

MSCI Renewables & Energy Efficiency Index Methodology

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1 MSCI Renewables & Energy Efficiency Index

The MSCI Renewables & Energy Efficiency Index (the ‘Index’) aims to represent the performance of a set of companies from MSCI ACWI IMI that are associated with the development of new products and services that promote renewable energy and energy efficiency, all assessed within the context of potential contribution towards a circular economy (see Appendix 1).

In particular, the Index incorporates companies that provide technologies (“circular technologies”), as defined using the following measures:

- Alternative Energy
- Energy Efficiency

The MSCI Renewables & Energy Efficiency Index also applies a set of exclusions criteria to screen companies with business activities that are not considered aligned with the overall objective of promoting renewable energy, energy efficiency, or circularity. Additionally, the Index utilizes a weighting strategy at security level, as well as applies issuer capping.

2 MSCI ESG Research

The MSCI Renewables & Energy Efficiency Index uses company ratings and research provided by MSCI ESG Research LLC. In particular, the Index uses the following MSCI ESG Research products: MSCI Impact Solutions, MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG 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-investing>.

2.1 MSCI Impact Solutions: Sustainable Impact Metrics

MSCI Impact Solutions’ Sustainable Impact Metrics is designed to identify companies that derive revenue from products or services with positive impact on society and the environment. The Sustainable Impact Metrics are comprised of six Environmental Impact categories and seven Social Impact categories arranged by theme.

MSCI Sustainable Impact Taxonomy

Pillar	Themes	Categories
Environmental Impact	Climate Change	1. Alternative energy 2. Energy efficiency 3. Green building
	Natural capital	4. Sustainable water 5. Pollution prevention 6. Sustainable agriculture
Social Impact	Basic needs	7. Nutrition 8. Major Disease Treatment 9. Sanitation 10. Affordable Real Estate
	Empowerment	11. SME Finance 12. Education 13. Connectivity – Digital divide

Under each of the actionable environmental and social impact themes, MSCI ESG Research has identified specific categories of products and services that it has determined companies can offer as potential solutions to environmental and social challenges.

More detailed taxonomy for each category can be found in Section 2.4 of the MSCI ACWI Sustainable Impact Index Methodology available at <https://www.msci.com/index-methodology>.

2.2 MSCI Impact Solutions: SDG Alignment

MSCI Impact Solutions' SDG Alignment is designed to provide a holistic view of companies' net contribution – both positive and negative – towards addressing each of the 17 UN Sustainable Development Goals (SDGs). SDG Alignment assessments and scores include analysis of companies' operations, products and services, policies, and practices and their net contribution – positive and adverse – to addressing key global challenges.

The MSCI SDG Alignment framework provides 17 SDG Net Alignment scores and 17 SDG Net Alignment assessments (including Strongly Aligned, Aligned, Neutral, Misaligned and Strongly Misaligned) for each of the 17 global goals. In addition, the model offers assessments and scores for two dimensions, product alignment and operation alignment, for each company and for each of the 17 goals.

For more details on MSCI Impact Solutions including MSCI SDG Alignment, please refer to <https://www.msci.com/our-solutions/esg-investing/impact-solutions>.

2.3 MSCI ESG Ratings

MSCI ESG Ratings provides research, data, 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, as well as underlying data and metrics used to compile the scores and ratings.

For more details on MSCI ESG Ratings, please refer to <https://www.msci.com/esg-ratings>.

2.4 MSCI ESG Controversies

MSCI ESG Controversies (formerly known as MSCI Impact Monitor) 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>.

2.5 MSCI Climate Change Metrics

MSCI Climate Change Metrics provides climate data & tools to support investors integrating climate risk & opportunities into their investment strategy and processes. It supports investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, align 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/climate-solutions>.

3 Constructing the MSCI Renewables & Energy Efficiency Index

3.1 Selection Universe

The underlying universe for the MSCI Renewables & Energy Efficiency Index is defined by the constituents of the MSCI ACWI Investable Market Indexes (IMI, the 'Parent Index'¹), from which two separate universes of stocks are constructed (as described in Sections 3.2 and 3.3).

3.2 ESG Filtered Universe

The MSCI Renewables & Energy Efficiency Index methodology applies two sets of exclusions criteria to determine eligibility in the ESG Filtered Universe.

3.2.1 Renewables & Energy Efficiency-specific Exclusions

The MSCI Renewables & Energy Efficiency Index uses MSCI Climate Change Metrics and MSCI Impact Solutions' SDG Alignment to identify companies that have been assessed as negatively impacting the index objective. The criteria are as follows:

- Thermal Coal Mining
- Oil & Gas-related Activities
- Fossil Fuel-based Power Generation
- SDG 7 and 13 Net Alignment

Please refer to Appendix 2 for details on these exclusions criteria.

3.2.2 Circular Economy-related Screens

The MSCI Renewables & Energy Efficiency Index, uses MSCI ESG Research data to apply a set of exclusions standards which either address headline risks and/or contribute negatively to a circular economy. The exclusions filters are as follows:

1. **ESG Controversies Score:** All companies that are involved in environmental, social, and/or governance controversies assessed as Red Flags (Score of 0 or those with very severe controversies).

¹ Other parent indexes, as a subset of MSCI ACWI IMI, may also be used. However, use of some indexes as parent indexes may result in a low number of constituents, which may affect replicability.

2. **Environmental Controversies:** All companies that are involved in environmental controversies assessed as Red, Orange, and Yellow Flags (Score of 4 and below).
3. **Environmental Pillar Quartile:** All companies that are assessed as belonging to the bottom quartile relative to their relevant ESG Ratings Industry.
4. **SDG 12 Net Alignment:** All companies that are assessed as Strongly Misaligned and Misaligned on their Net Alignment to SDG 12 (Responsible Consumption and Production).
5. **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>.

Notes on Unrated Securities or Securities with Missing Coverage:

- Companies that are not assessed on MSCI ESG Research’s ESG Controversies (exclusion filters 1 and 2) are excluded from the final universe.
- Companies that are not assessed on MSCI ESG Research’s ESG Ratings and SDG Alignment (exclusion filters 3 and 4) are not excluded from the final universe.

3.3 “Circular Technologies” Universe

The MSCI Renewables & Energy Efficiency Index uses MSCI Impact Solutions’ Sustainable Impact Metrics to identify companies that have exposure to products and services that aim to promote renewable energy and energy efficiency. Companies in the ESG Filtered Universe that have an aggregated revenue of 25% or more from the following categories (‘ESG Revenue’) are included in the Circular Technologies Universe:

- Alternative Energy
- Energy Efficiency

3.4 Weighting Scheme

The MSCI Renewables & Energy Efficiency Index constituents that are determined to be part of the Circular Technologies Universe are weighted as follows:

3.4.1 Security Weighting

- Circular Technologies Universe

Securities that meet the selection criteria outlined in Section 3.3 are weighted by the product of the aggregated ESG Revenue and their free float-adjusted market capitalization. The weights are then normalized to sum to 100%.

3.4.2 Issuer Capping

The maximum weight of any issuer in the MSCI Renewables & Energy Efficiency Index is then capped at 5% in accordance with the MSCI Capped Indexes methodology². The excess weight of the capped issuers is distributed among the remaining constituents in proportion of their existing weights in the Index.

² Please refer to the MSCI Capped Indexes methodology at www.msci.com/index-methodology

4 Maintaining the MSCI Renewables & Energy Efficiency Index

4.1 Semi-Annual Index Review

The MSCI Renewables & Energy Efficiency Index is reviewed on a semi-annual basis, as of the close of the last business day of May and November, coinciding with the May and November Semi-Annual Index Reviews of the Parent Index. The pro forma index is generally announced nine business days before the effective date.

As a rule, MSCI uses MSCI ESG Research data (including MSCI Impact Solutions, MSCI ESG Ratings, MSCI ESG Controversies, and MSCI Climate Change Metrics) as of the end of the month preceding the Index Reviews for the rebalancing of the Index. For some securities, such data may not be published by MSCI ESG Research 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 Renewables & Energy Efficiency Index.

At each Semi-Annual Index Review, the ESG Filtered and Circular Technologies universes are updated based on the criteria outlined in Sections 3.2 and 3.3.

4.1 Quarterly Index Reviews

The MSCI Renewables & Energy Efficiency Index is 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 and August. 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, MSCI SDG Alignment, and MSCI Climate Change Metrics data are taken as of the end of the month preceding the Index Reviews, i.e., January and July. For some securities, this data may not be published by MSCI ESG Research 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 Renewables & Energy Efficiency Index.

At the Quarterly Index Reviews, existing constituents in the ESG Filtered Universe are deleted from the MSCI Renewables & Energy Efficiency Index if they do not meet the exclusions criteria described in Section 3.2. Existing constituents that meet the criteria are retained in the Index.

4.2 Ongoing Event-Related Maintenance

The general treatment of corporate events in the MSCI Renewables & Energy Efficiency Index 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.

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.

There are no deletions from the MSCI Renewables & Energy Efficiency Index between Index Reviews on account of a security becoming ineligible because of reduced ESG revenue falling below the threshold, decrease in MSCI ESG Controversies Score, change in SDG Alignment assessment, and/or change in business involvement.

EVENT TYPE	EVENT DETAILS
New additions to the Parent Index	A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the index.
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 addition in the Index will occur at the subsequent Index Review.
Merger/Acquisition	<p>For Mergers and Acquisitions, the acquirer’s post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the Index.</p> <p>If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and</p>



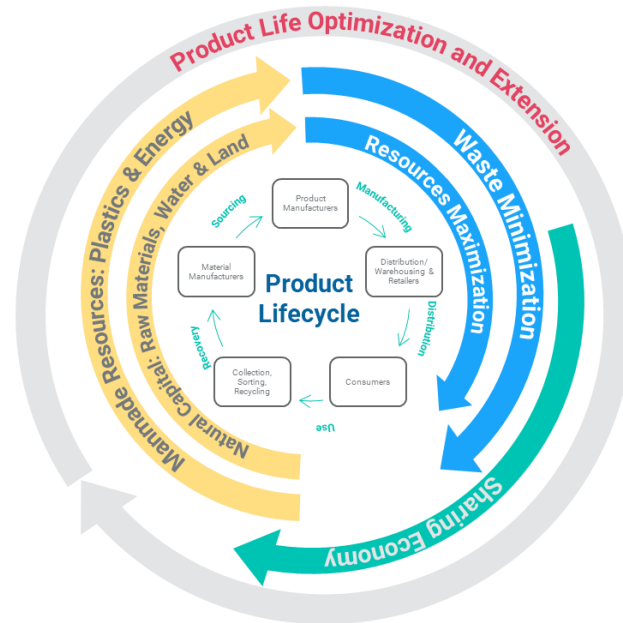
the acquiring non-constituent will not be added to the Index.

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.

The MSCI Corporate Events methodology book is available at:
<https://www.msci.com/index-methodology>.

Appendix 1: What is a Circular Economy?



A circular economy is an economic system wherein resources are kept as long as possible within the system, whether by rethinking resource-intensive products and processes, maximizing the use of materials, extending the life of products, and/or recycling of waste materials. This is a structural shift from the current linear economy, where materials are taken, converted via a manufacturing process, used, and then disposed. Underlying to the concept of a circular economy are the 9R strategies,³ which provide a holistic view to improving circularity at each stage of a product’s lifecycle.

For more information, please see the Circular Economy Theme Insight written by Rachel A. Meidl:

<https://www.msci.com/documents/1296102/28401354/ThematicIndex-CircularEconomy-cbr-en.pdf>

³ Circular Economy: Measuring Innovation in the Product Chain, Policy Report by PBLK Netherlands Environmental Assessment Agency, (Potting, J., Hekkert, M., Worrell, E., Hanemaaijer, A.), <https://www.pbl.nl/sites/default/files/downloads/pbl-2016-circular-economy-measuring-innovation-in-product-chains-2544.pdf>

Appendix 2: Renewables & Energy Efficiency-specific Exclusions Criteria

Companies are excluded based on the following MSCI Climate Change Metrics and MSCI Impact Solutions filters:

- Thermal Coal Mining
 - All companies deriving 1% 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 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.
- Oil & Gas-related Activities
 - All companies deriving 10% or more revenue (either reported or estimated) from oil and gas related activities, covering distribution / retail, equipment and services, extraction and production, petrochemicals, pipelines and transportation, and refining. It does not cover revenue from biofuel production and sales and trading activities.
- Fossil Fuel-based Power Generation
 - All companies that deriving 50% or more revenue (either reported or estimated) from thermal coal-, liquid fuel-, and natural gas-based power generation.
- SDG 7 and 13 Net Alignment
 - All companies that are assessed as Strongly Misaligned and Misaligned on their Net Alignment to SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action).

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