

# **MSCI GLOBAL CLIMATE INDEX METHODOLOGY**

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# 1 INTRODUCTION

The MSCI Global Climate Index is an equal weighted index, which is designed for investors seeking a global basket of companies that are leaders in mitigating immediate and long-term causes of climate change. The constituent companies in the MSCI Global Climate Index have pure play involvement in themes such as renewable energies, future fuels, clean technology and efficiency.

The MSCI Global Climate Index is based on the concept of the climate solutions value chain. The sources of climate change are widely distributed across the economy – transportation, factories, and commercial and residential buildings are the main sources of greenhouse gases – and climate change affects every sector. Consequently, the solutions to climate change will be broadly distributed across the economy – technology, materials, manufacturing, transportation, energy generation, construction, demand for clean/green energy and implementation of process efficiencies.

## 2 CONSTRUCTING THE MSCI GLOBAL CLIMATE INDEX

### 2.1 UNDERLYING UNIVERSE

The selection universe for the MSCI Global Climate Index is the MSCI World Investable Market Index (IMI).

### 2.2 ELIGIBILITY CRITERIA

Companies in the underlying universe that participate in activities classified into the following three categories are identified for inclusion in the index:

- Renewable Energy – Development of renewable energy technology; generation of power using renewable sources; or consumption of energy generated from renewable sources.
- Clean Technology and Efficiency – Development of clean technologies, (i.e., technologies that increase energy efficiency or reduce harmful emissions); or use of best practices in the adoption of clean technologies.
- Future Fuels – Use or development of fuel cells, clean fuels (e.g., hydrogen) or cleaner alternatives to petroleum and coal (e.g., natural gas, biofuels).

Please refer to Appendix 1 for a detailed description of these theme categories.

### 2.3 INDEX CONSTRUCTION

The objective of the Index is to identify 100 companies that are global leaders in addressing the conditions that contribute to climate change. Companies involved in the above three categories of activities are further analyzed for their leadership position in the industry. To qualify for inclusion in the MSCI Global Climate Index, indicators such as strategic commitment, investment in research and development, market share, intellectual property and reputation of companies are evaluated. This evaluation is done, both on an absolute basis and in a relative context compared to sector and/or thematic peers, to determine the final constituents of the MSCI Global Climate Index.

### 3 MAINTAINING THE MSCI GLOBAL CLIMATE INDEX

#### 3.1 QUARTERLY INDEX REVIEWS

The composition of the MSCI Global Climate Index is reviewed on a quarterly basis to coincide with the regular Index Reviews (Semi-Annual Index Reviews in May and November and Quarterly Index Reviews in February and August) of the MSCI Global Investable Market Indexes. The changes are implemented at the end of February, May, August and November.

At each Index Review, constituents may be removed from the MSCI Global Climate Index due to declining company involvement in a specific theme. Any constituent that is deleted from the underlying index as a result of the Quarterly Index Review of the Global Investable Market Indexes is also deleted from the MSCI Global Climate Index.

Companies that qualify for inclusion to the MSCI Global Climate Index as described in Section 2.3 are then added to the index to restore the number of companies back to 100. All the companies in the index are restored to an equal weight (i.e., 1% for each company in the MSCI Global Climate Index with 100 companies) based on prices as of 9 business days prior to the effective date as per the MSCI Equal Weighted Index methodology.

Constituent weights between Quarterly Index Reviews fluctuate based on price performance.

#### 3.2 ONGOING EVENT-RELATED MAINTENANCE

The general treatment of corporate events in the MSCI Global Climate 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, if the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the MSCI Global Climate Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the MSCI Global Climate Index.

The following section briefly describes the treatment of common corporate events within the MSCI Global Climate Indexes.

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
<b>New additions to the Parent Index</b>	A new security added to the parent index (such as IPO and other early inclusions) will not be added to the index.
<b>Spin-Offs</b>	All securities created as a result of the spin-off of an existing Index constituent will be added to the Index at the time of event implementation. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.
<b>Merger/Acquisition</b>	<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 the acquiring non-constituent will not be added to the Index.</p>
<b>Changes in Security Characteristics</b>	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 under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

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

## APPENDIX 1: CLIMATE CHANGE THEMES

The MSCI Global Climate Index is constructed to provide exposure to climate change themes such as:

- Renewable Energy
- Clean Technology and Efficiency
- Future Fuels

A brief description of each of these themes is included below.

### RENEWABLE ENERGY (RE)

RE includes companies whose products or practices involve renewable energy sources, which include solar, wind, geothermal, hydroelectric, and tidal or wave power

- Develop technologies for generating energy from renewable sources ;
- Generate electricity from renewable energy sources ; or
- Consume energy generated from renewable sources .

This category may also include companies that supply materials, specific-use parts, and services to original equipment manufacturers and generators of power from renewable energy sources.

### CLEAN TECHNOLOGY AND EFFICIENCY (CTE)

CTE includes companies (other than RE companies) whose products or practices reduce greenhouse gas emissions through:

- Technologies for producers or consumers that make more efficient use of fossil fuels;
- Products that make more efficient use of current fossil-fuel technologies; or
- Practices and policies that reduce the demand for fossil fuels.

Such clean technologies include hybrid (gas-electric) vehicles, cogeneration, energy-efficient ("green") building materials and buildings and cleaner-burning boiler technologies, among others. Practices and policies include emissions credit trading, noteworthy consumer education, demand management services (utilities), advanced metering, fleet management, innovative environmental management systems, and transportation (commuter, flying) decisions.

## FUTURE FUELS (FF)

FF includes companies that develop, promote, or use any energy alternatives to coal, crude oil, and gasoline not among the renewable energy sources, including biofuels, biomass, hydrogen fuel cells and fuel-cell-related technology and infrastructure.

FF also includes companies engaged in the production and use of natural gas. Natural gas is considered to be a “transitional” fuel because it is the cleanest burning of the fossil fuels and is expected to play a critical role in reducing GHGs in the transition to a post-petroleum economy. Types of natural gas companies eligible for the GC100 include:

- Exploration and production companies whose primary business is in natural gas
- Natural gas pipeline and distribution companies; or
- Utilities that supply natural gas or generate a high proportion of their power from natural gas-fired plants.

This category may also include companies that develop and market beneficial fuels such as:

- Bio-fuels (i.e. liquid fuels derived from biomass) such as biodiesel and ethanol;
- Gas to liquids (GTL);
- Compressed natural gas (CNG), liquefied natural gas (LNG), natural gas liquids (NGL) and other by-products of natural gas production;
- Clean-burning synthetic fuels; or
- Landfill methane.

**The following sections have been modified since November 2013:**

Section 2.3: Index Construction, Section 3.1: Quarterly Index Reviews and Section 3.2: Ongoing Event-Related Maintenance

- Clarification of index construction rules

**The following sections have been modified since August 2014:**

- The details on the Corporate Events treatment are now included in Section 3.2.

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