



FTSE Environmental Opportunities Index Series

v3.8



Contents

1.0	Introduction.....	3
2.0	Management Responsibilities	6
3.0	FTSE Russell Index Policies	8
4.0	Eligible Securities.....	10
5.0	Qualification Criteria & Periodic Review of Constituents	12
6.0	Changes to Constituent Companies	14
7.0	Corporate Actions and Events	16
8.0	Industry Classification Benchmark (ICB)	17
9.0	Indexes Algorithm and Calculation Method.....	18
10.0	Capping Methodology	19
	Appendix A: Index Opening and Closing Hours.....	22
	Appendix B: Status of Indexes.....	23
	Appendix C: Further Information	24



Section 1

Introduction

1.0 Introduction

1.1 This document sets out the Ground Rules for the construction and management of the FTSE Environmental Opportunities (EO) Index Series. Copies of the Ground Rules are available from FTSE Russell on the website www.ftserussell.com.

1.2 The FTSE EO Index Series is designed to represent the performance of global environmental opportunities (EO) companies taken from the FTSE Global All Cap Index Series which is part of the FTSE Global Equity Index Series, whose activities provide value-added solutions to environmental problems. This includes companies with business activities over a specified threshold that is covered in the FTSE Environmental Markets Classification System (EMCS), which includes the seven environmental Sectors below:

- A. Renewable & Alternative Energy
- B. Energy Efficiency
- C. Water Infrastructure & Technologies
- D. Pollution Control
- E. Waste Management & Technologies
- F. Environmental Support Services
- G. Food, Agriculture & Farming

Full details, including Sector and Subsector definitions within the FTSE Environmental Markets Classification System can found on the website www.ftserussell.com. The assessment to establish whether a technology, service or business qualifies as being within these sectors will be carried out by Impax Asset Management based on these classification rules, and is reviewed by the independent FTSE Environmental Markets Advisory Committee.

1.1 The base currency of the benchmark is US Dollars (USD). Index values may also be published in other currencies.

1.2 FTSE Russell

FTSE Russell is a trading name of FTSE International Limited, Frank Russell Company, FTSE Global Debt Capital Markets Limited (and its subsidiaries FTSE Global Debt Capital Markets Inc. and MTSNext Limited), Mergent, Inc., FTSE Fixed Income LLC and The Yield Book Inc.

- 1.3 These Ground Rules set out the methodology and provide information about the publication of the FTSE Environmental Opportunities Index Series.
- 1.4 FTSE Russell hereby notifies users of the index series that it is possible that circumstances, including external events beyond the control of FTSE Russell, may necessitate changes to, or the cessation of, the index series and therefore, any financial contracts or other financial instruments that reference the index series should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.
- 1.5 Index users who choose to follow this index or to buy products that claim to follow this index should assess the merits of the index's rules-based methodology and take independent investment advice before investing their own or client funds. No liability whether as a result of negligence or otherwise is accepted by FTSE Russell or Impax Asset Management (or any person concerned with the preparation or publication of these Ground Rules) for any losses, damages, claims and expenses suffered by any person as a result of:
- any reliance on these Ground Rules, and/or
 - any errors or inaccuracies in these Ground Rules, and/or
 - any non-application or misapplication of the policies or procedures described in these Ground Rules, and/or
 - any errors or inaccuracies in the compilation of the Index or any constituent data.
- 1.6 **Headline FTSE EO Index Series**
- 1.6.1 **FTSE EO All-Share Index**
- This Index comprises all the companies that meet the stated eligibility requirements.
- 1.6.2 **FTSE EO 100 Index**
- This Index comprises the largest 100 companies by full market capitalisation, selected from the constituents of the FTSE EO All-Share Index.
- 1.6.3 **FTSE EO Water Technology Index**
- This Index comprises all the companies in 'Water Technology' Category that meet the stated eligibility requirements.
- 1.6.4 **FTSE EO Water Technology 30 Index**
- This Index comprises the largest 30 companies by full market capitalisation, selected from the constituents of the FTSE EO Water Technology Index.
- 1.6.5 **FTSE EO Waste and Pollution Control Technology Index**
- This Index comprises all the companies in 'Waste and Pollution Control Technology' Category that meet the stated eligibility requirements.
- 1.6.6 **FTSE EO Waste and Pollution Control Technology 30 Index**
- This Index comprises the largest 30 companies by full market capitalisation, selected from the constituents of the FTSE EO Waste and Pollution Control Technology Index.
- 1.6.7 **FTSE EO Renewable and Alternative Energy Index**
- This Index comprises all the companies in 'Renewable and Alternative Energy' Category that meet the stated eligibility requirements.
- 1.6.8 **FTSE EO Renewable and Alternative Energy 50 Index**
- This Index comprises the largest 50 companies by full market capitalisation, selected from the constituents of the FTSE EO Renewable and Alternative Energy Index.

1.6.9 **FTSE EO Energy Efficiency Index**

This Index comprises all the companies in 'Energy Efficiency' Category that meet the stated eligibility requirements.

1.6.10 **FTSE EO Energy Efficiency 50 Index**

This Index comprises the largest 50 companies by full market capitalisation, selected from the constituents of the FTSE EO Energy Efficiency Index.

1.7 **FTSE EO Regional and Country Indexes**

1.7.1 **FTSE EO USA Index**

This Index comprises all the companies from the FTSE EO All-Share Index that are listed in USA as defined by their country classification in the Global Equity Index Series. For country classification, please refer to the FTSE Global Equity Index Series Ground Rules.

1.7.2 **FTSE EO Asia-Pacific Index**

This Index comprises all the companies from the FTSE EO All-Share Index that are listed in the Asian-Pacific region as defined by their country classification in the Global Equity Index Series.

1.7.3 **FTSE EO Asia-Pacific ex Japan Index**

This Index comprises all the companies from the FTSE EO All-Share Index that are listed in the Asian-Pacific region in exclusion to Japan, as defined by their country classification in the Global Equity Index Series.

1.7.4 **FTSE EO Japan Index**

This Index comprises all the companies from the FTSE EO All-Share Index that are listed in Japan as defined by their country classification in the Global Equity Index Series.

1.7.5 **FTSE EO Europe Index**

This Index comprises all the companies from the FTSE EO All-Share Index that are listed in Europe as defined by their country classification in the Global Equity Index Series.

1.8 Price Index Values are calculated on a real time basis in US dollars. Total Return Index values are published at the end of each working day. The Total Return Index includes income based on ex-dividend adjustments. Currencies provided for both indexes will include US Dollar, Euro, UK Pound Sterling and Japanese Yen on an end of day basis.



Section 2

Management Responsibilities

2.0 Management Responsibilities

2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index series.¹

2.1.2 FTSE is responsible for the daily calculation, production and operation of the FTSE EO Index Series and will:

- maintain records of the index weightings of all constituents and reserve list companies;
- make changes to the constituents and their weightings in accordance with the Ground Rules;
- carry out the periodic index reviews of the index series and apply the changes resulting from the reviews as required by the Ground Rules;
- publish changes to the constituent weightings resulting from their ongoing maintenance and the periodic reviews;
- disseminate the indexes.

2.1.3 The weightings of constituents in the real time indexes shall be used in the calculation of the end of day indexes.

2.1.4 FTSE is also responsible for monitoring the performance of the FTSE EO Index Series throughout the day and will determine whether the status of the Index should be Firm, Held or Indicative (see Appendix B).

2.2 Impax Asset Management

2.2.1 The role of Impax is to assess the eligible securities for Environmental Markets activity as outlined in Section 4. Analysis is carried out by Impax in line with the periodic reviews for each of the prospective Environmental Opportunities companies.

¹ The term administrator is used in this document in the same sense as it is defined in [Regulation \(EU\) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds](#) (the European Benchmark Regulation).

2.3 **FTSE Environmental Markets Advisory Committee**

- 2.3.1 To assist in the oversight of the indexes, FTSE Russell has established the FTSE Environmental Markets Advisory Committee.

The purpose of the Committee is to consider and advise on matters relating to the FTSE Environmental Markets Index Series and proposed amendments to the Ground Rules for the management of the FTSE EO Index Series to ensure that best practice is used in the construction and ongoing management of the Index.

- 2.3.2 The Terms of Reference of the FTSE Environmental Markets Advisory Committee are set out on the FTSE Russell website and can be accessed using the following link:

[FTSE Environmental Markets Advisory Committee.pdf](#)

2.4 **Amendments to these Ground Rules**

- 2.4.1 These Ground Rules shall be subject to regular review (at least once a year) by FTSE Russell to ensure that they continue to best reflect the aims of the index series. Any proposals for significant amendments to these Ground Rules will be subject to consultation with FTSE Russell advisory committees and other stakeholders if appropriate. The feedback from these consultations will be considered by the FTSE Russell Product Governance Board before approval is granted.

As provided for in the Statement of Principles for FTSE Russell Equity Indexes, where FTSE Russell or the FTSE Environmental Markets Advisory Committee determines that the Ground Rules are silent or do not specifically and unambiguously apply to the subject matter of any decision, any decision shall be based as far as practical on the Statement of Principles. After making any such determination, FTSE Russell shall advise the market of its decision at the earliest opportunity. Any such treatment will not be considered as an exception or change to the Ground Rules, or to set a precedent for future action, but FTSE Russell will consider whether the Ground Rules should subsequently be updated to provide greater clarity.



Section 3

FTSE Russell Index Policies

3.0 FTSE Russell Index Policies

These Ground Rules should be read in conjunction with the following policy documents which can be accessed using the links below:

3.1 Corporate Actions and Events Guide

3.1.1 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide using the following link:

[Corporate Actions and Events Guide.pdf](#)

3.2 Statement of Principles for FTSE Russell Equity Indexes (the Statement of Principles)

3.2.1 Indexes need to keep abreast of changing markets and the Ground Rules cannot anticipate every eventuality. Where the Ground Rules do not fully cover a specific event or development, FTSE will determine the appropriate treatment by reference to the Statement of Principles which summarises the ethos underlying FTSE Russell's approach to index construction. The Statement of Principles is reviewed annually and any changes proposed by FTSE Russell are presented to the FTSE Russell Policy Advisory Board for discussion before approval by the FTSE Russell Product Governance Board.

The Statement of Principles can be accessed using the following link:

[Statement of Principles.pdf](#)

3.3 Queries and Complaints

3.3.1 FTSE Russell's complaints procedure can be accessed using the following link:

[Benchmark Determination Complaints Handling Policy.pdf](#)

3.4 Index Policy for Trading Halts and Market Closures

3.4.1 Guidance for the treatment of index changes in the event of trading halts or market closures can be found using the following link:

[Index Policy for Trading Halts and Market Closures.pdf](#)

3.5 Index Policy in the Event Clients are Unable to Trade a Market

3.5.1 Details of FTSE Russell's treatment can be accessed using the following link:

[Index Policy in the Event Clients are Unable to Trade a Market.pdf](#)

3.6 **Recalculation Policy and Guidelines**

- 3.6.1 The FTSE EO Index Series is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE EO Index Series are notified through appropriate media.

For further information refer to the FTSE Russell Recalculation Policy and Guidelines document which is available from the FTSE Russell website using the link below or by contacting info@ftserussell.com.

[Recalculation Policy and Guidelines Equity Indexes.pdf](#)

3.7 **Policy for Benchmark Methodology Changes**

- 3.7.1 Details of FTSE Russell's policy for making benchmark methodology changes can be accessed using the following link:

[Policy for Benchmark Methodology Changes.pdf](#)

3.8 **Challenges against Classification within the FTSE Environmental Markets Classification System**

- 3.8.1 If a company (or professional advisor acting on behalf of the company) wishes to challenge its current classification in the FTSE Environmental Markets Classification System, it should contact FTSE Russell stating its reasons for proposing a change of classification, having regard to the FTSE Environmental Markets Classification System rules and attaching any documentary evidence in support of its claim. In considering the claim, FTSE Russell may only take account of publicly available information.

- 3.8.2 FTSE Russell will review the Company's classification based on its own analysis and evidence provided by or on behalf of the company and will communicate its decision to the company in writing with an explanation, including relevant data, as to how it arrived at its conclusion.

- 3.9 If, following a challenge to its classification, the company continues to disagree with FTSE Russell's assigned classification, the company should write to the Secretary of the FTSE Environmental Markets Advisory Committee and request that its classification be considered by the Committee, which meets on a semi-annual basis. The Committee will consider the Company's classification based on analysis provided by FTSE Russell, its own analysis and evidence provided by or on behalf of the company. After the semi-annual meeting the Committee Secretary will communicate the Committee's recommendation to the company in writing with an explanation as to how it arrived at its conclusion.

Challenges against a FTSE Russell decision, raised with a minimum 20 business days in advance of the next meeting of the FTSE Environmental Markets Advisory Committee, will normally be considered at that meeting.



Section 4

Eligible Securities

4.0 Eligible Securities

- 4.1 All classes of the ordinary shares in issue are eligible for inclusion in the FTSE EO Index Series, subject to conforming to all other rules of eligibility and free float.
- 4.2 Companies that are included in the FTSE Global All Cap Index Series are eligible for inclusion in the FTSE EO Index Series. For the list of eligibility criteria, please refer to the FTSE Global Equity Index Series Ground Rules which are available on www.ftserussell.com.²
- 4.3 Companies that are considered as an EO company (where 'EO' is defined in Rule 1.2) will be eligible for inclusion in the FTSE EO Index Series.
- 4.4 In order to ascertain whether a company is considered to exploit Environmental Opportunities (hence an "EO" company), the FTSE Environmental Markets Advisory Committee will consider the EO Analysis that is carried out by Impax Asset Management in line with the periodic reviews for each of the prospective EO companies. The EO Analysis will involve consideration of each of the following parameters:
 - A. $\frac{[\text{EO revenues}]}{[\text{total revenues}]}$
 - B. $\frac{[\text{EO invested capital}]}{[\text{total invested capital}]}$
 - C. $\frac{[\text{EO EBITDA}]}{[\text{total EBITDA}]}$

Companies' activities only count towards their EO percentage if the EO revenue or EO EBITDA is contained within their consolidated report and accounts.

EO invested capital will be analysed for pre-revenue companies using the book value for invested capital. Valuation of EO business is estimated by Impax Asset Management based on its own valuation analysis and that of other research analysts.

Exceptions to this calculation are as follows:

- A. Energy generating utilities; the company's energy generating capacity is assessed by the proportion of which are renewable. Renewable energy that is purchased by a utility rather than generated will not count towards this measure where the utility has a regulatory requirement to

^{2 2} Saudi Arabia was assigned Secondary Emerging market status in March 2019. Securities will be eligible for inclusion in the FTSE Environmental Technology Index from June 2020.

China A Shares (available under the Northbound China Stock Connect Scheme) was assigned Secondary Emerging market status beginning in June 2019. Securities will be eligible for inclusion in the FTSE Environmental Technology Index from June 2020.

source renewable energy, unless the total amount of renewable power supplied is 20% greater than the legal requirement.

B. Manufacturers of recycled goods; where the proportion of the company's products that are produced from recycled content is assessed.

4.5 A company will be considered an Environmental Opportunities (EO) company if any of the three calculations is greater than 20%. The company would then be eligible for inclusion in the FTSE EO Index Series.

In order to reduce index turnover buffer thresholds will also be employed. At reviews of the index, companies will only be eligible for inclusion if they are over 22% in any one of the calculations. In addition, at reviews, current constituents will only be ineligible (on an EO basis) if they fall below 18% in any one of the calculations.



Section 5

Qualification Criteria & Periodic Review of Constituents

5.0 Qualification Criteria & Periodic Review of Constituents

5.1 Review Dates

- 5.1.1 The FTSE EO Index Series will be reviewed semi-annually in June and December using data as at the close of business on the Monday 4 weeks prior to the review effective date.
- 5.1.2 The semi-annual review will be implemented after the close of business on the third Friday (i.e. effective Monday) of June and December.
- 5.1.3 Capping will be implemented quarterly after the close of business on the third Friday in March, June, September and December.

5.2 Rules for Insertion and Deletion at the Periodic Review

- 5.2.1 The rules for inserting and deleting securities at the periodic review are designed to provide stability in the selection of constituents of the FTSE EO Index Series while ensuring that the Index Series continues to be representative of the market by including or excluding those securities which have risen or fallen significantly.
- 5.2.2 A company will be inserted at the periodic review if it rises above the position stated below for the relevant index when the eligible securities for each FTSE EO Index are ranked by full market capitalisation, i.e. before the application of any investability weighting:

FTSE EO 100 Index	-	Risen to 90 th or above
FTSE EO Water Technology 30 Index	-	Risen to 25 th or above
FTSE EO Waste and Pollution Control Technology 30 Index	-	Risen to 25 th or above
FTSE EO Renewable and Alternative Energy 50 Index	-	Risen to 40 th or above
FTSE EO Energy Efficiency 50 Index	-	Risen to 40 th or above

5.2.3 A company will be deleted at the periodic review if it falls below the position stated below for the relevant index when the eligible securities for each FTSE EO Index are ranked by full market capitalisation, i.e. before the application of any investability weighting:

FTSE EO 100 Index	- Fallen to 111 th or below
FTSE EO Water Technology 30 Index	- Fallen to 36 th or below
FTSE EO Waste and Pollution Control Technology 30 Index	- Fallen to 36 th or below
FTSE EO Renewable and Alternative Energy 50 Index	- Fallen to 61 st or below
FTSE EO Energy Efficiency 50 Index	- Fallen to 61 st or below

5.2.4 A constant number will be maintained for the FTSE EO 100 Index, the FTSE EO Water Technology 30 Index, the FTSE EO Waste and Pollution Control Technology 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index and the FTSE EO Energy Efficiency 50 Index. Where a greater number of companies qualify to be inserted in an index than those qualifying to be deleted, the lowest ranking constituents presently included in the index will be deleted to ensure that an equal number of companies are inserted and deleted at the periodic review. Likewise, where a greater number of companies qualify to be deleted than those qualifying to be inserted, the securities of the highest ranking companies which are presently not included in the index will be inserted to match the number of companies being deleted at the periodic review.

5.2.5 Where a company is deleted from the FTSE EO 100 Index, the FTSE EO Water Technology 30 Index, the FTSE EO Waste and Pollution Control Technology 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, and the FTSE EO Energy Efficiency 50 Index after the periodic changes to the indexes have been announced, but before the periodic changes have been implemented, the highest ranking company as from the new Reserve List at the day of the deletion (see Rule 5.3), excluding current index constituents, will replace the deleted company.

5.2.6 A constant number of constituents will not be maintained for the FTSE Environmental Opportunities All-Share Index, the FTSE EO Water Technology Index, the FTSE EO Waste Index, the FTSE EO Renewable and Alternative Energy Index, the FTSE EO Energy Efficiency Index and the FTSE EO Regional and Country Indexes.

5.3 Monitoring of Eligible Companies

5.3.1 The market capitalisation of companies eligible for inclusion in the FTSE EO Index Series is monitored by FTSE. All listed securities that pass Impax Asset Management's EO criteria will be included in the periodic reviews.

5.4 Reserve List

5.4.1 FTSE will be responsible for publishing the ten highest ranking non-constituents of the FTSE EO 100 Index, five highest ranking non-constituents of the FTSE EO Water 30 Index, the FTSE EO Waste and Pollution Control 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, and the FTSE EO Energy Efficiency 50 Index at the time of the periodic review. The appropriate Reserve List will be used in the event that one or more constituents are deleted during the period up to the next periodic review.

5.5 Capping Methodology

5.5.1 The FTSE EO 100 Index, the FTSE EO Water Technology Index, the FTSE EO Water 30 Index, the FTSE EO Waste and Pollution Control Index, the FTSE Waste and Pollution Control 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, the FTSE EO Energy Efficiency 50 Index and FTSE EO Regional and Country Indexes use a capping methodology every quarter to reduce concentration for constituents that are considered over-weighted in the index. The capping methodology is described in more detail in Section 10.



Section 6

Changes to Constituent Companies

6.0 Changes to Constituent Companies

6.1 New Issues

- 6.1.1 In line with the FTSE Global Equity Index Series Ground Rules, when a constituent is added to the universe it will be considered for inclusion subject to Impax Asset Management notifying FTSE as soon as possible if there are any new company issues expected. The new issue will have to pass the criteria detailed in Rule 4.5, before application of individual constituent investability weightings. FTSE will normally decide to include the new issue as a constituent of the FTSE EO Index Series after the close of business on the fifth day of official trading.
- 6.1.2 If a constituent of the FTSE EO Index Series is delisted it will be removed from the index. The constituent of the FTSE EO 100 Index, the FTSE EO Water 30 Index, the FTSE Waste and Pollution Control 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, and the FTSE EO Energy Efficiency 50 Index will be replaced by the highest ranking company in the Reserve List by full market capitalisation two days prior to the event being implemented. The constituent of the FTSE All-Share Index, the FTSE EO Water Technology Index, the FTSE EO Waste Index, the FTSE EO Renewable and Alternative Energy Index, the FTSE EO Energy Efficiency Index and FTSE EO Regional and Country Indexes will not be replaced.
- 6.1.3 If FTSE decides to include a new issue as a constituent security other than as part of the normal periodic review procedure, this decision must be publicly announced at the earliest practicable time.
- 6.1.4 The new issue will also be subject to the free float, cross-holdings and foreign ownership restriction and other requirements detailed in Sections 4 and 5.

6.2 Deletions and Replacements

- 6.2.1 If a constituent is delisted, ceases to have a firm quotation, is subject to a take-over or has ceased to be a viable constituent as defined by the Ground Rules, it will be removed from the FTSE EO Index Series.
- 6.2.2 When the company is removed from the FTSE EO 100 Index, the FTSE EO Water 30 Index, the FTSE EO Waste 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, or the FTSE EO Energy Efficiency 50 Index, the vacancy will be filled by selecting the highest ranking security by full market value in the Reserve List as at the close of the index calculation two days prior to the deletion and adjusted accordingly.

- 6.2.3 Constituents will be deleted from the index when confirmation is received that all offer conditions have been met and acceptance levels have reached a minimum of 85% and that any new shares of the bidding company (if applicable) are listed. A company deleted following a takeover, with a remaining free float of 15% or less, will not be reconsidered for index inclusion until completion of a one year trading record.
- 6.2.4 Constituents removed in accordance with Rule 6.2.2, but which continue to trade thereafter, will be considered for re-inclusion to the index at the next review, subject to Sections 5 and 6 and at least 6 months has passed between deletion and the implementation date of the changes arising from the review.

6.3 **Mergers, Restructuring and Complex Takeovers**

- 6.3.1 If the effect of a merger or takeover is that one constituent in the FTSE EO All Share Index, the FTSE EO Water Technology Index, the FTSE EO Waste Index, the FTSE EO Renewable and Alternative Energy Index, the FTSE EO Energy Efficiency Index, the FTSE EO Renewable and Alternative Energy 50 Index, the FTSE EO Energy Efficiency 50 Index, or FTSE EO Regional and Country Indexes is absorbed by another constituent, the resulting company will remain a constituent of the Index, and a vacancy will be created.
- 6.3.2 If a constituent company in the FTSE EO 100 Index, the FTSE EO Water 30 Index, the FTSE EO Waste 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, or the FTSE EO Energy Efficiency 50 Index, is taken over by a non-constituent company for stock, the original constituent will be removed, and replaced by the highest ranking non-constituent in the Reserve List. Any eligible company resulting from the takeover, subject to Sections 5 and 6 will be eligible for the FTSE EO Index Series.
- 6.3.3 If a constituent company is split to form two or more companies, then the resulting companies will be eligible for inclusion as index constituents in the FTSE EO 100 Index, the FTSE EO Water 30 Index, the FTSE EO Waste 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, and the FTSE EO Energy Efficiency 50 Index, providing they are larger than the smallest constituent, based on their respective full market capitalisations, i.e. before the application of any investability weightings and if they qualify in all other respects. For example, a FTSE EO 100 Index constituent split into two companies may result in one or both of these companies remaining in the FTSE EO 100 Index. Where both of these companies remain in the FTSE EO 100 Index, the smallest FTSE EO 100 Index constituent will be removed from the index and included in the Reserve List.
- 6.3.4 Index constituent changes resulting from the split will be determined based on market values at close on day one of trading and applied with two days' notice. Consequently the FTSE EO 100 Index, FTSE EO Water 30 Index, FTSE EO Waste 30 Index, FTSE EO Renewable and Alternative Energy 50 Index and the FTSE EO Energy Efficiency 50 Index may have more than their fixed number of companies for 3 days.

6.4 **Suspension of Dealing**

- 6.4.1 Please refer to the Corporate Actions and Events Guide.

[Corporate Actions and Events Guide.pdf](#)

Section 7

Corporate Actions and Events

7.0 Corporate Actions and Events

7.1 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide using the following link:

[Corporate Actions and Events Guide.pdf](#)

A Corporate 'Action' is an action on shareholders with a prescribed ex date. The share price will be subject to an adjustment on the ex date. The index will be adjusted in line with the ex date.

These include the following:

- Capital Repayments
- Rights Issues/Entitlement Offers
- Stock Conversion
- Splits (sub-division) / Reverse splits (consolidation)
- Scrip issues (Capitalisation or Bonus Issue)

A Corporate 'Event' is a reaction to company news (event) that may impact the index depending on the index rules. For example, a company announces a strategic shareholder is offering to sell their shares (secondary share offer) – this could result in a free float weighting change in the index. Where an index adjustment is required FTSE Russell will provide notice advising of the timing of the change.

7.2 Shares in Issue

Changes to the number of shares in issue for constituent securities are covered in the Corporate Actions and Events Guide.



Section 8

Industry Classification Benchmark (ICB)

8.0 Industry Classification Benchmark (ICB)

8.1 Classification Structure

8.1.1 In addition to the identification as an EO company, the FTSE EO Index Series constituents are classified into Industries, Supersectors, Sectors and Subsectors, as defined by the Industry Classification Benchmark (ICB).

8.1.2 Details of the Industry Classification Benchmark are available from FTSE Russell and published on the FTSE Russell website (www.ftserussell.com) and can be accessed using the following link:

[Industry Classification Benchmark](#)



Section 9

Indexes Algorithm and Calculation Method

9.0 Indexes Algorithm and Calculation Method

9.1 Prices

9.1.1 The FTSE EO Index Series will use actual last trade prices, where available, for securities.

9.1.2 Thomson Reuters real time exchange rates are used in the real-time index calculations.

9.2 Index Calculation

9.2.1 The FTSE EO Index Series is calculated using the following formula:

$$\sum_{i=1}^N \frac{(p_i \times e_i \times s_i \times f_i \times c_i)}{d}$$

Where,

$i=1,2,\dots,N$

N is the number of securities in the index.

p_i is the latest trade price of the component security (or the price at the close of the index on the previous day).

e_i is the exchange rate required to convert the security's currency into the index's base currency.

s_i is the number of shares in issue used by FTSE Russell for the security, as defined in these Ground Rules.

f_i is the Investability Weighting Factor to be applied to a security to allow amendments to its weighting, expressed as a number between 0 and 1, where 1 represents a 100% free float. This factor is published by FTSE Russell for each security in the underlying index.

c_i is the Capping Factor to be applied to a security to correctly weight that security in the index. This factor maps the investable market capitalisation of each stock to a notional market capitalisation for inclusion in the index.

d is the divisor, a figure that represents the total issued share capital of the index at the base date. The divisor can be adjusted to allow changes in the issued share capital of individual securities to be made without distorting the index.

Section 10

Capping Methodology

10.0 Capping Methodology

- 10.1 The capping process aims to reduce any concentration levels that may exist. The capping process is applied after the close of business on the third Friday in March, June, September and December based on the starting constituents of the next working day. The underlying data used in the capping process is as follows:
- 10.1.1 The security's closing price adjusted for corporate events after the close of business on the second Friday of each quarter.
- 10.1.2 The security's starting shares in issue figure, its investability weight on the next working day following the third Friday of each quarter.
- 10.1.3 The algorithm is applied to each constituent of the FTSE EO 100 Index, the FTSE EO Water 30 Index, the FTSE EO Waste 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, and the FTSE EO Energy Efficiency 50 Index that requires capping, i.e. any constituent whose uncapped weight is greater than 10%.

The Constituent Capping Factor c_i is given by:

$$c_i = \frac{Z}{I \times (p_i \times s_i \times f_i)} \sum_{j \in J} (p_j \times s_j \times f_j)$$

Where,

i denotes the security to be capped.

j denotes an uncapped security.

J is the subset of securities that are uncapped.

p_k is the official closing price of the k^{th} security.

s_k is the number of shares in issue of the k^{th} security.

f_k is the free float factor of the k^{th} security.

I is the percentage of the index represented by all uncapped constituents.

Z is the percentage capping level.

Capping is applied to the constituents of the FTSE EO 100 Index, the FTSE EO Water 30 Index, the FTSE EO Waste 30 Index, the FTSE EO Renewable and Alternative Energy 50 Index, and the FTSE EO Energy Efficiency 50 Index by the following methodology:-

Stage 1

Any companies whose weights are greater than 10% are capped at 10%. The weights of all lower ranking companies are increased correspondingly. The weights of lower ranking companies are then checked and if they exceed 10% they are also capped at 10%. This process is repeated until no company weight exceeds 10%.

If the total index weight of those companies whose individual weights exceed 5% is greater than 40% in aggregate, the procedure moves onto Stage 2 below. Otherwise no further capping is required.

Stage 2

(a) Capping the largest company at 10%

If more than one company is capped at 10% in Stage 1, then weights of all subsequent companies previously capped at 10% are changed in accordance with the rules detailed below.

For example, if the second largest company is capped at 10% its weight will be reduced to 9% as detailed in Stage 2b below. Thus only one company will have a 10% weight in the index.

(b) Capping the second largest company at 9%

If the weight of the second largest company is greater than 9% the company's weight is capped at 9% and the weights of the remaining companies are increased correspondingly.

Following this procedure if the total index weight of those companies whose individual weights exceed 5%, is NOT greater than 40% then no further capping is required.

However, if the total index weight of those companies whose individual weights exceed 5%, IS greater than 40% then the procedure moves onto stage 2c.

Please note: Where the 40% threshold is breached we move to stage 2c even if the second largest company has not been capped.

(c) Capping the third largest company at 8%

If the weight of the third largest company is greater than 8% the company's weight is capped at 8% and the weights of the remaining companies are increased correspondingly.

Following this procedure if the total index weight of those companies whose individual weights exceed 5%, is NOT greater than 40% then no further capping is required.

However, if the total index weight of those companies whose individual weights exceed 5%, IS greater than 40% then the procedure moves onto stage 2d.

Please note: Where the 40% threshold is breached we move to stage 2d even if the third largest company has not been capped.

(d) Capping the fourth largest company at 7%

If the weight of the fourth largest company is greater than 7% the company's weight is capped at 7% and the weights of the remaining companies are increased correspondingly.

Following this procedure if the total index weight of those companies whose individual weights exceed 5%, is NOT greater than 40% then no further capping is required.

However, if the total index weight of those companies whose individual weights exceed 5%, IS greater than 40% then the procedure moves onto stage 2e.

Please note: Where the 40% threshold is breached we move to stage 2e even if the fourth largest company has not been capped.

(e) Capping the fifth largest company at 6%

If the weight of the fifth largest company is greater than 6% the company's weight is capped at 6% and the weights of the remaining companies are increased correspondingly.

Following this procedure if the total index weight of those companies whose individual weights exceed 5%, is NOT greater than 40% then no further capping is required.

However, if the total index weight of those companies whose individual weights exceed 5%, IS greater than 40% then the procedure moves onto stage 2f.

Please note: Where the 40% threshold is breached we move to stage 2f even if the fifth largest company has not been capped.

(f) Capping the sixth largest company at 4%

If the weights of the sixth largest company and any lower ranking companies are greater than 4% those companies' weights are capped at 4% and the weights of lower ranking companies are increased correspondingly.

The process then moves to Stage 3.

Stage 3

Following the application of Stage 2, the weights of each company are checked. If the total index weight of those companies whose individual weights exceed 5% is greater than 40% in aggregate, then further capping is required and Stage 2 is repeated.

Companies are capped using prices as at the close of business on the second Friday in March, June, September and December and shares in issue and free float adjusted for corporate actions as at the Monday after the third Friday. The capping is implemented after the close of business on the third Friday of March, June, September and December.



Appendix A: Index Opening and Closing Hours

Index	Open	Close
FTSE EO Index Series	00:30	21:10
FTSE EO Regional and Country Indexes		
FTSE EO USA Index	14:30	21:10
FTSE EO Europe Index	08:00	16:30
FTSE EO Asia-Pacific Index	00:30	11:30
FTSE EO Asia-Pacific ex-Japan Index	00:30	11:30
FTSE EO Japan Index	00:30	06:45
FTSE EO USA & Alternative Energy Index	00:30	21:10

Notes:

Indexes that disseminate until 21:10 will have the closing value disseminated at 21:30.

Timings are UK hours.



Appendix B: Status of Indexes

The FTSE EO Index Series is calculated on a real time basis and in US Dollars in exclusion to the FTSE EO Japan Index and FTSE EO Europe Index which are calculated in Japanese Yen and Euro respectively. All indexes may exist in the following states.

A) Firm

- i) The indexes are being calculated during Official Market Hours (see Appendix A). No message will be displayed against the index value.
- ii) The Official Closing Price for each FTSE EO Index will be the Exchange Official Closing Price for that Index.

B) Closed

The indexes have ceased all calculations for the day. The message 'CLOSE' will be displayed against the index value calculated by FTSE Russell.

C) Held

During Official Market Hours, an index has exceeded pre-set operating parameters and the calculation has been suspended pending resolution of the problem. The message 'HELD' will be displayed against the last index value calculated by FTSE Russell.

D) Indicative

If there is a system problem or situation in the market that is judged to affect the quality of the constituent prices at any time when an index is being calculated, the index will be declared indicative (e.g. normally where a 'fast market' exists in the equity market). The message 'IND' will be displayed against the index value calculated by FTSE Russell.

The official opening and closing hours of the FTSE EO Index Series are set out in Appendix A. Variations to the official hours of the indexes will be published by FTSE Russell.

US Dollar, Euro, UK Pound Sterling and Japanese Yen values will be calculated on an end-of-day basis.



Appendix C: Further Information

A Glossary of Terms used in FTSE Russell's Ground Rule documents can be found using the following link:

[Glossary.pdf](#)

For further information on the FTSE Environmental Opportunities Index Series, please visit www.ftserussell.com or contact FTSE Russell via e-mail at info@ftserussell.com.

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