

Methodology Book for:

- **MSCI World SRI Select Reduced Fossil Fuel Index**
- **MSCI Europe SRI Select Reduced Fossil Fuel Index**
- **MSCI Japan SRI Select Reduced Fossil Fuel Index**
- **MSCI USA SRI Select Reduced Fossil Fuel Index**
- **MSCI EM SRI Select Reduced Fossil Fuel Index**
- **MSCI EMU SRI Select Reduced Fossil Fuel Index**

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1 Introduction

The MSCI World SRI Select Reduced Fossil Fuel Index, MSCI Europe SRI Select Reduced Fossil Fuel Index, MSCI Japan SRI Select Reduced Fossil Fuel Index, MSCI USA SRI Select Reduced Fossil Fuel Index, MSCI EM SRI Select Reduced Fossil Fuel Index and MSCI EMU SRI Select Reduced Fossil Fuel Index (herein, 'MSCI SRI Select Reduced Fossil Fuel Indexes') are free float-adjusted market capitalization weighted indexes that exclude companies that are inconsistent with specific values based criteria focused on products with high negative social or environmental impact. Additionally, these indexes are designed to represent the performance of companies that have high Environmental, Social and Governance (ESG) ratings relative to their sector peers. Further, these Indexes aim to target sector weights that reflect the relative sector weights of the underlying MSCI Global Investable Market Indexes to limit the systematic risk introduced by the ESG selection process. Overall the Indexes target coverage of 25% of the underlying MSCI Global Investable Market Index.

2 MSCI ESG Research

The MSCI SRI Select Reduced Fossil Fuel Indexes use company ratings and research provided by MSCI ESG Research LLC. In particular, these indexes use the following four MSCI ESG Research products: MSCI ESG Ratings, MSCI ESG Controversies, MSCI Business Involvement Screening Research and MSCI Climate Change Metrics.

For details on MSCI ESG Research’s full suite of ESG products, please refer to: <https://www.msci.com/esg-integration>

2.1 MSCI ESG RATINGS

MSCI ESG Ratings provides research, analysis and ratings of how well companies manage environmental, social and governance risks and opportunities. MSCI ESG Ratings provides an overall company ESG rating - a seven-point scale from ‘AAA’ to ‘CCC’. In addition, the product provides scores and percentiles indicating how well a company manages each key issue relative to industry peers.

For more details on MSCI ESG Ratings, please refer to:

<https://www.msci.com/esg-ratings>

2.2 MSCI ESG CONTROVERSIES

MSCI ESG Controversies provides assessments of controversies concerning the 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.

For more details on MSCI ESG Controversies, please refer to :

<https://www.msci.com/documents/10199/acbe7c8a-a4e4-49de-9cf8-5e957245b86b>

2.3 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.

For more details on MSCI ESG Business Involvement Screening Research, please refer to http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf

2.4 MSCI CLIMATE CHANGE METRICS

MSCI Climate Change Metrics is designed to support investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, and factoring climate change research into their risk management processes. It provides Carbon Emissions, Fossil Fuel exposure, environmental impact (i.e., clean technology) data and screens, as well as climate-related risk exposure and management assessment on companies.

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

3 Constructing the MSCI SRI Select Reduced Fossil Fuel Indexes

3.1 ELIGIBLE UNIVERSE

The eligible universe for MSCI SRI Select Reduced Fossil Fuel Indexes includes all the constituents of their respective MSCI Parent index (the “Parent Index”), as shown in the table below.

Index Name	Parent Index
MSCI World SRI Select Reduced Fossil Fuel Index	MSCI World Index
MSCI Europe SRI Select Reduced Fossil Fuel Index	MSCI Europe Index
MSCI Japan SRI Select Reduced Fossil Fuel Index	MSCI Japan Index
MSCI USA SRI Select Reduced Fossil Fuel Index	MSCI USA Index
MSCI EM SRI Select Reduced Fossil Fuel Index	MSCI EM (Emerging Markets) Index
MSCI EMU SRI Select Reduced Fossil Fuel Index	MSCI EMU Index

3.2 ELIGIBILITY CRITERIA

The MSCI SRI Select Reduced Fossil Fuel Indexes use company ratings and research provided by MSCI ESG Research LLC to determine eligibility for index inclusion.

3.2.1 VALUES AND CLIMATE CHANGE BASED EXCLUSIONS

The MSCI SRI Select Reduced Fossil Fuel Indexes use MSCI ESG Business Involvement Screening Research to identify companies that are involved in the following business activities.

Companies that meet the business involvement criteria are excluded from the MSCI SRI Select Reduced Fossil Fuel Indexes.

Please refer to Appendix 1 for details on these criteria.

Values based Exclusions:

1. Controversial Weapons
2. Civilian Firearms

3. Nuclear Weapons
4. Tobacco
5. Alcohol
6. Adult Entertainment
7. Conventional Weapons
8. Gambling
9. Genetically Modified Organisms
10. Nuclear Power

Climate Change based Exclusions

1. Extraction & Production
 - a. Thermal Coal Mining
 - b. Unconventional Oil & Gas Extraction
 - c. Oil Sands Extraction
 - d. Conventional Oil & Gas Extraction
2. Power Generation
 - a. Thermal Coal-based Power Generation
 - b. Oil & Gas-based Power Generation
3. Fossil Fuel Reserves Ownership
 - a. Thermal Coal Reserves
 - b. Oil Sands Reserves

3.2.2 ESG RATINGS ELIGIBILITY

The MSCI SRI Select Reduced Fossil Fuel 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 'A' or above to be eligible for inclusion in the MSCI SRI Select Reduced Fossil Fuel Indexes.

3.2.3 ESG CONTROVERSIES SCORE ELIGIBILITY

The MSCI SRI Select Reduced Fossil Fuel Indexes use MSCI ESG Controversies Scores to identify those 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 4 or above to be eligible for inclusion in the MSCI SRI Select Reduced Fossil Fuel Indexes.

3.3 INDEX CONSTRUCTION

The MSCI SRI Select Reduced Fossil Fuel Indexes target 25% of the free float-adjusted market capitalization within each Global Industry Classification Standard (GICS®) sector of the underlying Parent Index.

The MSCI USA SRI Select Reduced Fossil Fuel Index, MSCI Europe SRI Select Reduced Fossil Fuel Index, MSCI Japan SRI Select Reduced Fossil Fuel Index and MSCI EMU SRI Select Reduced Fossil Fuel Index are constructed by applying the above methodology to their respective parent indexes.

The MSCI World SRI Select Reduced Fossil Fuel Index and MSCI EM SRI Select Reduced Fossil Fuel Index are constructed by applying the above methodology to the regional carve-outs of their corresponding parent indexes and then aggregating them together.

The following regions are used to construct the MSCI World SRI Select Reduced Fossil Fuel Index:

Region	Regional Carve-out
Developed Asia Pacific	MSCI Pacific Index
Developed Europe & Middle East	MSCI Europe & Middle East Index
Canada	MSCI Canada Index
USA	MSCI USA Index

The following regions are used to construct the MSCI EM SRI Select Reduced Fossil Fuel Index:

Region	Regional Carve-out
Emerging Asia	MSCI Emerging Markets Asia Index
Emerging Europe, Middle East & Africa	MSCI Emerging Markets Europe, Middle East & Africa Index
Emerging Latin America	MSCI Emerging Markets Latin America Index

3.4 SECURITY WEIGHTING

The MSCI SRI Select Reduced Fossil Fuel Indexes are constructed by weighting the eligible constituents in proportion of their free-float adjusted market capitalization.

3.4.1 ISSUER CAPPING

The maximum weight of any issuer in the MSCI SRI Select Reduced Fossil Fuel Indexes is capped at 5%. A buffer of 10% of the capping threshold (5%) is used to reduce the risk of non-compliance due to short term market movements between two quarterly rebalances. As a result, at the point of constructing or rebalancing, the weight of each issuer is capped at 4.5%.

Within the capped group, securities are weighted in proportion to their free float-adjusted market capitalization. The weight of the securities outside the capped group will be increased in proportion to their weight prior to capping.

4 Maintaining the MSCI SRI Select Reduced Fossil Fuel Indexes

4.1 ANNUAL INDEX REVIEW

The MSCI SRI Select Reduced Fossil Fuel Indexes are reviewed on an annual basis in May to coincide with the May Semi-Annual Index Review of the Parent Index. The changes are implemented at the end of May. The pro forma indexes are generally announced nine business days before the effective date.

In general, MSCI uses MSCI ESG Research data (including MSCI ESG Ratings, MSCI ESG Controversies Scores, MSCI Business Involvement Screening Research and ESG Climate Change Metrics) as of the end of the month preceding the Index Reviews for the rebalancing of the MSCI SRI Select Reduced Fossil Fuel Indexes. For some securities, such data may not be published by MSCI ESG Research LLC by the end of the month preceding the Index Review. For such securities, MSCI will use ESG data published after the end of month, when available, for the rebalancing of MSCI SRI Select Reduced Fossil Fuel Indexes.

At each Annual Index Review, the eligible universe is updated, and the composition of the index is reassessed in order to target 25% free float-adjusted cumulative market capitalization of each sector of the Parent Index.

4.1.1 UPDATING THE ELIGIBLE UNIVERSE

The eligible universe is updated during each Annual Index Review.

Companies that are not existing constituents of the MSCI SRI Select Reduced Fossil Fuel Indexes are evaluated using the same eligibility criteria described in Section 3.2.

Existing constituents of the MSCI SRI Select Reduced Fossil Fuel Indexes are maintained in the eligible universe if they meet all the following conditions:

- MSCI ESG Rating of 'BB' or above
- MSCI ESG Controversies Score of 1 or above
- Not screened by the business involvement criteria described in Section 3.2.1

4.1.2 RANKING OF ELIGIBLE SECURITIES

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

- ESG Rating

- ESG Trend¹ (positive ESG Trend preferred to neutral ESG Trend and neutral ESG Trend preferred to negative ESG Trend)
- Current index membership (existing constituents above non-constituents)
- Industry adjusted ESG scores
- Decreasing free float-adjusted market capitalization.

4.1.3 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 target 25% coverage by cumulative free float-adjusted market capitalization is reached:

- Securities in the top 17.5% cumulative free float-adjusted market capitalization coverage of the ranked universe
- 'AAA' and 'AA' rated securities in the top 25% cumulative free float-adjusted market capitalization coverage of the ranked universe
- Current index constituents in the top 32.5% cumulative free float-adjusted market capitalization coverage of the ranked universe
- Remaining eligible securities in the ranked universe

Please see Appendix 2 for additional details on the ranking and selection rules.

4.2 QUARTERLY INDEX REVIEWS

The MSCI SRI Select Reduced Fossil Fuel 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 indexes are generally announced nine business days before the effective date.

For the Quarterly Index Reviews, MSCI ESG Ratings, MSCI ESG Controversies Score assessments, MSCI BISR data and MSCI ESG Climate Change Metrics data are taken as of the end of the month preceding the Index Reviews, i.e., January, July and October. For some securities, this data may not be published by MSCI ESG Research LLC by the end of the month preceding the Index Review. For such securities, MSCI will use ESG data published after the end of month, when available, for the rebalancing of the MSCI SRI Select Reduced Fossil Fuel Indexes.

¹ ESG Trend is defined as the latest change in ESG Rating over the previous 12 months. A security without any change in ESG Rating over the previous 12 months will have a neutral ESG Trend.

At the Quarterly Index Reviews, existing constituents are deleted from the MSCI SRI Select Reduced Fossil Fuel Indexes if they do not meet the eligibility criteria described in Section 4.1.1. Existing constituents that meet the eligibility criteria are retained in the index.

Additions, from the eligible securities as per Section 3.2, are made only to those sectors where the current market capitalization coverage is less than 22.5%, until the 25% target is reached.

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 25% to define under-representation.

4.3 CAPPING FREQUENCY

The indexes are capped at the Annual Index Review as well as the Quarterly Index Reviews.

4.4 ONGOING EVENT RELATED CHANGES

The following section briefly describes the treatment of common corporate events within the MSCI SRI Select Reduced Fossil Fuel Indexes.

No new securities will be added (except where noted below) to the Index between Index Reviews. For cases where additions are noted below, securities will be added to the index only if added to the Parent Index.

Parent Index deletions will be reflected simultaneously.

There are no deletions from the MSCI SRI Select Reduced Fossil Fuel Indexes between Index Reviews because of a security becoming ineligible because of MSCI ESG Rating downgrade and/or decrease in MSCI ESG Controversies Score and/or change in business involvement.

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) will be added to the index on the date of security inclusion only if they meet the eligibility criteria described in Section 3 and the market capitalization

coverage of the sector to which the security belongs is less than 22.5%.

Spin-Offs

All securities created as a result of the spin-off of an existing Index constituent will not be added to the Index at the time of event implementation. Reevaluation for inclusion 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>

Appendix 1: Values and Climate Change Based Screening Criteria

Companies whose activities meet the following values and climate change-based criteria, as evaluated by MSCI ESG Research LLC, are excluded from the MSCI SRI Select Reduced Fossil Fuel Indexes.

Values-based Exclusions Criteria:

- **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>

- **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 revenue from the 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
- **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
- **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
- **Conventional Weapons**
 - All companies deriving 5% or more revenue from the production of conventional weapons
 - All companies deriving 10% 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

Climate Change based Exclusions Criteria:

- **Extraction & Production**
 - **Thermal Coal Mining**
 - All companies deriving 5% or more revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It excludes: 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**
 - All companies deriving 5% or more revenue (either reported or estimated) from unconventional oil and gas production. It includes revenue from the production of oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane, as well as revenue from onshore or offshore oil and gas production in the Arctic region. It excludes revenue from conventional oil and gas production including deep water, shallow water, and other onshore/offshore oil and gas.
 - **Oil Sands Extraction**
 - All companies deriving 5% or more revenue from oil sands extraction, which own oil sands reserves and disclose evidence of

deriving revenue from oil sands extraction. Companies that derive revenue from non-extraction activities (e.g. exploration, surveying, processing, refining) or intra-company sales are not excluded. Additionally, companies that own oil sands reserves with no associated revenue are also not excluded.

- **Conventional Oil & Gas Extraction**

- All companies deriving more than 0% revenue (either reported or estimated) from conventional oil and gas production and are deriving less than 40% revenue from products, services, or infrastructure projects supporting the development or delivery of renewable energy and alternative fuels.

The Conventional Oil & Gas Extraction revenue includes revenue from the production of deep water, shallow water, and other onshore/offshore oil and gas. It excludes revenue from unconventional oil and gas production (oil sands, shale oil, shale gas) and onshore/offshore oil and gas production in the Arctic region

- **Power Generation**

- **Thermal Coal-based Power Generation**

- All companies deriving 5% or more revenue (either reported or estimated) from thermal coal-based power generation
- All companies generating 10% or more of their total electricity from thermal coal in a given year

- **Oil & Gas-based Power Generation**

- All companies generating 30% or more of their total electricity from liquid fuel and natural gas in a given year

- **Fossil Fuel Reserves Ownership**

- **Thermal Coal Reserves**

- All companies that provide evidence of owning thermal coal reserves and are deriving more than 0% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. Evidence of owning reserves (including those that own less than 50% of a reserves field) includes companies providing the exact volume of reserves, and companies making a statement about their ownership of reserves.

- All companies that provide evidence of owning thermal coal reserves and are deriving more than 0% revenue (either reported or estimated) from thermal coal-based power generation

- **Oil Sands Reserves**
 - All companies that provide evidence of owning oil sands reserves and are deriving more than 0% revenue from oil sands extraction. Evidence of owning reserves (including those that own less than 50% of a reserves field) includes companies providing the exact volume of reserves, and companies making a statement about their ownership of reserves.

Appendix 2: Guidelines on Achieving the Target Sector Coverage of 25%

The MSCI SRI Select Reduced Fossil Fuel Indexes target 25% coverage of the free float-adjusted market capitalization of each Global Industry Classification Standard (GICS®) sector of the regional Parent Index (“cumulative sector coverage”). The underlying principle in the construction of the indexes is to achieve cumulative sector coverage closest to 25%, while aiming to maintain index stability.

The following guidelines are used in achieving the target cumulative sector coverage of 25%:

- For each sector, the eligible companies of the regional Parent Index are first ranked based on the company level ESG Rating.
- If two companies have the same ESG Rating, the company with better ESG Trend is given priority (positive ESG Trend preferred to neutral ESG Trend and neutral ESG Trend preferred to negative ESG Trend).
- In case of two companies with the same ESG Rating and the same ESG Trend, an existing index constituent is given priority to maintain index stability. Between two existing constituents with the same ESG Rating and the same ESG Trend, 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 the rules mentioned in Section 4.1.3 until the cumulative sector coverage crosses 25% or there are no eligible securities left to be selected.
- MSCI defines the company that increases the cumulative sector coverage above 25% 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 25% compared to the cumulative sector coverage without the marginal company.
- The minimum cumulative sector coverage is set to 22.5%.



- The marginal company is always selected if this is required to achieve cumulative sector coverage of 22.5%.
- Securities which are ineligible as per Section 4.1.1 will not be selected even if the cumulative sector coverage after selection of all eligible securities is below 25%.

Contact us

clientservice@msci.com

AMERICAS

Americas	1 888 588 4567 *
Atlanta	+ 1 404 551 3212
Boston	+ 1 617 532 0920
Chicago	+ 1 312 675 0545
Monterrey	+ 52 81 1253 4020
New York	+ 1 212 804 3901
San Francisco	+ 1 415 836 8800
São Paulo	+ 55 11 3706 1360
Toronto	+ 1 416 628 1007

EUROPE, MIDDLE EAST & AFRICA

Cape Town	+ 27 21 673 0100
Frankfurt	+ 49 69 133 859 00
Geneva	+ 41 22 817 9777
London	+ 44 20 7618 2222
Milan	+ 39 02 5849 0415
Paris	0800 91 59 17 *

ASIA PACIFIC

China North	10800 852 1032 *
China South	10800 152 1032 *
Hong Kong	+ 852 2844 9333
Mumbai	+ 91 22 6784 9160
Seoul	00798 8521 3392 *
Singapore	800 852 3749 *
Sydney	+ 61 2 9033 9333
Taipei	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Tokyo	+ 81 3 5290 1555

* = toll free

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