Climate and Net-Zero Solutions
A Toolkit for Transitioning Portfolios to Net-Zero
The urgency of preventing the worst extremes of a changing climate is spurring investors, companies, financial intermediaries and policymakers across the world to sharpen their focus on efforts to drive down greenhouse gas emissions to net-zero.

Investors are monitoring whether companies have credible plans to reduce their emissions and tracking the alignment of portfolios with the Paris Agreement, which aims to limit global temperature rise to well below 2 degrees Celsius (2°C), preferably no more than 1.5°C, to prevent the worst extremes of a warming world.

Reaching net-zero will demand extraordinary action. Ninety percent of listed companies are currently on an emissions pathway that would put global temperature rise above 1.5°C. It also will demand intuitive, forward-looking tools that help investors differentiate which companies in every sector will help them achieve net-zero and which will get in the way of that goal.

MSCI’s Climate and Net-Zero Solutions are designed to help institutional investors seeking benchmark, measure and manage portfolio exposure to climate risk, construct climate-aligned portfolios, identify low-carbon investment opportunities, and navigate to net-zero.
# How investors can integrate and use Climate and Net-Zero Solutions

Aligning portfolios with a 1.5°C warming scenario may require investors to re-evaluate their investments. Explore below to learn more about which Net-Zero solutions can help as you seek to achieve your climate objectives.

## Integrating our Climate and Net-Zero Solutions

**Setting a net-zero target may start with quantifying the impact of your investments on the climate based on their Implied Temperature Rise.** That also may include using scenario analysis to understand the physical and transition risks for investments.

**Constructing net-zero portfolios may entail reducing exposure to carbon-intensive companies and industries,** identifying companies with solid transition plans, increasing exposure to clean-energy technologies, and minimizing the risk of stranded assets.

**Engaging portfolio companies with the goal of understanding the ambition and thoroughness of their climate targets and assessing their progress toward net-zero emissions.**

## Use cases

### Internal reporting
Streamline internal reporting of risks associated with the transition to a net-zero economy and the physical manifestations of a warming world. Visualize climate risk exposures and trends at the enterprise level and across funds and portfolios.

### Climate risk management / scenario analysis / stress test
Identify and understand climate risk exposures and trends within and across funds and portfolios. Deepen insight into climate-related risks and opportunities, stress test portfolios and model scenarios to inform strategy and investment decision-making.

### Asset-level selection / Identify climate positive investments
Assess alignment with temperature targets across multiple asset classes, identify drivers of risk and return, and untangle and compare issuer decarbonization targets.

### Portfolio construction
Map out and analyze investment strategies, inform security selection, and benchmark climate-aligned portfolios.

### Stewardship/ engagement
Refine climate engagement with consistent, quantitative data that illuminates corporate decarbonization strategies and targets, companies’ resilience to climate-related risks and their readiness for a net-zero economy.
Reporting on the climate risks and opportunities of existing investments and building new investment products that fuse net-zero and climate considerations with financial objectives

Use cases

TCFD-aligned regulatory reporting
Understand your complete carbon footprint and report on climate-related governance, strategy, risk management, and metrics and targets in line with the Task Force on Climate-Related Financial Disclosures (TCFD). Available as a managed service that features portfolio-data management, batch reporting and customization capabilities.

External reporting
Report to investors, shareholders, and other stakeholders on the climate-alignment of portfolios, progress against net-zero commitments and alignment with key temperature thresholds.
Why MSCI Climate and Net-Zero Solutions

Deep Knowledge
The MSCI Climate Risk Center in Zurich acts as the focal point for climate change risk analytics. It includes a team of more than 40 climate specialists dedicated to modeling, methodology and client support.

Innovation
MSCI combines leading-edge data with state-of-the-art climate scenario analysis pioneered by Carbon Delta, which MSCI acquired in September 2019, in collaboration with some of the world’s top climate experts.

Powerful Tools
Tools for integrating climate considerations into your investment process, including risk management, portfolio construction and reporting, as well as a range of innovative climate change indexes.

Forward-looking
Our solutions consider a range of climate risks and opportunities, including the complete carbon footprint (Scope 1, 2 and 3 emissions) of companies and portfolios, exposure to green revenue, the possible impacts on valuations of companies’ climate strategies and targets, as well as forward-looking analysis of emissions trajectories and their implied temperature rise and climate value-at-risk for both transition and physical risk scenarios.

Depth and breadth
Data that covers nearly 10,000 companies (15,000 including subsidiaries) and more than 95% of the global value of equity, fixed income, sovereign debt and real estate markets. In addition to real-time data, MSCI offers nearly 50 years of historical data on equities, factors and fixed income, together with more than 30 years of ESG and climate knowledge.
The world’s largest owners and managers of assets turn to MSCI to better understand how climate-related physical and transition risk can affect financial assets, identify low-carbon investment opportunities and align portfolios with key temperature targets.

**Climate Data and Metrics**

Climate data and metrics from MSCI ESG Research help investors integrate climate change into decision-making across the investment process. They include MSCI ESG Research’s Implied Temperature Rise, the Climate Targets and Commitments Dataset and Climate Value-at-Risk, together with datasets that encompass emissions across all scopes, fossil fuel exposure, clean technologies and more. Available for nearly 10,000 companies, including large-, mid- and small-cap developed and emerging market equities, as well as investment grade, high yield and emerging market fixed income issuers worldwide.
Implied Temperature Rise from MSCI ESG Research is designed to show the temperature alignment of companies, portfolios and funds with global temperature goals. Expressed in degrees Celsius, it is an intuitive, forward-looking metric that shows how a company aligns with the ambitions of the Paris Agreement. Investors can use Implied Temperature Rise to assess alignment of companies and portfolios with key temperature rise thresholds, set decarbonization targets and inform engagement on climate risk.

**How Implied Temperature Rise works**

» We look at the remaining carbon budget left for the world if we are to avoid the worst impacts of the climate crisis.

» We use this budget and allocate an amount to about 10,000 public companies— including all companies within the MSCI ACWI Investable Market Index (IMI) universe.

» We then look at all the public companies’ projected emissions over the next five decades, based on their current emissions and our analysis of their stated reduction targets.

» All things being equal, a company whose projected emissions are below budget can be said to “undershoot,” while those whose projected emissions exceed the budget “overshoot.”

» The over or undershoot is then converted to an implied global temperature rise - meaning how much would the temperature of the world increase if the whole economy had the same carbon overshoot or undershoot as the company in question.
Company Overshoot Example

![Company Overshoot Example Diagram]

> 1.5°C

Company Undershoot Example

![Company Undershoot Example Diagram]

> 3.8°C

How investors use Implied Temperature Rise metrics

» Investors use Implied Temperature Rise metrics as a forward-looking measure for: Assessing the progress of companies, portfolios, funds and benchmarks toward driving down greenhouse gas emissions to net-zero by the middle of this century

» Staying informed about companies’ climate risk management, set evidence-based decarbonization targets and optimize portfolios

» Engaging companies on climate risk

» Showing clients how investment portfolios align with global climate goals

» Aligning with the reporting recommendations by the TCFD.² With coverage of nearly 10,000 issuers and all greenhouse gas emissions scopes, Implied Temperature Rise supports reporting in line with evolving disclosure requirements

For the full methodology, please visit Implied Temperature Rise - MSCI

1 As of August 2021

The Target and Commitments dataset from MSCI ESG Research helps investors evaluate companies’ pledges to decarbonize and compare decarbonization commitments among companies. The dataset details and standardizes the publicly stated commitments of most publicly listed companies to provide a complete picture of their targets in a single view.

**How MSCI Climate Target and Commitments Dataset works**

The Climate Target and Commitments dataset allows institutional investors to compare corporate climate commitments and identify companies that have set targets in line with the investor’s strategy.

The dataset maps targets based on their comprehensiveness (the share of total greenhouse gas emissions across Scopes 1, 2 and 3) and ambition (whether the target would decarbonize the company enough to reach net-zero emissions by the date targeted). The analysis also plots a company’s emissions trajectory in the coming years and decades, assuming the company meets the commitments it has mapped out.

**How institutional investors use the MSCI Climate Target and Commitments Dataset**

The Target and Commitments dataset helps investors evaluate companies’ pledges to decarbonize and compare decarbonization commitments among companies. The dataset details and standardizes the publicly stated commitments of most publicly listed companies to provide a complete picture of their targets in a single view.

It’s designed to help investors:

- Untangle corporate decarbonization pledges
- Compare decarbonization commitments by publicly listed companies
- Inform climate risk engagement
- Report portfolio emissions pursuant to frameworks such as the Task Force on Climate-related Financial Disclosures (TCFD).

The dataset provides a snapshot of a company’s decarbonization target and main drivers of carbon emissions. It illustrates the aggregate projected reduction in carbon emissions the company has pledged to achieve each year.
Climate Value-at-Risk (Climate VaR) from MSCI ESG Research delivers a forward-looking, return-based valuation for measuring climate-related risks and opportunities in an investment portfolio.

How the Climate VaR model works
Climate VaR provides insight into the potential climate-stressed market valuation of investment portfolios and downside risks. MSCI ESG Research’s financial modeling approach translates climate-related costs into valuation impacts on companies and their publicly tradable securities. The framework helps investors understand the potential climate-related downside risk and/or upside opportunity in their investment portfolios.

Modeling approach
- Impact modeling
- Cost/profit calculation
- Security valuation
- Portfolio aggregation

How Climate VaR can help you to prepare your institution
- Scenario analysis on climate risks and opportunities
- Systematic tools for disclosure
- Automated, streamlined report creation
Investors use climate and net-zero indexes from MSCI for a range of investment objectives.

They include addressing financial risks and opportunities, reducing exposure to fossil fuels, incentivizing companies to change their business models, capturing clean-energy opportunities and aligning portfolios with global temperature targets.

MSCI has launched the following four categories of standard climate indexes:

» MSCI Climate Paris Aligned Indexes target reduced exposure to firms with higher physical and transition climate risk and increases exposure to companies pursuing opportunities arising from the transition to a net-zero economy while aligning with a 1.5°C scenario. The index incorporates the recommendations of the TCFD and is designed to exceed the minimum standards of the EU Paris-Aligned Benchmark.

» MSCI Climate Change Indexes target reduced exposure to carbon-intensive firms, increased exposure to climate-solutions firms and alignment with the requirements of the EU Climate Transition Benchmark.

» MSCI Low Carbon Target and Leaders Indexes focus on minimizing carbon-emission intensity and fossil-fuel-reserves exposure.

» MSCI Global Environment Indexes exclusively focus on companies that contribute to a more environmentally sustainable economy.

Overall, these indexes may be used by clients seeking to mitigate climate risks and identify new investment opportunities.

3 MSCI ESG Ratings, research and data are produced by MSCI ESG Research LLC, a subsidiary of MSCI Inc. MSCI ESG, Climate and Net-Zero Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. MSCI Indexes are administered by MSCI Limited (UK).
How MSCI Climate and Net-Zero Indexes work

MSCI Climate and Net-Zero indexes are based on our Climate Analytical Framework. The objective is to support investors seeking to make an efficient allocation of capital toward the most productive assets in the long term by offering relevant benchmarks. These tools can help facilitate the integration of net-zero considerations into a balanced transition toward net-zero emissions by 2050.

### Objectives MSCI Indexes

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<th>Objectives</th>
<th>MSCI Indexes</th>
<th>Key features</th>
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<td>Reduce Emissions</td>
<td>• Low Carbon</td>
<td>✓</td>
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<td></td>
<td>• Ex Fossil Fuel</td>
<td>✓</td>
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<tr>
<td>Transition to a Low Carbon Economy</td>
<td>• Climate Change</td>
<td>✓ ✓</td>
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<tr>
<td></td>
<td>Equity and Fixed Income</td>
<td>✓ ✓</td>
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<tr>
<td>Climate Impact*</td>
<td>• Climate Paris Aligned</td>
<td>✓ ✓ ✓ ✓</td>
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<tr>
<td>Climate Thematic</td>
<td>• Global Environment</td>
<td>✓</td>
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<th>Low Carbon Transition Score</th>
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<td>Physical Risk</td>
<td>1.5 Alignment*</td>
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How institutional investors use MSCI Climate and Net-Zero Indexes

MSCI Climate and Net-Zero indexes can be used as part of an active or passive investment strategy. They are being used by global investors for various purposes:

» As a policy benchmark to evaluate the performance of investment strategies, including asset allocation.

» To benchmark the performance of active investment strategies.

» As part of an overlay strategy to existing portfolio investment policies by overweighting firms that may benefit from climate opportunities.

» As the underlying index for ETFs, indexed mutual funds or structured products.

» As a tool to engage with invested companies

Read our latest research to understand how different methodologies one can use to integrate climate considerations into a benchmark and to illuminate the resulting differences in financial and climate characteristics.

Read now
Investors use climate risk analytics and reporting from MSCI to minimize transition risk, capture green opportunities, minimize physical risk, and ensure alignment with 1.5° pathways.

**Climate Lab Enterprise**
MSCI Climate Lab Enterprise can help dynamically measure, monitor, and manage climate risks and opportunities enterprise wide.

Climate Lab Enterprise provides easy visualization of aggregated data across portfolios, quick identification of key investment strategies positively or negatively contributing to your goals, and on-the-fly trend analysis that allows you to track your success at multiple levels in your portfolio hierarchy.

**How Institutional Investors use MSCI Climate Lab Enterprise**
Climate Lab Enterprise supports investors managing alignment with net-zero and preparing for a changing investment environment.

» Quickly assess of where you stand with your Net-Zero commitments

» Monitor progress to climate targets across the entire organization

» Access datasets and analysis from our climate solutions toolkit, including Implied Temperature Rise and Target Scorecard.

» Leading edge climate models

» Market leading climate data across multiple asset classes

» Scalable from small institutions to enterprises with millions of positions

**Climate Lab Company**
MSCI’s Climate Lab Company provides a set of tools and dashboards with enhanced visualization capabilities for exploring the breadth and depth of MSCI ESG Research’s climate data and scenario analysis to provide a comprehensive view of potential climate-related financial impacts and actionable insights across listed companies.
Climate Lab Company helps investors:

» Visualize the forecast trajectory of companies’ emissions in the coming decades.

» Explore the depth of climate data and scenario analysis from MSCI ESG Research.

» Drill into climate risks and opportunities by issuer, sector, or peer set.

» Explore the Implied Temperature Rise and decarbonization targets of nearly 10,000 public companies

» Identify emissions leaders and laggards; explore climate-related risks and opportunities by issuer, sector or peer set to compare performance and progress.

» Explore transition and physical risks by issuer

» Map exposure to physical risks for both current and projected scenarios.

**Climate Risk Reporting**

Investors turn to MSCI for high-volume risk reporting. Reporting from MSCI is designed to streamline climate risk management processes within existing workflows.

**TCFD Reporting**

Climate Risk TCFD Reporting from MSCI is designed to assess climate related risks and opportunities in alignment with the recommendations of the TCFD. Available as a managed service that includes batch reporting and customization.

**Carbon Portfolio Analytics**

Carbon Portfolio Analytics reporting from MSCI ESG Research helps investors understand, measure and manage carbon risk at the portfolio, sector, and company level. Available directly from MSCI ESG Manager or as a managed service.

**How institutional investors use Climate Risk Reporting from MSCI**

» To report to shareholders and other stakeholders on alignment with TCFD recommendations

» To analyze carbon risk management and exposure

» To assess how varied climate scenarios may affect asset valuations

» To inform investment strategies and construct climate-aligned portfolios

» To support engagement

**A variety of ways to access MSCI Climate Risk Reporting**

**ESG Manager and BarraOne**

Create, run and save analysis, download company level reports using a powerful web-based application.

Generate portfolio analysis using MSCI report templates: footprint calculator, Carbon Portfolio Analytics and Climate Value-at-Risk report.

**Custom data exports**

Export your analysis in your preferred file type including Excel, CVS, EDS flat file via FTP or API.

**Climate Risk and TCFD Report**

Receive portfolio level Climate Risk and TCFD reports via managed service for one or hundreds of portfolios.
Owners and managers of private assets turn to MSCI for climate data and analytical tools that can help them better understand the risks and opportunities of a warming climate, track progress and inform decision-making.

Carbon Footprinting of Private Equity and Debt Funds is designed to help investors measure and monitor greenhouse gas emissions within private equity portfolios.

The tool, which combines performance data produced by Burgiss Data, a market leader in data and analytics for private assets, with climate risk models developed by MSCI ESG Research, delivers insight into how climate risk may affect private company valuations and positions private equity investors and general partners to capture clean-energy opportunities and align portfolios with global temperature targets.

A Tool for Transparency
Private equity investors and general partners can use Carbon Footprinting of Private Equity and Debt Funds to:

» Measure and monitor the greenhouse gas emissions of private equity portfolios, based on estimates for over 15,000 private companies in nearly 4,000 active private equity and debt funds.

» Aggregate and compare emissions by fund, asset class, strategy or portfolio.

» Align private-asset portfolios with global temperature targets.

» Identify carbon-intensive investments and low-carbon investment opportunities.

» Assess how private equity general partners engage portfolio companies on climate and ESG.

» Meet net-zero commitments and report on decarbonization of private portfolios to limited partners and pursuant to the TCFD.

Carbon Footprinting of Private Equity and Debt Funds is available as an extension of Burgiss Transparency Data delivered through the Burgiss Private i® Analytics Platform. The tool is also compatible with MSCI Risk Management and other third-party platforms.

4 In 2020, MSCI entered into a strategic relationship with Burgiss https://www.msci.com/documents/10199/220efd56-9356-d27c-91f1-eacef631f02f
Real estate investors need support to make climate-informed investment decisions, integrate performance and risk analysis, and build more sustainable portfolios.

MSCI Real Estate offers a robust suite of tools to help real estate investors measure and manage portfolio exposure to climate risk and identify and set strategic goals – all on one platform.

**How Real Estate Investors use MSCI’s Climate Solutions**

- Assess, and monitor climate transition and physical risk across real estate assets
- Compare the emissions pathways of real estate portfolios
- Analyze the carbon efficiency of buildings and portfolios for pre-acquisition due diligence
- Benchmark the climate progress of portfolios compared with industry peers
- Measure alignment with regulations like the EU Sustainable Finance Disclosure Regulation and reporting frameworks including TCFD
Leadership in Climate Data and Analytics
» Climate data provider to 17 of the world’s 20 largest asset managers
» More than 900 climate change metrics covering over 10,000 issuers

Leadership in Climate Indexes
» #1 climate index provider by equity assets linked to its climate indexes
» Market leadership in ESG ratings and data
» #1 ESG data and research provider
» More than 1,900 MSCI ESG Research clients globally with coverage of over 17,000 Issuers and 750,000+ Securities

Leadership in ESG Indexes
» #1 ESG index provider by equity ETF assets linked to its ESG indexes
» USD 579 billion are benchmarked to MSCI ESG & Climate Equity Indexes

5 MSCI ESG Research’s climate solutions are used by 17 of the top 20 world’s largest Asset Managers as determined by Willis Towers Watson report “The world’s largest 500 asset managers, Joint study with Pensions & Investments.” AUM and rankings calculated as of December 2020. Report published October 2021; 2 Source: MSCI ESG Research as of September 2021
6 Source: MSCI ESG Research as of February 2021
7 Data as of 30th September 2021, based on eVestment for Institutional funds, Morningstar for Retail funds and Refinitiv Universe for ETFs
8 UBS Report published 2/16/2020 “Is the ESG Data and Services TAM Expanding? Who is Capitalizing on the Trend?”-Survey data from 35 Mutual funds, 18 hedge funds, 9 pension funds, 63 Wealth Management (High Net Worth), and 48 Long-only institutional investors.
9 To calculate the number of clients, we use the shipping address of the ultimate customer utilizing the product, which counts affiliates, user locations or business units within a single organization as separate clients. As of January 2021
10 Data based on Refinitiv Universe as of September 2021, only primary listings, and not cross-listings.
11 As of 30th June 2021
MSCI’s Climate Risk Center

MSCI’s Climate Risk Center comprises more than 45 climate scientists and experts in sustainability, technology and finance who share a commitment to developing forward-looking, intuitive tools to help investors measure and manage the financial risks and opportunities of climate change and the transition to a net-zero economy. Most researchers possess PhDs or other advanced degrees in finance, economics, or other sciences such as physics; the team also has expert knowledge of investment process, client use cases and technical skill sets including artificial intelligence (AI), machine learning (ML) and natural language processing (NLP).

Contact Us

Ready to talk? Get in touch now to discuss your climate and net-zero objectives.

Subscribe Now

Subscribe to our climate newsletter series for latest climate-related research, events and actionable insights for achieving your net-zero objectives.
About MSCI Inc.

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

About MSCI ESG Research Products and Services

MSCI ESG Research products and services are provided by MSCI ESG Research LLC, and are designed to provide in-depth research, ratings and analysis of environmental, social and governance-related business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research LLC. are also used in the construction of the MSCI ESG Indexes. MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc.

To learn more, please visit www.msci.com/esg-investing.