FTSE Environmental Technology Index Series
v3.1
## Contents

1.0 Introduction ................................................................................3

2.0 Management Responsibilities .......................................................5

3.0 FTSE Russell Index Policies .........................................................7

4.0 Eligible Securities .......................................................................10

5.0 SI Data Inputs ............................................................................12

6.0 Periodic Review of Constituents ..................................................13

7.0 Changes to Constituent Companies ..............................................15

8.0 Corporate Actions and Events .....................................................17

9.0 Industry Classification Benchmark (ICB) .....................................18

10.0 Index Algorithm and Calculation Method .................................19

11.0 Capping Methodology ..............................................................20

Appendix A: Index Opening and Closing Hours ...............................23

Appendix B: Status of Index ............................................................24

Appendix C: Further Information ....................................................25
Section 1

Introduction

1.0 Introduction

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

1.2 The FTSE Environmental Technology (ET) Index Series comprise the FTSE Environmental Markets family of indexes. The Environmental Markets indexes are designed in partnership with Impax Asset Management, and aim to represent the performance of global companies, taken from the FTSE Global Equity Index Series, that provide products and services offering solutions to environmental problems, or that improve the efficiency of natural resource use.

Full details, including sector and subsector definitions within the FTSE Environmental Markets Classification System can be found on the website Environmental_Markets_Classification_System

1.3 The FTSE Environmental Technology Index Series takes account of ESG factors in its index design. Please see further details in Section 5.

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

1.5 FTSE Russell


1.6 These Ground Rules set out the methodology and provide information about the publication of the FTSE Environmental Technology Index Series.

1.7 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 or investment funds which use the index series to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.

1.8 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 the FTSE Russell Green Industries Advisory Committee (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.

1.9 The following indexes will be calculated in the FTSE Environmental Technology Index Series:

1.9.1 **FTSE ET50 Index**
This Index comprises the largest 50 companies by full market capitalisation that meets the stated eligibility requirements.

1.9.2 **FTSE ET100 Index**
This Index comprises the largest 100 companies by full market capitalisation that meets the stated eligibility requirements. This Index will include all the companies from the FTSE ET50 Index.

1.9.3 **FTSE ET Developed 50 8% Capped Index**
This Index comprises the largest 50 companies by full market capitalisation within the FTSE ET100 Index that are assigned a developed market nationality.

1.10 Price Index values are published on a real time basis in their calculated currencies. Total Return Index values are published at the end of each working day using WM exchange rates set at 16:00 UK time. The Total Return Index includes income based on ex-dividend adjustments. Currencies provided for these indexes will include US Dollar, Euro, UK Pound Sterling, Japanese Yen and Australian Dollar 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 Environmental Technology 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 Environmental Technology 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) and The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019 (the UK Benchmark Regulation).
2.3 FTSE Russell Green Industries 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 to ensure that best practice is used in the construction and ongoing management of the Index Series.

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

FTSE Russell Green Industries 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.

2.4.2 As provided for in the Statement of Principles for FTSE Russell Equity Indexes, where FTSE Russell or the FTSE Russell Green Industries 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 Rules do not fully cover a specific event or development, FTSE Russell 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:


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
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[Index_Policy_in_the_Event_Clients_are_Unable_to_Trade_a_Market.pdf](#)

3.8 **Recalculation Policy and Guidelines**

3.8.1 The FTSE Environmental Technology Index Series is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE Environmental Technology 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](#)

3.9 **Policy for Benchmark Methodology Changes**

3.9.1 Details of FTSE Russell’s policy for making benchmark methodology changes can be accessed using the following link:

[Policy_for_Benchmark_Methodology_Changes.pdf](#)

3.10 **Challenges Against Classification within the FTSE Environmental Markets Classification System**

3.10.1 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.

3.10.2 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.

3.11 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 Russell Green Industries 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 Russell Green Industries Advisory Committee, will normally be considered at that meeting.
3.1 **FTSE Russell Governance Framework**

3.1.1 To oversee its indexes, FTSE Russell employs a governance framework that encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group's three lines of defence risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks\(^2\), the European benchmark regulation\(^3\) and the UK benchmark regulation\(^4\). The FTSE Russell Governance Framework can be accessed using the following link:

[FTSE Russell Governance Framework.pdf](#)

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\(^2\) IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013

\(^3\) 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

\(^4\) The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019
Section 4

Eligible Securities

4.0 Eligible Securities

4.1.1 Companies that are included in the FTSE Global All Cap Index Series are eligible for inclusion in the FTSE Environmental Technology 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.  

4.1.2 All classes of the ordinary shares in issue are eligible for inclusion in the FTSE Environmental Technology Index Series, subject to conforming to all other rules of eligibility, free float and liquidity.

4.1.3 In order to ascertain whether a company is eligible, the FTSE Russell Green Industries Advisory Committee will consider analysis is carried out by Impax Asset Management in line with the periodic reviews for each of the prospective ET companies. This will involve consideration of each of the following parameters:

A. \[\frac{\text{ET revenues}}{\text{total revenues}}\]
B. \[\frac{\text{ET invested capital}}{\text{total invested capital}}\]
C. \[\frac{\text{ET EBITDA}}{\text{total EBITDA}}\]

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

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

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

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5 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.
B. Manufacturers of recycled goods; where the proportion of the company's products that are produced from recycled content is assessed.

4.1.5 A company will be eligible for the FTSE Environmental Technology Index Series if any of the three calculations is greater than 50%. The company would then be eligible for inclusion in the FTSE Environmental Technology Index Series.

4.1.6 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 55% in any one of the calculations. In addition, at reviews, current constituents will only be ineligible (on an ET basis) if they fall below 45% in all of the calculations.
Section 5

Sustainable Investment Data Inputs

5.0 SI Data Inputs

5.1 Impax Asset Management

5.1.1 The role of Impax is to assess the eligible securities for Environmental Markets activity as outlined in Section 4. Input data is sourced from Impax using publicly available information and analysts’ expertise. Impax provides detailed breakdowns of activity percentages, which are the basis for the overall activity.

Further details on the use of third party data can be found in the following guide:

Guide_to_Third_Party_Sustainable_Investment_Data_used_in_FTSE_Russell_Indexes.pdf

5.2 Quality Procedures

5.2.1 FTSE Russell conducts quality checks to identify discrepancies and ensure fidelity to the Ground Rules and classification rules; these checks are focused on detailed reviews of underlying sector data for proper alignment to environmental classification which results in index inclusion.

5.3 Sustainable Investment Metrics

5.3.1 Please see the FTSE Russell Sustainable Investment Metrics website for the ratings, scores and values of the environmental, social and governance (ESG) factors listed in Annex II to Delegated Regulation (EU) 2020/1816 which are taken into account in the benchmark methodology for the benchmarks within this index series.
Section 6

Periodic Review of Constituents

6.0 Periodic Review of Constituents

6.1 Review Dates

6.1.1 The FTSE Environmental Technology 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.

6.1.2 The semi-annual review will be implemented after the close of business on the third Friday (i.e. effective Monday) of June and December.

6.1.3 Capping will be implemented quarterly after the close of business on the third Friday in March, June, September and December.

6.2 Rules for Insertion and Deletion at the Periodic Review

6.2.1 The rules for inserting and deleting securities at the periodic review are designed to provide stability in the selection of constituents of the FTSE Environmental Technology Index Series while ensuring that the Index continue to be representative of the market by including or excluding those securities which have risen or fallen significantly.

6.2.2 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 Environmental Technology Index Series are ranked by full market capitalisation, i.e. before the application of any investability weighting:

- FTSE ET50 Index - Risen to 40th or above
- FTSE ET100 Index - Risen to 90th or above
- FTSE ET Developed 50 8% Capped Index - Risen to 40th or above

6.2.3 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 Environmental Technology Index Series are ranked by full market capitalisation, i.e. before the application of any investability weighting:

- FTSE ET50 Index - Fallen to 61st or below
- FTSE ET100 Index - Fallen to 111th or below
- FTSE ET Developed 50 8% Capped Index - Fallen to 61st or below

6.2.4 A constant number of 50 constituents will be maintained for the FTSE ET50 Index and the FTSE ET Developed 50 8% Capped Index, and a constant number of 100 constituents will be maintained for
the FTSE ET100 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.

6.2.5 Where a company is deleted from the FTSE Environmental Technology Index Series after the periodic changes to the indexes, 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 6.4), excluding current index constituents, will replace the deleted company.

6.3 Monitoring of Eligible Companies

6.3.1 The market capitalisation of companies eligible for inclusion in the FTSE Environmental Technology Index Series is monitored by FTSE. All listed securities that pass Impax Asset Management’s ET and PPA criteria will be included in the periodic reviews.

6.4 Reserve List

6.4.1 FTSE Russell will be responsible for publishing a maximum of the five highest ranking non-constituents of the FTSE ET50 Index and the FTSE ET Developed 50 8% Capped 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.

6.4.2 FTSE Russell will be responsible for publishing the ten highest ranking non-constituents of the FTSE ET100 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.

6.5 Capping Methodology

6.5.1 The FTSE Environmental Technology Index Series uses capping methodology every quarter to reduce concentration for constituents that are considered overweighted in the index. The capping methodology is described in more detail in Section 11.
Section 7

Changes to Constituent Companies

7.0 Changes to Constituent Companies

7.1 New Issues

7.1.1 Impax Asset Management will notify the FTSE Russell Green Industries Advisory Committee as soon as possible if there are any new company issues expected. The new issue will have to pass the criteria detailed in Rule 4.1.3 and ranked at least 10th or higher in the FTSE ET50 Index or the FTSE ET100 Index or the FTSE ET Developed 50 8% Capped Index, before application of individual constituent investability weightings. FTSE Russell will normally decide to include the new issue as a constituent of the FTSE Environmental Technology Index Series after the close of business on the second day of official trading. Therefore the lowest ranking constituent in the FTSE ET50 Index or the FTSE ET100 Index or the FTSE ET Developed 50 8% Capped Index will be removed and included in their respective Reserve List. In all cases, advance notification confirming the timing of the inclusion of the new constituent will be given.

7.1.2 If a constituent of the FTSE Environmental Technology Index Series is delisted it will be removed from the Index. The constituent will be replaced by the highest ranking company in the Reserve List by full market capitalisation two days prior to the event being implemented.

7.1.3 If FTSE Russell decides to include a new issue as a constituent security other than as part of the normal periodic review procedure, this decision must be announced to the market prior to the implementation.

7.1.4 The new issue will also be subject to the free float, cross-holdings and foreign ownership restriction and other requirements detailed in Section 4.

7.2 Deletions and Replacements

7.2.1 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 Environmental Technology Index Series.

7.2.2 When the company is removed from the FTSE ET50 Index or the FTSE ET100 Index or the FTSE ET Developed 50 8% Capped Index, the vacancy will be filled by selecting the highest ranking security by full market value in the relevant Reserve List as at the close of the index calculation two days prior to the deletion and adjusted accordingly such changes will be announced to the market prior to the implementation.

7.2.3 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.
7.3 Mergers, Restructuring and Complex Takeovers

7.3.1 If the effect of a merger or takeover is that one constituent in the FTSE ET50 Index or the FTSE ET100 Index or the FTSE ET Developed 50 8% Capped Index is absorbed by another constituent, the resulting company will remain a constituent of the relevant Index, and a vacancy will be created. This vacancy will be filled by selecting the highest ranking security by full market capitalisation in the relevant Reserve List as at the close of the index calculation two days prior to the deletion.

7.3.2 If a constituent company in the FTSE ET50 Index or the FTSE ET100 Index or the FTSE ET Developed 50 8% Capped Index is taken over by an ineligible non-constituent company, the original constituent will be removed and replaced by the highest ranking non-constituent in the relevant Reserve List. Any eligible company resulting from the takeover, subject to Section 4, will be eligible to become the replacement company if it is ranked higher than any company on the relevant Reserve List.

7.3.3 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 Environmental Technology Index Series providing they are larger than the smallest constituent in the relevant Index, 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 ET50 constituent split into two companies may result in one or both of these companies remaining in the FTSE ET50 Index. Where both of these companies remain in the FTSE ET50 Index, the smallest FTSE ET50 Index constituent will be removed from the index and included in the Reserve List.

7.3.4 Index constituent changes resulting from a split will be determined based on market values at close on day one of trading and applied with two days’ notice. Consequently the FTSE ET50 Index, the FTSE ET Developed 50 8% Capped Index and the FTSE ET100 Index may have more than 50 or 100 companies for three days.

7.3.5 Any changed pursuant to Rule 7.3 will be announced to the market prior to the implementation.
Section 8
Corporate Actions and Events

8.0 Corporate Actions and Events

8.1 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. 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.

8.2 Shares in Issue

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

8.3 Suspension of Dealing

Suspension of dealing rules can be found within the Corporate Actions and Events Guide.
Section 9

Industry Classification Benchmark (ICB)

9.0 Industry Classification Benchmark (ICB)

9.1 Classification Structure

9.1.1 In addition to the identification as an ET company, the FTSE Environmental Technology Index Series constituents are classified into Sectors and Subsectors, as defined by the FTSE Environmental Markets Classification System (EMCS); they are also classified into Industries, Supersectors, Sectors and Subsectors, as defined by the Industry Classification Benchmark (ICB).

9.1.2 Details of the Environmental Markets Classification System and Industry Classification Benchmark are available from FTSE Russell (see Appendix B) and published on the FTSE Russell website (www.ftserussell.com) and can be accessed using the following link:

Industry Classification Benchmark

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6 FTSE indexes will migrate to the new ICB classification system in March 2021
Section 10

Index Algorithm and Calculation Method

10.0 Index Algorithm and Calculation Method

10.1 Prices

10.1.1 The FTSE Environmental Technology Index Series will use actual last trade prices, where available, for securities.

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

10.2 Index Calculation

10.2.1 The FTSE Environmental Technology Index Series is calculated using the following formula:

\[ \frac{\sum_{i=1}^{N} \left( p_i \times e_i \times s_i \times f_i \times c_i \right)}{d} \]

Where,

\( i = 1, 2, \ldots, N \)

\( N \) 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 11

Capping Methodology

11.0 Capping Methodology

11.1 The FTSE Environmental Technology Index Series 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:

11.1.1 The security’s closing price adjusted for corporate events after the close of business on the second Friday of each quarter.

11.1.2 The security’s starting shares in issue figure, its investability weight on the next working day following the third Friday of each quarter.

11.2 FTSE ET50 Index and FTSE ET100 Index Capping Methodology

The algorithm is applied to each constituent of the FTSE ET50 Index and the FTSE ET100 Index that requires capping, i.e. any constituent whose uncapped weight is greater than 10%.

The Constituent Capping Factor $c_i$ is given by:

$$c_i = \frac{Z}{I \times \left( \sum_{j \in J} (p_j \times s_j \times f_j) \right)}$$

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 Environmental Technology Index Series 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.

11.3 **FTSE ET Developed 50 8% Capped Index Capping Methodology**

Any companies whose weights are greater than 8% are capped at 8%. The weights of all lower ranking companies are increased correspondingly. The weights of lower ranking companies are then checked and if they exceed 8% they are also capped at 8%. This process is repeated until no company weight exceeds 8%
## Appendix A: Index Opening and Closing Hours

<table>
<thead>
<tr>
<th>Index</th>
<th>Open</th>
<th>Close</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE Environmental Technology Index Series</td>
<td>00:30</td>
<td>21:10</td>
</tr>
</tbody>
</table>

**Notes:**

Closing values at 21:10 will be disseminated at 21:30

Timings are UK hours.
Appendix B: Status of Index

The FTSE Environmental Opportunities UK Index is calculated in UK Pound Sterling on a real time basis and may exist in the following states.

A) Firm
   i) The index is being calculated during Official Market Hours (see Appendix A). No message will be displayed against the index value.
   ii) The Official Closing Price for FTSE Environmental Opportunities UK Index will be the London Stock Exchange Official Closing Price for the index.

B) Closed
   The index has 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, the 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 the 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 Environmental Opportunities UK Index are set out in Appendix A. Variations to the official hours of the index 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

The FTSE Russell Sustainable Investment Metrics website can be found using the following link: Sustainable Investment Metrics

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

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