

MSCI Selection Low Carbon Plus G Series Indexes Methodology

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1. Introduction

The MSCI Selection Low Carbon Plus G Series Indexes¹ (the 'Indexes')² are designed to represent the performance of companies that have high Environmental, Social and Governance ("ESG") ratings relative to their GICS^{®3} sector peers and aim to achieve the following through an optimization process:

- Reduce the weighted average GHG emissions (Scope 1 and 2) intensity of the Indexes by 60% at base date (November 2019 Index Review), relative to the weighted average GHG emissions intensity of the respective Parent Indexes.
- Reduce the weighted average GHG emissions (Scope 1 and 2) intensity of the Indexes by 7% annually on average.
- Achieve a 1.2x SDG 08 Net Alignment Score and achieve 2x Net Alignment Scores for each of the SDG 03, 07, 12 and 13 of those of the respective Parent Indexes.

The Indexes follow the methodology outlined in this document from February 2025 Index Review⁴.

¹ The Indexes are governed by a set of methodology and policy documents ("Methodology Set"), including the present index methodology document. Please refer to Appendix VIII for more details.

² The Indexes governed by this methodology book are listed in Section 2.1

³ GICS, the global industry classification standard jointly developed by MSCI Inc. and S&P Global Market Intelligence.

⁴ Prior to February 2025 Index review, the Indexes followed the methodology located here:
<https://www.msci.com/documents/10199/c8869836-1791-87d3-e3b5-9b88b6301442> and
https://www.msci.com/eqb/methodology/meth_docs/MSCI_Europe_Select_ESG_Leaders_Low_Carbon_Impact_G_Series_Index_Jan2021.pdf

2. Index Construction

The Indexes use company ratings and research provided by MSCI ESG Research⁵ to determine eligibility for Index inclusion.

2.1 Applicable Universe

The Applicable Universe includes all the constituents of the Parent Indexes, shown in the table below:

Index Name	Parent Index
MSCI World Selection Low Carbon Plus G Series Index	MSCI World
MSCI Europe Selection Low Carbon Plus G-Series Index	MSCI Europe
MSCI Emerging Markets Selection Low Carbon Plus G Series Index	MSCI Emerging Markets Index ⁶
MSCI North America Selection Low Carbon Plus G Series Index	MSCI North America Index
MSCI Pacific Selection Low Carbon Plus G Series Index	MSCI Pacific Index

2.2 Eligible Universe

The Eligible Universe is constructed from the Applicable Universe by excluding securities of companies based on the exclusion criteria below.

2.2.1 ESG Ratings Eligibility

The Indexes use MSCI ESG Ratings to identify companies that have demonstrated an ability to manage their ESG risks and opportunities. Companies are required to have an MSCI ESG Rating of 'BB' or above to be eligible for inclusion in the Indexes.

2.2.2 ESG Controversies Score Eligibility

The Indexes use MSCI ESG Controversies Scores to identify companies that are involved in very serious controversies involving the environmental, social, or governance impact of their operations and/or products and services. Companies are required to have an MSCI ESG Controversies Score of 1 or above to be eligible for inclusion in the Indexes.

⁵ See section 4 for further information regarding ESG and climate data used in the Index that MSCI Limited and MSCI Deutschland GmbH source from MSCI ESG Research LLC, a separate subsidiary of MSCI Inc. MSCI ESG Research is solely responsible for the creation, determination and management of such data as a provider to MSCI Limited and MSCI Deutschland GmbH. MSCI Limited and MSCI Deutschland GmbH are the benchmark administrators for the MSCI indexes.

⁶ The Parent Index for the Optimization in Section 2.4 is MSCI Emerging Markets. However, the Parent Indexes for the Eligible Universe exclude Egypt and Pakistan. This approach aims to provide an opportunity set with sufficient liquidity and investment capacity.

2.2.3 Controversial Business Involvement Criteria

The Indexes use MSCI ESG Business Involvement Screening Research and MSCI Climate Change Metrics to identify companies that are involved in the following business activities. Companies that meet the business involvement criteria are excluded from the Indexes. Please refer to Appendix I for details on these criteria.⁷

- Controversial Weapons
- Civilian Firearms
- Nuclear Weapons
- Tobacco
- Adult Entertainment
- Alcohol
- Conventional Weapons
- Gambling
- Genetically Modified Organisms
- Nuclear Power
- Fossil Fuel Reserves Ownership
- Fossil Fuel Extraction
- Thermal Coal
- Power Generation
- Oil & Gas
- Arctic Oil & Gas
- Palm Oil

2.2.4 State-Owned Enterprise Exclusions

For the MSCI Emerging Markets Selection Low Carbon Plus G Series Index companies from specific countries are excluded based on state-owner enterprise controversy criteria listed in Appendix VII.

2.3 Selected Universe

The Selected Universe is constructed from the Eligible Universe after applying the screening and ranking criteria described below:

⁷ For more information on the screening criteria, please refer to Appendix I.

2.3.1 Security Ranking and Selection

The ranking and selection of securities is based on the MSCI Selection Indexes Methodology with modification to the ranking criteria by increasing the target coverage within each Global Industry Classification Standard (GICS®)⁸ sector to 60%.

The Eligible Universe is then formed as the composite of the individually screened regional indexes. For example:

The Eligible Universe for the MSCI World Selection Low Carbon Plus G Series Index requires screening, ranking and selecting securities in MSCI USA, MSCI Canada, MSCI Europe & Middle East and MSCI Pacific separately.

The Eligible Universe for MSCI North America Selection Low Carbon Plus G Series Index requires screening, ranking and selecting securities in MSCI USA and MSCI Canada separately.

The Eligible Universe for MSCI Europe Selection Low Carbon Plus G Series takes the MSCI Europe subset of the screened, ranked and selected securities in MSCI Europe & Middle East Index.

The Eligible Universe for the MSCI Emerging Markets Selection Low Carbon Plus G Series Index requires screening, ranking and selecting securities in MSCI Emerging Markets Asia, MSCI Emerging Markets Europe, Middle East & Africa and MSCI Emerging Markets Latin America separately.

More details on the selection approach can be found in Appendix II.⁹

2.4 Optimization Constraints

The Indexes are constructed from the Selected Universe using the Barra Open Optimizer in combination with the relevant Barra Equity Model.

The optimization objective is to minimize the tracking error relative to the Parent Indexes.¹⁰

At each quarterly Index Review in May, August, November and February, the following optimization constraints are applied which aim to ensure investability:¹¹

No	Category	Constraint
1	Stock	+/- 2% active constituent with respect to the Parent Index
2		20x maximum weight multiplier of that in the Parent Index
3		Minimum constituent weight 0.02% if selected
4	Sector	+/- 5% active sector weight with respect to the Parent Index (excluding Energy sector)
5	Country	+/- 5% active country weight with respect to the Parent Index
6		3x maximum weight multiple of that in the Parent Index

⁸ GICS is the global industry classification standard jointly developed by MSCI and S&P Global Market Intelligence.

⁹ For more information on the ranking and selection criteria, please refer to Appendix II and for more information on the MSCI Selection Indexes Methodology at <http://www.msci.com/index-methodology>

¹⁰ Specific risk aversion is set to 0.075 and common factor risk aversion is set to 0.0075.

¹¹ Please refer to Appendix V for handling infeasible optimization.

7	Region ¹²	+/- 5% active region weight with respect to the Parent Index
8	Climate ¹³	The weighted-average Carbon Intensity (Scope 1+2 / Sales) of the Index is equal or lower than 40% of the Carbon Intensity of the Parent Index at Base Date, November 2019 Index Review
9		Minimum average reduction (per annum) in Carbon Intensity (Scope 1+2 / Sales) relative to Carbon Intensity of the Index at Base Date is 7%. Carbon Intensity is not adjusted for inflation.
10	SDG ¹⁴	Weighted Average SDG 8 Net Alignment Score of the Index is equal to or greater than 1.2x of the Weighted Average SDG 8 Net Alignment Score of the Parent Index (or 5/6x in case the Weighted Average Parent Index Score is negative)
11		Weighted Average of the individual SDG 3, 7, 12 and 13 Net Alignment Score of the Index is equal to or greater than 2x of the Weighted Average of the individual SDG 3, 7, 12 and 13 Net Alignment Score of the Parent Index (or 1/2x in case the Weighted Average Parent Index Score is negative)
12		For Pacific only, the Weighted Average of the individual SDG 3, 7, 12 and 13 Net Alignment Score of the Index is equal to or greater than 1.8x of the Weighted Average of the individual SDG 3, 7, 12 and 13 Net Alignment Score of the Parent Index (or 5/9x in case the Weighted Average Parent Index Score is negative)
13	Turnover ¹⁵	The one-way turnover of the Indexes will be constrained to a maximum of 5% at each Annual Index Review and 2.5% at Quarterly Index Review

2.5 Determining the Optimized Indexes

The weights of the securities are an outcome of the optimization process, using the Barra Open Optimizer¹⁵ in combination with the relevant Barra Equity Model. The optimization uses the Eligible Universe and the specified optimization objective and constraints to determine the Optimized Index.

2.6 Treatment of Unrated Companies

Companies not assessed by MSCI Research on data for the following MSCI ESG Research products are not eligible for inclusion in the Indexes:

- MSCI ESG Controversies
- MSCI ESG Ratings

¹² Regions are defined by MSCI USA, MSCI Canada, MSCI Europe & Middle East, MSCI Pacific, MSCI Emerging Markets Asia, MSCI Emerging Markets Europe, Middle East & Africa, MSCI Emerging Markets Latin America.

¹³ Please refer to Appendix VI for calculation of Carbon Intensity.

¹⁴ The weighted average SDG Net Alignment Scores for the Parent Index are calculated ignoring missing values. SDG Net Alignment Score data is backfilled prior to the August 2020 Index Review.

¹⁵ As a one-off rebalance, the Indexes were rebalanced in February 2025 Index Review without the turnover constraint.

¹⁵ Please refer to Appendix III and IV for more details.



- MSCI Climate Change Metrics
- MSCI Business Involvement Screening Research (BISR)

3. Index Maintenance

3.1 Annual Index Reviews

The MSCI Selection Low Carbon Plus G Series Indexes are reviewed on an annual basis in May to coincide with the Index Review of the Parent Index, and the changes are implemented at the end of May. In general, the pro forma indexes are announced nine business days before the effective date.

At each Annual Index Review, the Eligible Universe for the selection criteria is updated, and the composition of the Index is reassessed in order to target 60% free float-adjusted cumulative market capitalization of each sector of the Parent Indexes.

The optimization process is applied, as described in Section 2.3, on the updated Selected Universe at Annual Index Review.

In general, MSCI uses MSCI ESG Research data (including MSCI ESG Ratings, MSCI Climate Change Metrics, MSCI ESG Sustainable Impact Metrics, MSCI ESG Controversies and MSCI Business Involvement Screening Research) as of the end of the month preceding the Index Reviews for the rebalancing of the Indexes.

3.1.1 Updating the Eligible Universe and Selected Universe

The eligible universe is updated during each Annual Index Review.

Companies that are currently not constituents of the Indexes are evaluated using the same eligibility criteria described in Section 2.2.

Existing constituents of the Indexes are maintained in the eligible universe if they meet all the following conditions:

- MSCI Rating of 'BB' or above
- MSCI Controversies Score of 1 or above
- Not screened by the business involvement criteria described in Section 2.2.3

For each sector, eligible of the regional Parent Indexes are ranked based on the following criteria:

- ESG Rating
- Current index membership (existing constituents above non-constituents)
- Industry adjusted ESG scores
- Decreasing free float-adjusted market capitalization

3.1.2 Selection of Eligible Securities

For each sector, eligible securities of the regional Parent Index are then selected from the ranked universe in the following order until the 60% coverage by cumulative free float-adjusted market capitalization is reached.

- Securities in the top 42% cumulative free float-adjusted market capitalization coverage of the ranked universe, including the first security that increases the cumulative coverage above 42%

- 'AAA' rated securities in the top 60% cumulative free float-adjusted market capitalization coverage of the ranked universe, including the first security that increases the cumulative coverage above 60%
- Current index constituents in the top 78% cumulative free float-adjusted market capitalization coverage of the ranked universe, including the first security that increases the cumulative coverage above 78% if that security is a current index constituent
- Remaining eligible securities in the ranked universe

Please see Appendix II for additional details on the ranking and selection rules

3.2 Quarterly Index Reviews

The Indexes are also reviewed on a quarterly basis to coincide with the regular Index Reviews of the Parent Indexes. The changes are implemented at the end of February, August and November. The pro forma index is in general announced nine business days before the effective date. Barra Equity Model data as of the day before the rebalancing day is used.

For the Quarterly Index Reviews, MSCI ESG Ratings, MSCI ESG Controversies Score assessments and MSCI BISR data are taken as of the end of the month preceding the Index Reviews, i.e. January, April, July and October. For some securities, this data may not be published by MSCI ESG Research by the end of the month preceding the Index Review, so MSCI will use ESG data published after the end of month, when available, for the rebalancing of the Indexes.

At the Quarterly Index Review, existing constituents are deleted from the Eligible Universe if they do not meet the eligibility criteria as described in Section 3.1.

Market price movements may cause small deviations in the sector coverage between two Index Reviews. Therefore, to minimize turnover, a buffer of 10% is used on the target coverage of 60% to define under-representation. Additions to the Eligible Universe of the regional Indexes are made, as per Section 3.1.2, only to those sectors where the current market capitalization coverage is less than 54%, until the 60% target is reached.

At each Quarterly Index Review, the optimization process, as described in Section 2.4, is applied on the Selected Universe.

As a one-off rebalance, the Indexes were rebalanced in Feb 2025 Index Review per the details in Section 3.1 Annual Index Reviews.

3.3 Ongoing Event Related Changes

The general treatment of corporate events in the Indexes aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor's participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved. Further, changes in index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

Additionally, as the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the Index.

The following section briefly describes the treatment of common corporate events within the Index. No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously.

Event Type

Event Details

New additions to the Parent Index

New securities added to the Parent Index (such as IPOs, other early inclusions and migrations from a different size-segment) may be added to the Indexes on the date of security inclusion only if they meet the eligibility criteria described in Section 3.2 and the market capitalization coverage of the sector to which the security belongs is less than 54%.

Spin-Offs

All securities created as a result of the spin-off of an existing Index constituent will not be added to the Indexes at the time of event implementation. Reevaluation for addition in the Indexes will occur at the subsequent Index Review.

Merger/Acquisition

If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Index.

Changes in Security Characteristics

A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.) Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology book.

The MSCI Corporate Events methodology book is available at:

<https://www.msci.com/index/methodology/latest/CE>.

4. MSCI ESG Research

The Indexes are products of MSCI Inc. that utilize information such as company ratings and research produced and provided by MSCI ESG Research LLC (MSCI ESG Research), a subsidiary of MSCI Inc. In particular, the Indexes use the following MSCI ESG Research products: MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research, MSCI Climate Change Metrics, and MSCI Impact Solutions. MSCI Indexes are administered by MSCI Limited and MSCI Deutschland GmbH.

4.1 MSCI ESG Ratings

MSCI ESG Ratings aim to measure entities' management of environmental, social and governance risks and opportunities. MSCI ESG Ratings use a weighted average key issue calculation that is normalized by industry to arrive at an industry-adjusted ESG score (0-10), which is then translated to a seven-point scale from 'AAA' to 'CCC', indicating how an entity manages relevant key issues relative to industry peers.

The MSCI ESG Ratings methodology can be found at: <https://www.msci.com/legal/disclosures/esg-disclosures>.

4.2 MSCI ESG Controversies

MSCI ESG Controversies provide assessments of controversies concerning the potential negative environmental, social, and/or governance impact of company operations, products and services. The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact. MSCI ESG Controversies Score falls on a 0-10 scale, with "0" being the most severe controversy.

The MSCI ESG Controversies methodology can be found at: <https://www.msci.com/legal/disclosures/esg-disclosures>.

4.3 MSCI ESG Business Involvement Screening Research

MSCI ESG Business Involvement Screening Research (BISR) aims to enable institutional investors to manage environmental, social and governance (ESG) standards and restrictions reliably and efficiently.

The MSCI Business Involvement Screening Research methodology can be found at: <https://www.msci.com/legal/disclosures/esg-disclosures>.

4.4 MSCI Climate Change Metrics

MSCI Climate Change Metrics provides climate data & tools to support institutional investors seeking to integrate climate risk & opportunities into their investment strategy and processes. This includes investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, alignment with temperature pathways and factoring climate change research into their risk management processes, in particular through climate scenario analysis for both transition and physical risks.

The dataset spans across the four dimensions of a climate strategy: transition risks, green opportunities, physical risks and 1.5° alignment.

For more details on MSCI Climate Change Metrics, please refer to <https://www.msci.com/legal/disclosures/climate-disclosures>.

4.4.1 Fossil Fuels and Power Generation Metrics

MSCI ESG Research identifies companies involved in fossil fuel-related assets and activities including fossil fuel reserves, resource extraction, power generation and generation capacity, revenue from such assets and activities and capital investments in such assets and activities. The metrics are based on disclosed activities, disclosed revenue and estimates of revenue that are extrapolated from company disclosures and eligible third-party sources (such as NGOs).

4.4.2 Greenhouse Gas (GHG) Emissions

MSCI ESG Research collects reported emissions and uses proprietary estimation methodologies that follows the GHG Protocol in including carbon dioxide (CO₂) and the five other principal GHGs: hydrofluorocarbons (HFCs), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Emissions of these other gases are accounted for in terms of the quantity of CO₂ that has an equivalent global warming potential.

Appendix I: Controversial Business Involvement Criteria

MSCI ESG Research has developed a framework designed to define significant involvement in controversial activities. According to this framework, there are four levels of restrictiveness: Most Restrictive, Highly Restrictive, Moderately Restrictive, Least Restrictive.

Each controversial activity screened by the Indexes (except Fossil Fuel Reserves Ownership, Fossil Fuel Extraction and Thermal Coal Power) is assigned to one of these restrictiveness levels.

"Most Restrictive" screen applied

- **Controversial Weapons**
 - All companies with any tie to Controversial Weapons (cluster munitions, landmines, depleted uranium weapons, biological/chemical weapons, blinding lasers, non-detectable fragments and incendiary weapons), as defined by the methodology of the MSCI Global Ex-Controversial Weapons Indexes available at <https://www.msci.com/index/methodology/latest/XCW>

"Highly Restrictive" screen applied

- **Civilian Firearms**
 - All companies classified as "Producer" of firearms and small arms ammunitions for civilian markets. It does not include companies that cater to the military, government, and law enforcement markets.
 - All companies deriving 5% or more aggregate revenue from the production and distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.
- **Nuclear Weapons**
 - All companies that manufacture nuclear warheads and/or whole nuclear missiles.
 - All companies that manufacture components that were developed or are significantly modified for exclusive use in nuclear weapons (warheads and missiles).
 - All companies that manufacture or assemble delivery platforms that were developed or significantly modified for the exclusive delivery of nuclear weapons.
 - All companies that provide auxiliary services related to nuclear weapons.
 - All companies that manufacture components that were not developed or not significantly modified for exclusive use in nuclear weapons (warheads and missiles) but can be used in nuclear weapons.
 - All companies that manufacture or assemble delivery platforms that were not developed or not significantly modified for the exclusive delivery of nuclear weapons but have the capability to deliver nuclear weapons.
 - All companies that manufacture components for nuclear-exclusive delivery platforms.
- **Tobacco**
 - All companies classified as a "Producer".

- All companies deriving 5% or more aggregate revenue from the production, distribution, retail, supply and licensing of tobacco-related products.

"Moderately Restrictive" screen applied

- **Adult Entertainment**
 - All companies deriving 5% or more revenue from the production of adult entertainment materials
 - All companies deriving 15% or more aggregate revenue from the production, distribution and retail of adult entertainment materials
- **Alcohol**
 - All companies deriving 5% or more revenue from the production of alcohol-related products
 - All companies deriving 15% or more aggregate revenue from the production, distribution, retail and supply of alcohol-related products
- **Conventional Weapons**
 - All companies deriving 5% or more revenue from the production of conventional weapons and components
 - All companies deriving 15% or more aggregate revenue from weapons systems, components, and support systems and services
- **Gambling**
 - All companies deriving 5% or more revenue from ownership of operation of gambling-related business activities
 - All companies deriving 15% or more aggregate revenue from gambling-related business activities
- **Genetically Modified Organisms (GMO)**
 - All companies deriving 5% or more revenue from activities like genetically modifying plants, such as seeds and crops, and other organisms intended for agricultural use or human consumption
- **Nuclear Power**
 - All companies generating 5% or more of their total electricity from nuclear power in a given year
 - All companies that have 5% or more of installed capacity attributed to nuclear sources in a given fiscal year
 - All companies deriving 15% or more aggregate revenue from nuclear power activities

No specific restrictiveness level applied

- **Fossil Fuel Reserves Ownership**
 - All companies with evidence of owning proven & probable coal reserves and/or proven oil and natural gas reserves used for energy purposes, or evidence of owning thermal coal reserves.

- **Fossil Fuel Extraction**

- All companies deriving more than 0% aggregate revenue (either reported or estimated) from thermal coal mining or unconventional oil and gas extraction.
 - *Thermal Coal Mining:* Revenue from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It does not cover revenue from metallurgical coal; coal mined for internal power generation (e.g. in the case of vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading.
 - *Unconventional Oil & Gas Extraction:* Revenue from oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane. It does not cover all types of conventional oil and gas production including Arctic onshore/offshore, deep water, shallow water and other onshore/offshore.

- **Thermal Coal**

- Thermal Coal Power: All companies deriving 5% or more revenue (either reported or estimated) from thermal coal-based power generation.
- Thermal Coal Distribution: All companies with evidence of thermal coal distribution or transport involvement. This includes transport of thermal coal by road, rail, shipping or air, and physical trading of thermal coal. It does not include involvement in storage of thermal coal, or involvement in metallurgical coal-related activities.

- **Power Generation**

- All companies deriving 50% or more aggregate revenue from thermal coal-based power generation, liquid fuel-based power generation and natural gas based power generation

- **Oil & Gas**

- All companies deriving 10% or more aggregate revenue from oil and gas related activities, including distribution / retail, equipment and services, extraction and production, pipelines and transportation and refining but excluding biofuel production and sales and trading activities

- **Arctic Oil & Gas**

- All companies deriving more than 0% revenue from Arctic Oil & Gas production.

- **Palm Oil**

- All companies deriving 5% or more revenue from the production of Palm Oil.

Appendix II: Guidelines on Achieving the Target Sector Coverage of 60%

The Eligible Universe targets 60% coverage of the free float-adjusted market capitalization of each GICS sector of the regional Parent Indexes. The underlying principle in the construction of the Eligible Universe is to achieve cumulative sector coverage closest to 60%, while aiming to maintain index stability.

The following guidelines are used in achieving the target cumulative sector coverage of 60%:

- For each sector, the eligible companies of the regional Parent Indexes are first ranked based on the company level ESG Rating.
- In case of two companies with the same ESG Rating, the existing constituent is given priority to maintain index stability. Between two existing constituents with the same ESG Rating, the company with the higher industry-adjusted ESG score is given priority. For two existing Index constituents with the same industry-adjusted ESG score, the security with the largest free float-adjusted market capitalization is given priority.
- The cumulative sector coverage at each rank is calculated.
- In each sector, companies are selected as per rules mentioned in Section 3.1.2 until the cumulative sector coverage crosses 60% or there are no eligible securities left to be selected.
- MSCI defines the company that increases the cumulative sector coverage above 60% as the “marginal company”.
 - If the marginal company is a current Index constituent, then it is always selected.
 - If the marginal company is not a current Index constituent, then it is selected only if the cumulative sector coverage with the marginal company is closer to 60% compared to the cumulative sector coverage without the marginal company.
- The minimum cumulative sector coverage is set to 54%.
 - The marginal company is always selected if this is required to achieve cumulative sector coverage of 54%.
- Securities which are ineligible as per Section 3.1.1 will not be selected even if the cumulative sector coverage after selection of all eligible securities is below 60%.

Appendix III: Barra Equity Model Used in the Optimization

The MSCI Selection Low Carbon Plus G Series Indexes currently use an optimization setup using the MSCI Barra Global Equity Model for Long-Term Investors (GEMTL).

Appendix IV: New release of Barra® Equity Model or Barra® Optimizer

A major new release of the relevant Barra Equity Model or Barra Optimizer may replace the former version within a suitable timeframe.

Appendix V: Handling Infeasible Optimizations

During the Index Reviews, in the event that there is no optimal solution that satisfies all the optimization constraints defined in Section 2.4, the following constraints will be relaxed until an optimal solution is found:

- **First two rounds:** In alternating fashion, relax turnover limit (steps of 1%), active sector limit (steps of 1%), and SDG 8 target (steps of 0.1) up to the stated limit of 1.0x (two rounds).
- **Subsequent two rounds:** In alternating fashion, relax turnover limit (steps of 1%), active sector limit (steps of 1%), and SDG 13 target (steps of 0.1) up to 1.8x at minimum (two rounds). For Pacific, the SDG 13 target is relaxed in steps of 0.1 up to 1.6x.
- **Final rounds:** In alternating fashion, relax turnover limit (steps of 1%) up to a maximum of 20%, active sector limit (steps of 1%) up to a maximum of 10%, SDG 13 target (steps of 0.1 up to 1.5x), SDG 7 target (steps of 0.1 up to 1.5x), SDG 3 target (steps of 0.1 up to 1.5x), and SDG 12 target (steps of 0.1 up to 1.5x).

In the event that there is no optimal solution after the above constraints have been relaxed, the Indexes will not be rebalanced for that Index review.

Appendix VI: Calculation of Target Metrics

MSCI ESG Research collects company-specific direct (Scope 1) and indirect (Scope 2) greenhouse gas emissions (GHG) data from company public documents and/or the Carbon Disclosure Project. If a company does not report GHG emissions, then MSCI ESG Research estimates Scope 1 and Scope 2 GHG emissions.

Calculation of GHG Emissions relative to Sales

Security Level GHG Emissions relative to Sales =

$$\frac{\text{Scope 1 + 2 GHG Emissions}}{\text{Sales (in M\$)}}$$

Where negative values for Sales are removed.

For Parent Index constituents where the Scope 1+2 Emissions Intensity is not available, the average Scope 1+2 Emissions Intensity of all the constituents of the MSCI ACWI in the same GICS® Industry Group in which the constituent belongs is used. If GICS® Industry Group is unavailable, the average at the GICS® Sector level is used.

Weighted Average GHG Emissions Intensity relative to Sales of Parent Index =

$$\sum (\text{Weight in Parent Index} * \text{Security Level GHG Emissions relative to Sales})$$

Weighted Average GHG Emissions Intensity relative to Sales of Derived Index =

$$\sum (\text{Index Weight} * \text{Security Level GHG Emissions Intensity relative to Sales})$$

Calculation of Average Decarbonization

On average, the Indexes follow a 7% decarbonization trajectory since the Base Date. The Weighted Average GHG Intensity relative to Sales at the Base Date (W_1) is used to compute the target Weighted Average GHG Intensity relative to Sales at any given Quarterly Index Review (W_t) as per the below formula:

$$W_t = W_1 * 0.93^{\frac{t-1}{4}}$$

Where 't' is the number of Quarterly Index Reviews since the Base Date.

Appendix VII: State Owned Enterprise Controversies

For the MSCI Emerging Markets Selection Low Carbon Plus G Series Index, companies from specific countries are removed according to the exclusions below:

- State Owned Enterprise and Dominant Shareholder Screen: All companies which are State Owned and have a Dominant Shareholder percentage more than 50% are excluded.
- State Owned Enterprise and Golden Share Screen: All companies which are State Owned and have a Golden Share are excluded

The list of countries will be provided by Van Lanschot Kempen Investment Management N.V. before the May and November Index Reviews.¹⁶

¹⁶ Van Lanschot Kempen Investment Management N.V. has an option to update the country list, provided that, the country list is provided at least 14 business days before the effective date of implementation of the May and November Index Review. The exclusion list must be emailed to custom_indices@msci.com.

Appendix VIII: Methodology Set

The Indexes are governed by a set of methodology and policy documents (“Methodology Set”), including the present index methodology document as mentioned below:

- Description of methodology set –
<https://www.msci.com/index/methodology/latest/ReadMe>
- MSCI Corporate Events Methodology –
<https://www.msci.com/index/methodology/latest/CE>
- MSCI Fundamental Data Methodology –
<https://www.msci.com/index/methodology/latest/FundData>
- MSCI Index Calculation Methodology –
<https://www.msci.com/index/methodology/latest/IndexCalc>
- MSCI Index Glossary of Terms –
<https://www.msci.com/index/methodology/latest/IndexGlossary>
- MSCI Index Policies –
<https://www.msci.com/index/methodology/latest/IndexPolicy>
- MSCI Global Industry Classification Standard (GICS) Methodology –
<https://www.msci.com/index/methodology/latest/GICS>
- MSCI Global Investable Market Indexes Methodology –
<https://www.msci.com/index/methodology/latest/GIMI>
- MSCI Global ex Controversial Weapons Indexes Methodology –
<https://www.msci.com/index/methodology/latest/XCW>
- MSCI Selection Indexes Methodology –
<https://www.msci.com/index/methodology/latest/Selection>
- ESG Factors In Methodology*

The Methodology Set for the Indexes can also be accessed from MSCI’s webpage:
<https://www.msci.com/index-methodology> in the section ‘Search Methodology by Index Name or Index Code’.

* ‘ESG Factors in Methodology’ contains the list of environmental, social, and governance factors considered, and how they are applied in the methodology (e.g., selection, weighting or exclusion). It can be accessed in the Methodology Set as described above.

Appendix IX: Changes to this Document

The following section has been modified as of November 2022:

Section 2.1.1: There were two new country specific screens added to the methodology of the MSCI Emerging Market Selection Low Carbon Plus G Series Index, as noted in the footnote.

The following sections have been modified as of July 2023:

Section 2: The section has been clarified given the methodology book is also the governing documents of two other regional indexes which follow the same methodology.

Section 3: There is a Quarterly Index Review section given the North America and Pacific Indexes are rebalanced on a quarterly rebalance.

Section 4: The ESG Product descriptions have moved from Section 2 to Section 4 and the language has been updated.

Appendix: There have been three sections added to the Appendix; Guidelines on Achieving the Target Sector Coverage of 50%, Controversial Business Involvement Criteria and Calculation of Carbon Exposure Metrics

The following sections have been modified as of May 2024:

Section 2.3 Final Universe:

- Security capping of constituents was adjusted for the North America and Emerging Markets Index.

Appendix IV: Methodology Set

- Added details on the Methodology Set for the Indexes

The following sections have been modified as of February 2025

The entire methodology was reviewed, updated and unified into one methodology for all the five indexes, impacting Section 1-4 and Appendix I to VIII.

The following sections have been modified as of May 2025

Section 2.1 Eligible Universe

- Updated list to reflect the addition of the thermal coal distribution screen.

Sub-section 2.3.1 Security Ranking and Selection

- Removed the reference to “removing the ESG rating trend”.

Appendix I: Controversial Business Involvement Criteria

- Updated the description for the Fossil Fuel Reserves Ownership screen.
- Added the description for the thermal coal distribution screen.
- Modified the Arctic Oil and Gas screen thresholds from 5% to 0%

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Brazil	+ 55 11 4040 7830
Mexico	+ 52 81 1253 4020

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South Africa	+ 27 21 673 0103
Germany	+ 49 69 133 859 00
Switzerland	+ 41 22 817 9777
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EUROPE, MIDDLE EAST & AFRICA

China	+ 86 21 61326611
Hong Kong	+ 852 2844 9333
India	+ 91 22 6784 9160
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