance and ethics (shareholder alignment)
Goldwind Science & Technology	2208 HK	Wind	2021	2023	<ul style="list-style-type: none"> • Workforce rights and equality • Energy and emissions intensity • Management of hazardous materials
Pan American Silver	PAAS US	Critical Raw Materials	2021	2023	<ul style="list-style-type: none"> • Non-hazardous waste management • Management of hazardous materials • Rehabilitation and restoration practices • Community management including cultural heritage
Neste	NESTE FH	Biofuels	2023		<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) stewardship;
Great Wall Motor Company	2333 HK	Electric Vehicles	2023		<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability (social) • Energy and emissions intensity (net zero) • Workforce rights and equality • Organisational governance and ethics
Niu Technologies	NIU U	Electric Vehicles	2023		<ul style="list-style-type: none"> • Environmental management processes and oversight • Organisation governance and ethics (including diversity/gender) • Workforce rights and equality • Whole of supply chain sustainability (social) stewardship

Company	Ticker	Building Block	Date Added	Date Removed	Key ESG Factors
NextEra Energy	NEE US	Clean Utilities	2023		<ul style="list-style-type: none"> • Management of ecologically sensitive areas and biodiversity • Political transparency • Energy and emissions intensity (net zero)
Bloom Energy	BE US	Energy Storage	2023		<ul style="list-style-type: none"> • Climate risk management • Energy and emissions intensity (net zero) • Workforce rights and equality • Organisational governance and ethics

Source: T8

Engage to impact

Company	Ticker	Building Block	ESG Factors	Issue	Objective	Timeframe
Freeport-McMoRan	FCX US	Critical Raw Materials	Non- hazardous waste management	Suboptimal tailings disposal practices	Additional disclosure which allows the investment community to better understand the enormous amount of work which Freeport has performed over decades examining alternative tailings storage/disposal solutions in Indonesia and why the present approach remains technically, economically and environmentally superior (notwithstanding some factors which may have improved its prospects since operations began, e.g. advancing technology for alternative practices such as dry stacking; increased process efficiency; shift from predominantly open cut to predominantly underground mining; depleted mining areas; increased government ownership; etc.)	3-5 years
			Rehabilitation and restoration practices	Concerns regarding inadequate rehabilitation planning and provisioning	Additional disclosure detailing the full extent of Freeport's global, company-wide post-closure rehabilitation and restoration plans (possibly including artist's impressions) to demonstrate and promote how all disturbed areas will be fully rehabilitated and restored to the highest standards following the end of mining and processing. Also, additional detail demonstrating why the financial provisioning to fund these plans remains appropriate. Including circumstances where a particular asset could be sold by Freeport prior to the completion of rehabilitation	3 years
Xinyi Solar	968 HK	Solar	Whole of supply chain stewardship	Concerns regarding human rights issues in solar panel supply chain ¹	Commitment to increase disclosure in relation to the efforts the company has gone to in order to identify and assess the risks of forced labour in its supply chains, including disclosing suppliers and where appropriate the location of the suppliers' facilities, including any identified as high risk	2-3 years

Source: T8

¹Xinyi Solar has an operating segment which develops solar energy projects (13.5% of revenue in the 2022 calendar year). The solar equipment for these projects is sourced from various Chinese manufacturers. While the company has not publicly disclosed the suppliers of this equipment, following direct engagement with the company we understand that it procures equipment from the whole of the Chinese solar industry. Numerous Chinese solar industry participants have production facilities (especially polysilicon) in Xinjiang (an autonomous territory in northwest China). Xinjiang is associated with allegations that since 2017 the Chinese government has committed crimes against humanity in the region, including arbitrary detention, enforced disappearances, and cultural and religious persecution, and has subjected Uyghurs and other Turkic Muslim communities to forced labour inside and outside of the territory. It is therefore conceivable that some of these suppliers are linked or have supply chains linked to Xinjiang (and therefore an elevated risk of exposure to forced labour). The Chinese government officially denies the use forced labour in the province. We acknowledge that forced labour is a black and white issue. However, Xinyi Solar's situation has a range of elements (further complicated by language and cultural nuance) which make it impossible to conclude on a binary basis at this point in time. For these reasons, Xinyi Solar is subjected to our highest intensity monitoring.

Appendix 3 – Comparison of ESG ratings (as of 31 December 2022)

Company	Ticker	Building Block	T8 ESG Rating	Sustainalytics			MSCI	Bloomberg			
			Overall (L-M-H)	Overall (100-0)	Exposure ¹	Management ²	Overall (CCC-AAA)	E (0-10)	S (0-10)	G (0-10)	Overall (0-10)
Algonquin Power & Utilities	AQN US	Clean Utilities	Medium	21 Medium	Medium	Strong	AAA Leader	2.4	5.5	8.1	4.7
Enel	ENEL IM	Clean Utilities	Medium	22 Medium	High	Strong	AAA Leader	6.7	5.3	7	6.4
Orsted	ORSTED DC	Clean Utilities	Medium	17 Low	High	Strong	AAA Leader	5.2	3.9	6.8	5.2
China Longyuan Power	916 HK	Clean Utilities	High	38 High	Medium	Average	BBB Average	4.4	3.3	5.2	4.3
Neoen	NEOEN FP	Clean Utilities	Medium (Preliminary)	23 Medium	Medium	Average	NR	0.4	2.6	6.3	2.2
Pan American Silver	PAAS US	Critical Raw Materials	Medium	28 Medium	High	Strong	BBB Average	6.5	6	8.3	6.8
MP Materials	MP US	Critical Raw Materials	Medium	54 Severe	High	Weak	NR	0	0.8	6	1.5
Freeport-McMoRan	FCX US	Critical Raw Materials	High	32 High	High	Strong	BBB Average	6.1	7.7	8.6	7.2
Alcoa	AA US	Critical Raw Materials	Medium	26 Medium	High	Strong	NR	4.9	2.7	8	4.8
Neste	NESTE FH	Biofuel	High	20 Low	Medium	Strong	AAA Leader	5.9	4.8	7.4	6
Cleantech	CLSK US	Energy Efficiency	High	27 Medium	Medium	Average	NR	NR	NR	4.2	NR
Renesas Electronics	6723 JP	Enabling Technology	Medium (Preliminary)	19 Low	Medium	Strong	AA Leader	4.4	4.4	6.6	5
Micron Technology	MU US	Enabling Technology	Medium	19 Low	Medium	Strong	A Average	4.7	5.8	8	5.9
ASML	ASML NA	Enabling Technology	Low	10 Negligible	Low	Strong	AAA Leader	6.9	6.8	7.7	7.1
Wolfson	WOLF US	Enabling Technology	Medium (Preliminary)	29 Medium	High	Strong	AA Leader	3.9	6.6	7.2	5.6

Company	Ticker	Building Block	T8 ESG Rating	Sustainalytics			MSCI	Bloomberg			
			Overall (L-M-H)	Overall (100-0)	Exposure ¹	Management ²	Overall (CCC-AAA)	E (0-10)	S (0-10)	G (0-10)	Overall (0-10)
Qualcomm	QCOM US	Enabling Technology	Medium	16 Low	Medium	Strong	A Average	7	8	7.9	7.6
ITM Power	ITM LN	Hydrogen	Medium	26 Medium	Medium	Average	NR	NR	NR	6.5	NR
Nel	NEL NO	Hydrogen	Medium	30 Medium	Medium	Average	NR	NR	NR	6.6	NR
Stem	STEM US	Energy Efficiency	Low	NR	NR	NR	NR	NR	NR	7.1	NR
EnerSys	ENS US	Energy Storage	Medium	24 Medium	Medium	Average	NR	NR	NR	6.4	NR
QuantumScape	QS US	Energy Storage	Low	28 Medium	Medium	Average	NR	0.3	2.8	5.2	2.3
Wartsila	WRTIV FH	Energy Storage	Medium	21 Medium	Medium	Strong	AAA Leader	4.6	7.7	7.5	6.5
Plug Power	PLUG US	Hydrogen	Medium	31 High	Medium	Average	NR	NR	NR	5.2	NR
TPI Composites	TPIC US	Wind	Medium	19 Low	Medium	Strong	NR	2.3	4.9	6.6	4.2
Nordex	NDX1 GY	Wind	Medium (Preliminary)	17 Low	Medium	Strong	NR	3	2.8	5.6	3.7
Xinyi Solar	968 HK	Solar	High	23 Medium	Low	Average	BBB Average	4.9	4.1	4.2	4.5
SolarEdge Technologies	SEDG US	Solar	Medium	16 Low	Medium	Strong	BBB Average	6	5.9	6.2	6
Sunrun	RUN US	Solar	Medium	23 Medium	Medium	Average	NR	NR	NR	7	NR
First Solar	FSLR US	Solar	Medium	19 Low	Medium	Strong	AA Leader	6.2	5.3	6.9	6.1
Shoals Technologies	SHLS US	Solar	Low	25 Medium	Medium	Average	NR	NR	NR	6.2	NR
Array Technologies	ARRY US	Solar	Low	16 Low	Low	Strong	NR	3.7	0.9	5.8	3.2

Company	Ticker	Building Block	T8 ESG Rating	Sustainalytics			MSCI	Bloomberg			
			Overall (L-M-H)	Overall (100-0)	Exposure ¹	Management ²	Overall (CCC-AAA)	E (0-10)	S (0-10)	G (0-10)	Overall (0-10)
Enphase Energy	ENPH US	Solar	Medium	22 Medium	Medium	Average	AA Leader	4.1	0.7	5.8	3.3
Eos Energy	EOSE US	Energy Storage	Low (Preliminary)	25 Medium	Medium	Average	NR	NR	NR	5.1	NR
General Motors	GM US	Electric Vehicles	Medium	29 Medium	Medium	Average	BBB Average	4.2	6.7	8.4	5.9
Nidec	6594 JP	Electric Vehicles	Medium	26 Medium	Medium	Average	A Average	2	2.1	6.5	3.1
Great Wall Motor Company	2333 HK	Electric Vehicles	High	29 Medium	Medium	Average	A Average	2.3	3.1	5.7	3.3
Canoo	GOEV US	Electric Vehicles	Low	24 Medium	Medium	Average	NR	NR	NR	NR	NR
Tesla	TSLA US	Electric Vehicles	High	25 Medium	Medium	Average	A Average	5.2	5.6	6.3	5.6
Niu Technologies	NIU US	Electric Vehicles	High	NR	NR	NR	NR	0.4	2.3	2.6	1.4
ChargePoint	CHPT US	Electric Vehicles	Medium	18 Low	Low	Average	NR	0.7	1.7	5.3	2.1

Source: T8

Notes

Third party ESG rating/scores were sourced from Bloomberg data feed, apart from Sustainalytics which were sourced their website (<https://www.sustainalytics.com>) in November 2023. Note that rating and scoring systems are not directly comparable since they utilise different methodologies and different criteria to calculate scores.

For further detail on Sustainalytics' methodology refer: <https://www.sustainalytics.com/esg-data>

For further detail on MSCI's methodology refer: <https://www.msci.com/our-solutions/esg-investing/esg-ratings>

For further detail on Bloomberg's ESG Scores refer: https://www.bloomberg.com/professional/product/esg-data/?utm_medium=Adwords_SEM&utm_source=pdsrch&utm_content=APAC_ESGdata_2023&utm_campaign=728003&tactic=728003&gad_source=1&gclid=EAlaIqObChMI3JKUxNjXggMVW8FMAh0QRgeqEAAYASAAEgJ71_D_BwE

¹ Extent to which a company is exposed to different material ESG issues

² How well company is managing relevant ESG issues

Appendix 4 – Summary of company shareholder meetings in 2022

Company	Ticker	Building Block	Meeting Date	Resolutions	Votes Against Management	Concerns	Relevant ESG Factor(s)
Siemens Gamesa	SGRE SM	Wind	24/03/2022	17	0		
Neste	NESTE FH	Biofuel	30/03/2022	17	0		
Renesas Electronics	6723 JP	Enabling Technology	30/03/2022	9	1	<ul style="list-style-type: none"> Permanent arrangements for virtual-only shareholder meetings 	<ul style="list-style-type: none"> Organisational governance and ethics
Orsted	ORSTED DC	Wind	8/04/2022	23	0		
Nel	NEL NO	Hydrogen	21/04/2022	23	4	<ul style="list-style-type: none"> Executive compensation Over-boarding of director 	<ul style="list-style-type: none"> Organisational governance and ethics (including remuneration)
ASML	ASML NA	Enabling Technology	29/04/2022	31	0		
Continental	CON GY	Electric Vehicles	29/04/2022	37	1	<ul style="list-style-type: none"> Executive compensation 	<ul style="list-style-type: none"> Organisational governance and ethics (including remuneration)
Albemarle	ALB US	Critical Raw Materials	3/05/2022	12	4	<ul style="list-style-type: none"> Lack of board diversity Length of audit firm tenure 	<ul style="list-style-type: none"> Workforce rights and equality
Alcoa	AA US	Critical Raw Materials	5/05/2022	13	5	<ul style="list-style-type: none"> Lack of board diversity Proposed Reduction of Ownership Threshold for Shareholders to Call Special Meeting 	<ul style="list-style-type: none"> Auditor objectivity
Shoals Technologies	SHLS US	Solar	5/05/2022	4	3	<ul style="list-style-type: none"> Classified board and supermajority vote requirements Lack of board diversity 	<ul style="list-style-type: none"> Organisational governance and ethics
Darling Ingredients	DAR US	Biofuel	10/05/2022	12	1	<ul style="list-style-type: none"> Length of audit firm tenure 	<ul style="list-style-type: none"> Workforce rights and equality
Pan American Silver	PAAS US	Critical Raw Materials	11/05/2022	10	4	<ul style="list-style-type: none"> Lack of board diversity Length of audit firm tenure 	<ul style="list-style-type: none"> Organisational governance and ethics
Électricité de France	EDF FP	Clean Utilities	12/05/2022	29	7	<ul style="list-style-type: none"> Lack of director independence Concerning equity issuances 	<ul style="list-style-type: none"> Workforce rights and equality
Itron	ITRI US	Energy Efficiency	12/05/2022	5	2	<ul style="list-style-type: none"> Lack of board diversity Audit firm independence (high non-audit fees) 	<ul style="list-style-type: none"> Auditor objectivity
Eos Energy	EOSE US	Energy Storage	17/05/2022	6	4	<ul style="list-style-type: none"> Lack of board diversity Classified board Executive compensation 	<ul style="list-style-type: none"> Workforce rights and equality

Company	Ticker	Building Block	Meeting Date	Resolutions	Votes Against Management	Concerns	Relevant ESG Factor(s)
Enphase Energy	ENPH US	Solar	18/05/2022	4	2	<ul style="list-style-type: none"> • Lack of board diversity • Executive compensation 	<ul style="list-style-type: none"> • Auditor objectivity
Encavis	ECV GY	Solar	19/05/2022	24	6	<ul style="list-style-type: none"> • Lack of board diversity • Executive compensation • Lack of director independence 	<ul style="list-style-type: none"> • Organisational governance and ethics
Enel	ENEL IM	Clean Utilities	19/05/2022	10	0		<ul style="list-style-type: none"> • Workforce rights and equality
MasTec	MTZ US	Enabling Technology	19/05/2022	5	1	<ul style="list-style-type: none"> • Lack of board diversity 	<ul style="list-style-type: none"> • Auditor objectivity
NextEra Energy	NEE US	Clean Utilities	19/05/2022	17	9	<ul style="list-style-type: none"> • Lack of detailed diversity disclosures • Length of audit firm tenure • Lack of board diversity • Lack of strong board oversight of climate risks 	<ul style="list-style-type: none"> • Organisational governance and ethics
Power Integrations	POWI US	Enabling Technology	20/05/2022	10	4	<ul style="list-style-type: none"> • Lack of board diversity 	<ul style="list-style-type: none"> • Workforce rights and equality
Array Technologies	ARRY US	Solar	24/05/2022	6	2	<ul style="list-style-type: none"> • Classified board and problematic board charter • Lack of board diversity 	<ul style="list-style-type: none"> • Organisational governance and ethics
Neoen	NEOEN FP	Energy Storage	25/05/2022	26	11	<ul style="list-style-type: none"> • Executive compensation • Combined CEO/board chair role • Problematic capital raising 	<ul style="list-style-type: none"> • Workforce rights and equality
TPI Composites	TPIC US	Wind	25/05/2022	6	2	<ul style="list-style-type: none"> • Lack of board diversity • Lack of responsiveness to previous shareholders votes • Supermajority voting requirements 	<ul style="list-style-type: none"> • Organisational governance and ethics
First Solar	FSLR US	Solar	26/05/2022	13	5	<ul style="list-style-type: none"> • Lack of board diversity • Length of audit firm tenure 	<ul style="list-style-type: none"> • Workforce rights and equality
Nordex	NDX1 GY	Wind	31/05/2022	12	3	<ul style="list-style-type: none"> • Permanent arrangements for virtual-only shareholder meetings • Lack of board independence 	
Sunrun	RUN US	Solar	2/06/2022	6	2	<ul style="list-style-type: none"> • Supermajority voting requirements and classified board 	<ul style="list-style-type: none"> • Workforce rights and equality
Ballard Power Systems	BLDP US	Hydrogen	8/06/2022	13	4	<ul style="list-style-type: none"> • Lack of board diversity • Length of audit firm tenure 	<ul style="list-style-type: none"> • Workforce rights and equality

Company	Ticker	Building Block	Meeting Date	Resolutions	Votes Against Management	Concerns	Relevant ESG Factor(s)
Freeport-McMoRan	FCX US	Critical Raw Materials	9/06/2022	13	4	<ul style="list-style-type: none"> • Combined CEO/board chair role • Lack of board diversity • Length of audit firm tenure 	<ul style="list-style-type: none"> • Auditor objectivity
Stem	STEM US	Energy Efficiency	15/06/2022	4	2	<ul style="list-style-type: none"> • Supermajority voting requirements and classified board • Lack of board diversity 	<ul style="list-style-type: none"> • Climate risk management
Nidec	6594 JP	Electric Vehicles	17/06/2022	13	0		<ul style="list-style-type: none"> • Workforce rights and equality
Renova	9519 JP	Clean Utilities	17/06/2022	11	2	<ul style="list-style-type: none"> • Executive compensation • Permanent arrangements for virtual-only shareholder meetings 	<ul style="list-style-type: none"> • Organisational governance and ethics
China Longyuan Power	916 HK	Wind	22/06/2022	12	3	<ul style="list-style-type: none"> • Lack of disclosure of financial budget • Problematic issue of equity • Problematic financial services agreement 	<ul style="list-style-type: none"> • Workforce rights and equality
Plug Power	PLUG US	Hydrogen	30/06/2022	6	4	<ul style="list-style-type: none"> • Lack of board diversity • Executive remuneration • Length of audit firm tenure 	<ul style="list-style-type: none"> • Organisational governance and ethics
Blink Charging	BLNK US	Electric Vehicles	11/07/2022	8	5	<ul style="list-style-type: none"> • Supermajority voting requirements and classified board • Lack of board diversity 	<ul style="list-style-type: none"> • Workforce rights and equality
Canoo	GOEV US	Electric Vehicles	12/07/2022	7	5	<ul style="list-style-type: none"> • Supermajority voting requirements and classified board • Lack of board diversity 	<ul style="list-style-type: none"> • Organisational governance and ethics
ChargePoint	CHPT US	Electric Vehicles	12/07/2022	6	4	<ul style="list-style-type: none"> • Supermajority voting requirements and classified board • Lack of board diversity • Executive compensation 	<ul style="list-style-type: none"> • Workforce rights and equality
EnerSys	ENS	Energy Storage	4/08/2022	5	2	<ul style="list-style-type: none"> • Lack of board diversity • Length of audit firm tenure 	<ul style="list-style-type: none"> • Workforce rights and equality

Company	Ticker	Building Block	Meeting Date	Resolutions	Votes Against Management	Concerns	Relevant ESG Factor(s)
Tesla	TSLA	Electric Vehicles	4/08/2022	14	10	<ul style="list-style-type: none"> • Lack of board diversity • Lack of oversight of executive stock pledging • Board oversight of ESG risks • Insufficient responsiveness to majority-supported shareholder proposals • Adoptions of proxy access right • Additional disclosure on board diversity • Increased transparency on efforts to prevent workplace discrimination and harassment • Disclosure on mandatory arbitration • Disclosure on climate lobbying 	<ul style="list-style-type: none"> • Auditor objectivity
QuantumScape	QS US	Energy Storage	20/09/2022	14	9	<ul style="list-style-type: none"> • Lack of board diversity • Executive compensation • Problematic capital structure 	<ul style="list-style-type: none"> • Organisational governance and ethics
Wolfspeed	WOLF US	Enabling Technology	24/10/2022	11	8	<ul style="list-style-type: none"> • Lack of board diversity 	<ul style="list-style-type: none"> • Organisational governance and ethics
ITM Power	ITM LN	Hydrogen	28/10/2022	13	3	<ul style="list-style-type: none"> • Lack of board diversity 	<ul style="list-style-type: none"> • Workforce rights and equality
Great Wall Motor Company	2333 HK	Electric Vehicles	17/11/2022	2	0		<ul style="list-style-type: none"> • Auditor objectivity

Source: T8

Appendix 5 – Register of Company Meetings in 2022

Company	Ticker	Date	Key ESG factors discussed in meeting
Nel	NEL NO	20/12/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Energy and emissions intensity • Climate risk management • Whole of supply chain environmental stewardship • Organisation governance and ethics • Auditor objectivity
MP Materials	MP US	16/12/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Environmental compliance • Management of hazardous materials • Water management • Whole of supply chain environmental stewardship • Organisation governance and ethics
Meyer Burger Technology	MBTN SW	16/12/2022	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Organisation governance and ethics
Pan American Silver	PAAS US	13/12/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Environmental compliance
Algonquin Power & Utilities	AQN US	8/12/2022	<ul style="list-style-type: none"> • Energy and emissions intensity • Climate risk management • Management of ecologically sensitive areas and biodiversity • Whole of supply chain environmental stewardship
Stem	STEM US	6/12/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Energy and emissions intensity • Climate risk management • Whole of supply chain environmental stewardship • Organisation governance and ethics
TransAlta Renewables	RNW CN	1/12/2022	<ul style="list-style-type: none"> • Energy and emissions intensity • Climate risk management • Management of ecologically sensitive areas and biodiversity • Whole of supply chain environmental stewardship • Management of industrial relations • Community management including cultural heritage
QuantumScape	QS US	29/11/2022	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Organisation governance and ethics

Company	Ticker	Date	Key ESG factors discussed in meeting
NIO	NIO US	24/11/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Energy and emissions intensity • Non-hazardous waste management • Climate risk management • Whole of supply chain environmental stewardship • Employee rights • Auditor objectivity
EnerSys	ENS US	22/11/2022	<ul style="list-style-type: none"> • Energy and emissions intensity • Non-hazardous waste management • Climate risk management • Whole of supply chain environmental stewardship • Organisation governance and ethics
TPI Composites	TPIC US	22/11/2022	<ul style="list-style-type: none"> • Energy and emissions intensity • Non-hazardous waste management • Climate risk management • Management of ecologically sensitive areas and biodiversity • Whole of supply chain environmental stewardship • Occupational health and safety • Organisation governance and ethics
Renesas Electronics	6723 JP	22/11/2022	<ul style="list-style-type: none"> • Energy and emissions intensity
Darling Ingredients	DAR US	15/11/2022	<ul style="list-style-type: none"> • Energy and emissions intensity • Climate risk management • Whole of supply chain environmental stewardship • Whole of supply chain sustainability stewardship • Welfare of domesticated animals
Alphamin Resources	AFM CN	13/10/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Energy and emissions intensity • Whole of supply chain environmental stewardship • Physical security of assets and workforce • Community management including cultural heritage • Whole of supply chain sustainability stewardship
Enel	ENEL IM	8/9/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Environmental compliance • Energy and emissions intensity • Climate risk management • Management of ecologically sensitive areas and biodiversity

Company	Ticker	Date	Key ESG factors discussed in meeting
			<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Occupational health and safety • Community management including cultural heritage • Whole of supply chain sustainability stewardship
SQM	SQM US	26/8/2022	<ul style="list-style-type: none"> • Management of ecologically sensitive areas and biodiversity • Community management including cultural heritage • General transparency and disclosure
NextEra Energy	NEE US	26/8/2022	<ul style="list-style-type: none"> • Environmental compliance • Energy and emissions intensity • Climate risk management • Management of ecologically sensitive areas and biodiversity • Political transparency
Canoo	GOEV US	18/8/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Energy and emissions intensity • Climate risk management • General transparency and disclosure
Sunrun	RUN US	13/7/2022	<ul style="list-style-type: none"> • Non-hazardous waste management • Whole of supply chain environmental stewardship • Occupational health and safety • Whole of supply chain sustainability stewardship
Électricité de France	EDF FR	27/6/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Management of hazardous materials • Community management including cultural heritage • Whole of supply chain sustainability stewardship
Xinyi Solar	968 HK	8/6/2022	<ul style="list-style-type: none"> • Whole of supply chain sustainability stewardship
First Majestic Silver	AG US	11/3/2022	<ul style="list-style-type: none"> • Energy and emissions intensity • Management of hazardous materials • Non-hazardous waste management • Climate risk management • Physical security of assets and workforce • Community management including cultural heritage
Pan American Silver	PAAS US	21/4/2022	<ul style="list-style-type: none"> • Energy and emissions intensity • Climate risk management. Rehabilitation and restoration practices • Occupational health and safety • Physical security of assets and workforce

Company	Ticker	Date	Key ESG factors discussed in meeting
			<ul style="list-style-type: none"> • Community management including cultural heritage • Organisation governance and ethics
Plug Power	PLUG US	22/4/2022	<ul style="list-style-type: none"> • Environmental management processes and oversight • Energy and emissions intensity • Climate risk management • Whole of supply chain environmental stewardship • Whole of supply chain sustainability stewardship • General transparency and disclosure
Tesla	TSLA US	1/3/2022	<ul style="list-style-type: none"> • Whole of supply chain environmental stewardship • Whole of supply chain sustainability stewardship

Source: T8

Appendix 6 – Calculating GHG emissions metrics

Calculating total GHG emissions

Total carbon emissions aggregates the proportional amount of each portfolio company’s emissions (proportional to the amount of stock held).

Calculating total GHG emissions

Total GHG emissions (tonnes CO₂e)=
$$\sum_{i=1}^N \left[I_i \times \text{Emissions}_i \times \frac{\text{Investment}_i}{\text{EVIC}_i} \right],$$

where:

I_i

Emissions_i

Investment_i

EVIC_i

is a scope marker, equal to 1 for assets in scope and with available (reported or estimated) data (0 otherwise)

are the GHG emissions for company *i*, in tonnes of CO₂ equivalent

is the total value invested in company *i*

is the enterprise value (including cash) of company *i*, in millions of US dollars, defined as “the sum of the market capitalisation of ordinary shares at fiscal year-end, the market capitalisation of preferred shares at fiscal year-end, and the book values of total debt and minorities’ interest” (PCAF)

Source: TCFD

Calculating carbon footprint

Carbon footprint aggregates the proportional amount of each portfolio company’s emissions (proportional to the amount of stock held).

Calculating carbon footprint

Carbon footprint (tonnes CO₂e per million US dollars invested)=
$$\frac{\sum_{i=1}^N \left[I_i \times \frac{\text{Investment}_i}{\text{AUM}} \times \frac{\text{Emissions}_i}{\text{EVIC}_i} \right]}{\sum_{i=1}^N \left[I_i \times \frac{\text{Investment}_i}{\text{AUM}} \right]},$$

where:

I_i

Emissions_i

Investment_i

AUM

EVIC_i

is a scope marker, equal to 1 for assets in scope and with available (reported or estimated) data (0 otherwise)

are the GHG emissions for company *i*, in tonnes of CO₂ equivalent

is the total value invested in company *i*

is the total size of the portfolio

is the enterprise value (including cash) of company *i*, in millions of US dollars, defined as “the sum of the market capitalisation of ordinary shares at fiscal year-end, the market capitalisation of preferred shares at fiscal year-end, and the book values of total debt and minorities’ interest” (PCAF)

Source: TCFD

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Calculating WACI

Weighted average carbon emissions intensity (WACI) is generally accepted to be the most appropriate metric for comparing the emissions intensity of different portfolios of companies.

WACI measures the carbon intensity of a company rather than total carbon emissions. It is the calculation of the tonnes of CO₂ emitted per one million US dollars of company sales. It then aggregates them using the percentage weight of the holding within T8 Energy Vision.

Calculating WACI

$$\text{WACI (tonnes CO}_2\text{e per million US dollars of revenue)} = \frac{\sum_{i=1}^N \left[I_i \times \frac{\text{Investment}_i}{\text{AUM}} \times \frac{\text{Emissions}_i}{\text{Revenues}_i} \right]}{\sum_{i=1}^N \left[I_i \times \frac{\text{Investment}_i}{\text{AUM}} \right]}$$

where:

I_i

is a scope marker, equal to 1 for assets in scope and with available (reported or estimated) data (0 otherwise)

Emissions_i

are the GHG emissions for company i , in tonnes of CO₂ equivalent

Investment_i

is the total value invested in company i

AUM

is the total size of the portfolio

Revenues_i

are the total revenues of company i , in millions of US dollars

Source: TCFD

The WACI metric therefore normalises for company size – a large global company with large carbon emissions, in absolute terms may have a lower WACI than a smaller company that pollutes less in absolute terms but is less efficient in its processes.

WACI is calculated at a point in time based on the following inputs:

- Portfolio weight – the percentage of the investment portfolio that a particular company comprises (based on the dollar value of a security divided by the total dollar value of the portfolio)
- Greenhouse gas emissions – tonnes of greenhouse gas emitted by a company during the year
- Revenue – total sales revenue generated by a company during the year

The limitations of WACI

WACI is calculated for the portfolio assuming that the portfolio weight remains constant over the course of the year being reported on (it is not a reflection of the emissions of every position owned over the course of a year). In reality, due to a variety of factors such as the natural drift of position weights and active portfolio management means that portfolio weights will not remain the same.

Further, the dynamic nature of the other above-mentioned inputs means that a WACI calculated at two different points in time is likely to vary. WACI outlined in the following graphs is based on portfolio weights as at 31 December 2022 and revenue and GHG emissions for the 2022 calendar year.

The WACI is only ever a snapshot in time and can vary depending on portfolio weights.

Appendix 7 – Assessment of company SDG contribution

Company	Ticker	SDG 5	SDG 7	SDG 9	SDG 11	SDG 12	SDG 13	SDG 16
Wolfspeed	WOLF US	● ○ ○	● ● ●	● ● ●	● ○ ○	● ○ ○	● ● ○	● ○ ○
TPI Composites	TPIC US	● ● ○	● ● ●	● ○ ○	● ○ ○	● ● ●	● ○ ○	● ● ○
Alcoa	AA US	● ○ ○	● ● ●	● ○ ○	● ○ ○	● ● ●	● ○ ○	● ● ●
NIDEC	6594 JP	● ● ○	● ○ ○	● ● ○	● ○ ○	● ● ○	● ○ ○	● ○ ○
General Motors	GM US	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ● ●	● ● ●	● ● ●
Nordex	NDX1 GY	● ● ○	● ● ●	● ● ○	● ○ ○	● ● ○	● ○ ○	● ● ●
Xinyi Solar	968 HK	● ○ ○	● ● ●	● ● ○	● ○ ○	● ● ○	● ○ ○	● ○ ○
Great Wall Motor Company	2333 HK	● ○ ○	● ○ ○	● ● ○	● ○ ○	● ● ○	● ● ○	● ○ ○
Neste	NESTE FH	● ● ○	● ○ ○	● ○ ○	● ○ ○	● ● ●	● ● ●	● ○ ○
Wartsila	WRT1V FH	● ● ○	● ○ ○	● ● ○	● ○ ○	● ● ○	● ● ○	● ○ ○
Plug Power	PLUG US	● ● ○	● ● ●	● ● ●	● ○ ○	● ● ○	● ○ ○	● ○ ○
Eos Energy	EOSE US	● ○ ○	● ● ●	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ○ ○
Stem	STEM US	● ● ○	● ● ●	● ● ●	● ● ●	● ● ○	● ○ ○	● ○ ○
Enel	ENEL IM	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ● ●	● ● ●	● ● ●
ITM Power	ITM LN	● ○ ○	● ● ●	● ○ ○	● ○ ○	● ● ○	● ○ ○	● ● ○
EnerSys	ENS US	● ○ ○	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ○ ○	● ○ ○
Orsted	ORSTED DC	● ● ●	● ● ○	● ● ○	● ○ ○	● ● ●	● ● ●	● ● ●
Algonquin Power & Utilities	AQN US	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ○ ○	● ○ ○	● ● ●
SolarEdge Technologies	SEDG US	● ○ ○	● ● ●	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ● ○
Niu Technologies	NIU US	● ○ ○	● ● ●	● ● ●	● ● ●	● ● ○	● ● ○	● ○ ○
Cleantech	CLSK US	● ○ ○	● ○ ○	● ○ ○	● ○ ○	● ○ ○	● ○ ○	● ○ ○
Pan American Silver	PAAS US	● ○ ○	● ○ ○	● ○ ○	● ● ●	● ○ ○	● ○ ○	● ○ ○
Shoals Technologies	SHLS US	● ○ ○	● ● ●	● ○ ○	● ○ ○	● ● ●	● ○ ○	● ● ●
MP Materials	MP US	● ○ ○	● ● ●	● ● ○	● ○ ○	● ○ ○	● ○ ○	● ● ○

Company	Ticker	SDG 5	SDG 7	SDG 9	SDG 11	SDG 12	SDG 13	SDG 16
First Solar	FSLR US	● ○ ○	● ● ●	● ● ○	● ○ ○	● ● ●	● ● ○	● ● ●
Renesas Electronics	6723 JP	● ○ ○	● ● ●	● ● ●	● ○ ○	● ● ○	● ● ●	● ○ ○
China Longyuan Power	916 HK	● ○ ○	● ● ○	● ○ ○	● ○ ○	● ● ○	● ○ ○	● ○ ○
Array Technologies	ARRY US	● ○ ○	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ○ ○	● ● ●
Micron Technology	MU US	● ● ●	● ● ●	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ● ○
ASML	ASML NA	● ● ●	● ● ●	● ○ ○	● ● ○	● ● ●	● ● ●	● ● ●
Sunrun	RUN US	● ● ●	● ● ●	● ○ ○	● ○ ○	● ● ○	● ● ○	● ○ ○
NEL	NEL NO	● ● ●	● ● ●	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ○ ○
QUALCOMM	QCOM US	● ● ○	● ● ●	● ● ●	● ○ ○	● ○ ○	● ● ○	● ● ●
Freeport-McMoRan	FCX US	● ● ○	● ● ●	● ○ ○	● ○ ○	● ● ●	● ● ○	● ● ●
Enphase Energy	ENPH US	● ○ ○	● ● ●	● ● ●	● ○ ○	● ● ●	● ○ ○	● ● ○
Neoen	NEOEN FP	● ● ●	● ● ●	● ○ ○	● ○ ○	● ● ○	● ○ ○	● ● ●
ChargePoint	CHPT US	● ● ○	● ● ●	● ● ●	● ● ●	● ● ○	● ○ ○	● ○ ○
Tesla	TSLA US	● ○ ○	● ● ●	● ● ●	● ● ●	● ● ●	● ○ ○	● ● ●
QuantumScape	QS US	● ○ ○	● ● ●	● ● ●	● ○ ○	● ● ○	● ○ ○	● ○ ○
Canoo	GOEV US	● ○ ○	● ● ●	● ● ●	● ● ●	● ○ ○	● ○ ○	● ○ ○

Source: T8

Legend

● ○ ○ Low ● ● ○ Medium ● ● ● High

Notes

Criteria/indicators utilised:

- SDG 5 Gender Equality: board (and senior management if reported) >40% female = High; 30-40% = Medium; <30% = Low
- SDG 7 Affordable and Clean Energy: Net (net of revenue associated with 'negative' issues such as traditional oil refining) revenue from solutions >70% = High, 50-70% = Medium, <50% = Low
- SDG 9 Industry, Innovation and Infrastructure: R&D spend >5% (or >US\$1b) of revenue = High; R&D spend 1-5% (or >US\$0.5b) of revenue = Medium; <1% or undisclosed R&D spend = Low
- SDG 11 Sustainable Cities and Communities: Revenue from electric vehicles and energy efficiency building blocks >70% = High, 50-70% = Medium, <50% = Low
- SDG 12 Responsible Consumption and Production: sustainability report and formal waste reduction targets = High; either a sustainability report or formal waste reduction targets = Medium; nothing disclosed = Low

- SDG 13 Climate Action: Clear Net Zero commitment and programmes = High; Broad Net Zero commitment = Medium; No Net Zero commitment = Low
- SDG 16 Peace and Justice Strong Institutions: One class of shares and last remuneration report carried by >90% = High; one class of shares and remuneration report carried by >70% = Medium; Multiple classes of shares and last remuneration report carried by <70% = Low

All data sourced from Bloomberg feed in November 2023, apart from net zero programmes which is based on SBTi data (sourced from SBTi website in June 2023) and clean energy revenue percentage which is based on publicly reported sources of revenue including company disclosures. This is a lagging indicator and therefore does not represent future growth or capital investment in clean energy and associated supply chain and enabling technology. We define clean energy as both renewables (solar, wind etc) and nuclear energy. For critical raw materials, clean energy revenue is based on proportion of company revenue associated with the production of critical raw materials. Individual critical raw materials are utilised for a variety of purposes in addition to being an input into the manufacturing of clean energy technology. Due to the lack of availability of consistent data on end uses/customers we have not differentiated revenue data based on end use.

Appendix 8 – T8's key responses to the TCFD recommendations

TCFD Recommendation	T8 Response
Governance	Disclose the organisation's governance around climate-related risks and opportunities
Board oversight in assessing and managing climate related risks.	<p>In 2023 we enhanced and clarified the investment process and governance structure of T8 to incorporate the following elements of technical insight and oversight functions:</p> <ul style="list-style-type: none"> • The Investment Committee comprises senior members of the Investment Team together with the Chair of the Board of Triple Eight Capital Pty Ltd (also the Chair of the Advisory Board) as a non-voting observer. The committee leverages the collective experience of its members to make well informed investment decisions based on proprietary assessments of reward and risk in line with the investment process. Each member of the Investment Committee is empowered to veto investment decisions. • The Advisory Board provides deep industry insights and access to broader industry networks (as well as non-fiduciary oversight of the investment process). The Advisory Board receives weekly disclosures detailing performance; attribution; positioning; risk; as well as market and stock commentary. • The Responsible Investment Committee provides non-fiduciary oversight over T8's responsible investment policy as well as T8's ESG strategy, due diligence, stewardship (including engagement) and reporting. • Industry technical analysts provide technical insights (e.g. engineering and scientific) to the investment team which ensures a sound technical basis for investment decision. • The Board/Oversight Committee (of Triple Eight Capital Pty Ltd) is the key oversight function within T8's corporate governance framework. The Oversight Committee meets on a quarterly basis and provides oversight over the governance of the investment process, as well as other aspects of the business which are not directly related to investment (including high level organisational climate risk).
Management oversight in assessing and managing climate related risks.	<ul style="list-style-type: none"> • Investments are wholly focussed on investing in companies that can genuinely contribute to the transition to clean energy. Assessment of climate related risks are therefore very much at the heart of our investment process and front of mind for our management team. • In addition to our investment philosophy, T8 has a robust ESG analysis embedded in our investment process. Utilising the specialised experience of an ESG Consultant, we perform comprehensive due diligence of companies. Through this, we identify ESG risks (including climate risks) that are then evaluated against our ESG 23 Factor Assessment. Where required, we seek engagements with specific companies for further clarification. • A comprehensive overview of our ESG process is included at page 18 of our Shared Value report.
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's business, strategy, and financial planning where such information is material.
Describe the climate related risks and opportunities the organisation has identified over the short, medium, and long term.	<p>Risks</p> <p>Short term</p> <ul style="list-style-type: none"> • Challenging regulatory environment that some companies struggle to adhere to. • Challenging economic environment that pushes consumers toward fossil fuels. • Geo-political uncertainty pushing consumers toward fossil fuels. • Technological innovation is stifled by economic challenges causing slowing in update of clean energy technologies. • Extreme weather events that impact some operations (for example hurricanes may have impact on companies that have assets located in high-risk locations, droughts and reduction in river water levels may impact on financial returns from hydroelectric power plants). • Consumer scepticism about the benefits of clean energy. • Investments in companies that currently have material exposure to fossil fuels and therefore risks associated with fossil fuels (e.g. an electric utility which produces the majority of its electricity from sources with no greenhouse gas emissions may operate or have exposure to gas-fired electricity generation assets within its portfolio).

Medium and long term

- Climate shifts that physically impact some operations (for example floods and rising sea levels may have impact on companies that have assets located in high risk locations).

ISS have assessed the physical risk exposure of companies, including exposure to drought, flood, heat stress, tropical cyclone and wildfire. The Total Likely Physical Risk Score assesses the total physical risk considering a likely climate-change scenario. The score ranks the issuer's change in risk exposure relative to its sector on a scale 1-100. A score of 1 corresponds to the highest relative risk exposure while a score of 100 corresponds to null or negligible physical risk exposure. A score of 50 indicates that the issuer's physical risk exposure is close to or equal to the sector median. Scores for portfolio companies held on 31 December 2022 are detailed in Table 9.

ISS also assesses how well a company takes into consideration physical risks in its risk management strategy. The Physical Risk Management Score has defined four categories: None/Not-covered (0), Weak (20), Moderate (60), and Robust (100). A company must report to the CDP to have a score value. Scores for portfolio companies held on 31 December 2022 are detailed in Table 9. In summary, 10% of the portfolio was considered to be in the weak category, 10% in the moderate category and 20% in the robust category (for 60% of the portfolio there was insufficient data to determine a score).

Opportunities

- A shift in the way that people consume energy toward renewable products and away from fossil fuels.
- Technology improvements that mean greater energy efficiency and cheaper renewables (and drive consumers away from emissions intensive sectors).
- Increased demand for investment products with:
- An investment strategy that has invests in clean energy solutions; and
- genuine, embedded ESG processes.

ISS has assessed the overall Carbon Risk Rating for companies. This rating is a numeric score from 0 to 100 predicated on an assessment of over 100 industry-specific indicators and a carbon risk classification at the industry and sub-industry levels. The Carbon Risk Rating assesses the climate-related performance of companies, taking into account industry-specific challenges and risk profiles as well as a company's positive impact. Factors that the carbon risk rating considers include:

- Company's CO2 efficiency, as well as its capacity to seize climate-related opportunities and manage its industry-specific climate risks in the future.
- Relevant aspects of a company's entire value chain (supply chain, production, products & services).
- Considers the extent to which a company in a given industry is exposed to CO2 risks.
- Favours companies from sectors contributing to the solving of climate change challenges, i.e. sectors with a high share of clean tech solutions.
- Penalises companies from sectors causing the highest greenhouse gas emissions along their value chain, i.e. sectors not compatible with climate change mitigation.

A company's performance category will be labelled "Climate Leader" if the CRR score is between 75 and 100, "Climate Outperformer" if the CRR score is between 50 and 74, "Climate Medium Performer" if the CRR score is between 25 and 49, "Climate Laggard" if the CRR score is between 0 and 24 and "Not Covered" when the position's carbon risk rating is "Not Applicable" or "Not Collected". Ratings for portfolio companies held on 31 December 2022 are detailed in Table 9. In summary, 33% of portfolio companies are considered "Climate Leaders", 23% are considered "Climate Outperformers", 25% are considered "Climate Medium Performers" and 8% are considered "Climate Laggards" (for 13% of the portfolio there was insufficient data to make a determination).

Describe the impact of climate related risks and opportunities on the organisation's business, strategy, and financial planning.

- Management of climate related risks and opportunities is intrinsic to T8 Energy Vision's strategy and is embedded across our investment process.
- Climate risk is also one of the organisational risks that we assess as part of the annual risk review for T8 that occurs as part of the Annual Business Planning process. The Annual Business Plan is reviewed/considered by the Board and Oversight Committee.

TCFD Recommendation	T8 Response
Describe the resilience of the organisation's strategy, taking into consideration different climate related scenarios, including a 2 degree or lower scenario	<ul style="list-style-type: none"> • We have not yet performed detailed scenario analysis, however the portfolio is specifically constructed to identify companies that will both enable and benefit from the transition to cleaner forms of energy. We believe that this portfolio construction and therefore the strategy of T8 Energy Vision will be resilient to the different possible climate related scenarios that may eventuate. • T8 Energy Vision is a global equities fund dedicated to investing in companies critical to the clean energy transition: renewables, energy storage and electrification and associated value chains including critical raw materials. By investing in companies involved in manufacturing or resource extraction, T8 Energy Vision however will not by its nature be a low carbon emissions portfolio relative to the broader listed global equity market and may have investments in companies that currently have material exposure to fossil fuels (e.g. an electric utility which produces the majority of its electricity from sources with no greenhouse gas emissions may operate or have exposure to gas-fired electricity generation assets within its portfolio).
Describe how risks and opportunities are factored into investment strategies	<ul style="list-style-type: none"> • T8 Energy Vision is wholly invested in companies that both enable and benefit from the transition to clean energy. Consideration of climate risks is therefore intrinsic to the investment strategy of T8 Energy Vision. • In addition to this, T8 adopts a rigorous approach to assessing company ESG practices and investment stewardship to ensure that we accurately understand and consider the climate risk in the companies in which we are invested. Our ESG approach is comprehensively described in our Responsible Investment Policy which is available on our website.
Risk Management	Disclose how the organisation identifies, assesses, and manages climate-related risks.
Describe the organisation's process for identifying and assessing climate related risks.	<ul style="list-style-type: none"> • Identifying, assessing, and managing climate risk occurs both at the organisational and portfolio level. • Climate risk is one of the organisational risks that we assess as part of the annual risk review for T8 that occurs as part of the Annual Business Planning process. • At a portfolio level, our investment strategy is predicated upon identifying companies that can both contribute to and benefit from the transition to cleaner forms of energy. On this basis, we are constantly looking to identify those companies who contribute to lower emissions (whether that be through the energy that they produce or their contribution to the value chain). <p>There are four key pillars to our ESG approach:</p> <ul style="list-style-type: none"> • Pillar 1 – Screening (investment focus is dedicated to clean energy) • Pillar 2 – ESG due diligence and our proprietary 23 factor ESG assessment • Pillar 3 – Active ownership/stewardship • Pillar 4 – Reporting
Describe the organisation's process for managing climate related risks.	<ul style="list-style-type: none"> • Refer above

TCFD Recommendation	T8 Response
<p>Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organisation's overall risk management.</p>	<p>Identifying climate risks</p> <ul style="list-style-type: none"> Climate risks will be identified through both our screening process (pillar 1) and Due Diligence process (Pillar 2). Our screening process (pillar 1) ensures that companies must have both 'clean intent' and if a company passes our 'clean energy intent' and 'clean enough' assessments, it is prioritised for a formal ESG assessment. <p>The first part of our screening process (pillar 1) considers whether the company has a 'clean energy intent':</p> <ul style="list-style-type: none"> Is a direct producer of clean energy for example, operates wind turbines; or Produces an input which is critical to the value chain of clean energy (from a critical raw material such as copper to a manufactured component such as a microchip). <p>For those companies that do meet this threshold, we ask a further question of whether the company is 'clean enough'. We have developed several industry specific hurdles which guide our assessment of this issue:</p> <ul style="list-style-type: none"> Automotive – transformation from Internal Combustion Engines (ICE) to 100% EV production by 2035 (passenger cars). Utilities – must derive more than 50% of revenue from the production/distribution of zero-emission energy (e.g. renewables and/or nuclear) and have a credible strategy to continue the shift to clean energy. Energy – must derive more than 50% of revenue from the production/distribution of clean energy and have a credible strategy to continue the shift to clean energy. Critical Raw Materials – the material must be a critical input in the supply chain of clean energy. Of the top 100 global producers of metals, fewer than 10 pass our initial clean energy intent and clean enough assessments. All coal mining is excluded. All other companies must derive more than 50% of revenue from clean energy enabling activities. <p>We review these hurdles annually and anticipate tightening them over time to ensure we are investing in the leaders of sustainable change.</p> <ul style="list-style-type: none"> Climate risks will also be identified in our Due Diligence process (Pillar 2). If a company passes our 'clean energy intent' and 'clean enough' assessments, it is prioritised for a formal ESG assessment. to flag climate risks which we then evaluate utilising our ESG 23 Factor Assessment. 'Energy and emissions intensity' and 'climate risk management' are two of the ESG factors we consider as part of this assessment. <p>Managing climate risks</p> <ul style="list-style-type: none"> Many companies exposed to significant climate risks will be excluded from investment in T8 Energy Vision since they would not be considered to have both a 'clean intent' and be 'clean enough' and therefore do not pass our initial screening process (Pillar 1). Once a climate risk has been identified and evaluated in our Due Diligence process (Pillar 2), depending on the scale of the risk it may then be added to our 'High Priority' monitoring watchlist. These companies are automatically included in the agenda of daily portfolio meetings and weekly advisory board reports. A higher priority is placed on monitoring the news flow on issues associated with these companies. We also utilise our direct engagements with companies (Pillar 3) to continuously encourage them to improve their performance across a range of areas to influence and drive positive change. We have a strict investment process that we follow in respect of every investment that we make. ESG research and risk assessments are a key element of T8's fundamental research, analysis and valuations of stocks. Fundamental stock specific risk is calculated based on ESG risk and qualitative risk assessments. Fundamental recommendation on position size is based on a matrix of risk and reward. Therefore, a high ESG risk company which is low or medium qualitative risk, will push it to high risk and limit position size.

TCFD Recommendation	T8 Response
<p>Describe engagement with investee companies to encourage better disclosure and practices related to climate related risks.</p>	<ul style="list-style-type: none"> Through our robust ESG assessments, we identify climate risks and, where appropriate, seek engagements with those companies where we want to obtain a better understanding of the risks. Net Zero commitments are one of the areas that has been prioritised by default in relation to company engagements. We monitor the decarbonisation strategies of companies to better understand our exposure to transition risk. Companies with decarbonisation targets supported by clear action plans provide us with confidence that they are managing risk and are ready to take advantage of the opportunities that transition presents. <p>Across our 31 December 2022 holdings:</p> <ul style="list-style-type: none"> Bloomberg data indicates 35% companies have a net zero target; 15% have targets approved by the Science-based Target Initiative (SBTi); and An additional 15% have committed to developing targets approved by the Science-based Targets initiative (SBTi). <p>In addition, we believe that companies should be looking to set interim Net Zero targets which are appropriate, ambitious, and accountable as well as a decarbonisation strategy which outlines actions to address emissions reduction, in alignment with targets.</p>
Metrics & Targets	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
<p>Disclose the metrics used by the organisation to assess climate related risks and opportunities in line with strategy and risk management processes.</p>	<ul style="list-style-type: none"> WACI, total GHG (refer Tables 4 and 5 and Figures 7 and 8).
<p>Disclose scope 1 and 2 and, if appropriate, scope 3 GHG emissions and the related risks.</p>	<ul style="list-style-type: none"> Refer Tables 3 and 4 and Figures 5, 6, 7 and 8 for details of GHG emissions. T8 is committed to achieving net zero by 2050 and has signed up to the Net Zero Asset Managers Initiative and is currently finalising interim targets.
<p>Describe the targets used by the organisation to manage climate related risks and opportunities and performance against targets.</p>	<ul style="list-style-type: none"> We have not yet set targets for our operational emissions.

Source: TCFD, T8

Table 9 – Climate Risk Assessment of Portfolio Companies (as at 31 December 2022)

Company	ISS Climate Emissions Data Source	ISS Carbon Risk Rating	ISS Carbon Risk Categorisation	ISS Climate Total Physical Risk Score	ISS Climate Physical Risk Management Score	ISS Climate Physical Risk Management Categorisation
Wolfspeed	CDP	46	Climate Medium Performer	51	100	Robust
TPI Composites	Sustainability or Annual Reports	100	Climate Leader	39	Not Collected	Not Collected
Alcoa	Sustainability or Annual Reports	44	Climate Medium Performer	80	Not Collected	Not Collected
Nidec	CDP	43	Climate Medium Performer	42	20	Weak
General Motors	Sustainability or Annual Reports	37	Climate Medium Performer	55	100	Robust
Nordex	Sustainability or Annual Reports	100	Climate Leader	75	Not Collected	Not Collected
Xinyi Solar	Sustainability or Annual Reports	100	Climate Leader	36	Not Collected	Not Collected
Great Wall Motor Company	Sustainability or Annual Reports	17	Climate Laggard	37	Not Collected	Not Collected
Neste	CDP	41	Climate Medium Performer	83	20	Weak
Wartsila	CDP	43	Climate Medium Performer	43	20	Weak
Plug Power	Modelled Emissions	48	Climate Medium Performer	57	Not Collected	Not Collected
Eos Energy	Modelled Emissions	Not Collected	Not Collected	Not Collected	Not Collected	Not Collected
Stem	Modelled Emissions	20	Climate Laggard	Not Collected	Not Collected	Not Collected
Enel	CDP	54	Climate Outperformer	65	100	Robust
ITM Power	Modelled Emissions	37	Climate Medium Performer	96	Not Collected	Not Collected
EnerSys	CDP	43	Climate Medium Performer	50	60	Moderate
Orsted	Sustainability or Annual Reports	100	Climate Leader	68	100	Robust
Algonquin Power & Utilities	CDP	52	Climate Outperformer	56	100	Robust

Company	ISS Climate Emissions Data Source	ISS Carbon Risk Rating	ISS Carbon Risk Categorisation	ISS Climate Total Physical Risk Score	ISS Climate Physical Risk Management Score	ISS Climate Physical Risk Management Categorisation
SolarEdge Technologies	Sustainability or Annual Reports	100	Climate Leader	100	Not Collected	Not Collected
Niu Technologies	Modelled Emissions	Not Collected	Not Collected	Not Collected	Not Collected	Not Collected
Cleanspark	Modelled Emissions	Not Collected	Not Collected	Not Collected	Not Collected	Not Collected
Pan American Silver	Sustainability or Annual Reports	45	Climate Medium Performer	59	Not Collected	Not Collected
Shoals Technologies	Modelled Emissions	76	Climate Leader	Not Collected	Not Collected	Not Collected
MP Materials	Sustainability or Annual Reports	16	Climate Laggard	Not Collected	Not Collected	Not Collected
First Solar	Sustainability or Annual Reports	100	Climate Leader	65	100	Robust
Renesas Electronics	CDP	58	Climate Outperformer	42	100	Robust
China Longyuan Power	Other Reported	82	Climate Leader	37	Not Collected	Not Collected
Array Technologies	Sustainability or Annual Reports	100	Climate Leader	Not Collected	Not Collected	Not Collected
Micron Technology	Sustainability or Annual Reports	55	Climate Outperformer	41	60	Moderate
ASML	Sustainability or Annual Reports	72	Climate Outperformer	37	60	Moderate
Sunrun	Sustainability or Annual Reports	100	Climate Leader	47	Not Collected	Not Collected
Nel	Sustainability or Annual Reports	63	Climate Outperformer	56	Not Collected	Not Collected
Qualcomm	Sustainability or Annual Reports	54	Climate Outperformer	37	20	Weak
Freeport-McMoRan	Sustainability or Annual Reports	53	Climate Outperformer	41	60	Moderate
Enphase Energy	Sustainability or Annual Reports	100	Climate Leader	64	Not Collected	Not Collected
Neoen	Modelled Emissions	89	Climate Leader	61	100	Robust
ChargePoint	Modelled Emissions	54	Climate Outperformer	Not Collected	Not Collected	Not Collected
Tesla	Sustainability or Annual Reports	77	Climate Leader	46	Not Collected	Not Collected

Company	ISS Climate Emissions Data Source	ISS Carbon Risk Rating	ISS Carbon Risk Categorisation	ISS Climate Total Physical Risk Score	ISS Climate Physical Risk Management Score	ISS Climate Physical Risk Management Categorisation
QuantumScape	Not Collected	Not Collected	Not Collected	Not Collected	Not Collected	Not Collected
Canoo	Not Collected	Not Collected	Not Collected	Not Collected	Not Collected	Not Collected

Source: ISS

Contact us

Please reach out to the T8 team for additional detail on anything discussed in this report at info@t8cap.com

Important notice

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