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Section 1

Introduction

1.0 Introduction

1.1 This document sets out the Ground Rules for the construction and management of the FTSE Global Climate Index Series. Copies of these Ground Rules are available from www.ftserussell.com.

1.2 The FTSE Global Climate Index Series is designed to reflect the performance of indexes incorporating climate change considerations.

1.3 The FTSE Global Climate Index Series takes account of ESG factors in its index design. Please see further details in Section 4.

1.4 These Ground Rules should be read in conjunction with the FTSE Global Equity Index Series Ground Rules, Russell U.S. Equity Indexes Methodology and the Corporate Actions and Events Guide for Non Market Cap Weighted Indexes which are available at www.ftserussell.com.

1.5 Price and Total Return Indexes will be calculated on an end of day basis.

1.6 The base currency of all indexes US Dollars (USD) and may also be published in other currencies.

1.7 FTSE Russell


1.8 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 benchmark to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.

1.9 Index users who choose to follow this index series or to buy products that claim to follow this index should assess the merits of the index series’ 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 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 series or any constituent data.
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 index and will:

- maintain records of the index weightings of all constituents;
- make changes to the constituents and their weightings in accordance with the Ground Rules;
- carry out the periodic 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 index series.

2.1.3 These Ground Rules set out the methodology and provide information about the publication of the FTSE Global Climate Index Series.

2.2 Amendments to these Ground Rules

2.2.1 These Ground Rules shall be subject to regular review 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.

\(^1\) 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).
2.2.2 As provided for in the Statement of Principles for FTSE Russell Equity Indexes, where FTSE Russell 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

3.2 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide for Non Market Cap Weighted Indexes using the following link:

Corporate_Actions_and_Events_Guide_for_Non_Market_Cap_Weighted_Indices.pdf

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

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 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 FTSE Russell’s Product Governance Board.

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


3.4 Queries and Complaints

3.4.1 FTSE Russell’s complaints procedure can be accessed using the following link:

Benchmark_Determination_Complaints_Handling_Policy.pdf

3.5 Index Policy for Trading Halts and Market Closures

3.5.1 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
3.6 **Index Policy in the Event Clients are Unable to Trade a Market**  
3.6.1 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

3.7 **Recalculation Policy and Guidelines**  
3.7.1 The FTSE Global Climate Index Series is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE Global Climate 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

3.8 **Policy for Benchmark Methodology Changes**  
3.8.1 Details of FTSE Russell’s policy for making benchmark methodology changes can be accessed using the following link:  
Policy_for_Benchmark_Methodology_Changes.pdf
Section 4

Sustainable Investment Data Inputs

4.0 SI Data Inputs

The following Sustainable Investment datasets are used in the construction of the FTSE ESG Global Climate Indexes

4.1 Green Revenues

Further information on the FTSE Green Revenues can be found here: https://www.ftserussell.com/data/sustainability-and-esg-data/green-revenues-data-model

4.2 Operational Carbon Emission and Fossil Fuel Reserves

4.2.1 Operational Carbon Emissions and Fossil Fuel Reserves data are subject to regular checks to identify discrepancies and ensure accuracy. These checks include trend analysis to assess data quality and detailed review of underlying data for significant changes in data values.

4.2.2 Further details third party data can be found in the following guide

Guide to Third Party Sustainable Investment Data used in FTSE Russell Indexes.pdf

4.3 Product involvement exclusions and UNGC exclusions

4.3.1 Product and activity involvement data are collected from publicly available information by FTSE Russell analysts. Where data is not obtained by FTSE Russell analysts, external sources are used to supplement the data, including from Sustainalytics.

4.3.2 All data undergo several layers of quality control including consistency checks over time, sector-relative checks, and knowledge checks. Where discrepancies are found analysts refer to primary data sources.

4.3.3 Where possible, the definitions for the products and activities refer to international standards and agreements such as the Convention on Cluster Munitions, Ottawa Treaty, and the Biological Weapons Convention.

4.3.4 Further information as to the definitions can be found in section 5.

4.3.5 Further details of the use of Sustainalytics and other third party data can be found in the following guide:

Guide to Third Party Sustainable Investment Data used in FTSE Russell Indexes.pdf
Section 5

ESG and Carbon Definitions

5.0 Green Revenues, Operational Carbon Emissions and Fossil Fuel Reserves

5.1 Green Revenues (GR)

The Green Revenues percentages are derived from the FTSE Green Revenues as detailed in the FTSE Green Revenues Index Series.

5.2 Operational Carbon Emissions Intensity (OE)

Operational Carbon Emissions Intensity is defined as the latest annual CO2 equivalent greenhouse gas (GHG) emissions in metric tons scaled by annual sales (in USD). CO2 equivalent GHG emissions data is defined as GHG Protocol Scope 1 and 2 emissions. Annual sales data is sourced from third party data providers. The data cut-off date for the availability of Operational Carbon Emissions Intensity is the close of business on the last business day of the month prior to the September review month.

5.3 Fossil Fuel Reserve Intensity (R)

Fossil Fuel Reserve Intensity is defined as the estimated CO2 equivalent GHG emissions in metric tons generated by the combustion of a company’s fossil fuel reserves, divided by its full company market capitalisation (in USD). The data cut-off date for the availability of Fossil Fuel Reserve Intensity is the close of business on the last business day of the month prior to the September review month.

5.4 Z-Scores and Missing Data Treatment

5.4.1 Individual stock quantities are normalised cross-sectionally to create Z-Scores within each eligible universe according to:

\[ Z_{F,i} = \frac{F_i - \mu_F}{\sigma_F} \quad \text{where} \quad F \in \{E, OE, \log(R)\} \]  

where \( F_i \) is the \( F \)-quantity of the \( i \)th stock and \( \mu_F \) and \( \sigma_F \) are its cross-sectional factor mean and standard deviation respectively.

Z-Scores that are greater (less) than three (minus three) are truncated to a value of three (minus three). Post-truncation, individual Z-Scores are renormalized by the re-application of equation (1). All Z-Scores, including truncated ones are included in this re-application. This process is repeated until all Z-Scores lie in a range between plus and minus three. Missing data is excluded from this process.

5.4.2 Missing ESG ratings and Operational Carbon Emissions Intensities are assigned a Z-Score of 0 at the end of the process described in 4.4.1.

5.4.3 Companies identified as having non-zero Fossil Fuel Reserves Intensities but with no available reserves data are treated as having missing data when calculating the Z-Scores in 4.4.1. However at the end of the process they are assigned a Z-Score in accordance with the following rules:
- Companies in the ICB sub-sector Coal Mining (1771) are assigned the average Z-score of companies in the Coal Mining sub-sector. If there are no companies in the Coal Mining sub-sector with reserve data, a Z-score of 0 is assigned.

- Companies in the ICB sector Oil & Gas Producers (0530) and Oil & Gas Services & Distributions (0570) are assigned the average Z-score of companies in the Oil & Gas Producers sector and Oil & Gas Services & Distributions respectively. If there are no companies with reserve data in such a sector, a Z-score of 0 is assigned.

- Companies in the ICB sub-sector General Mining (1775) which are identified via FTSE Sustainable Investment data to own coal reserves are assigned the average Z-score of companies in the General Mining sub-sector which own reserves and for which data is available. If there are no companies in the General Mining sub-sector with reserve data, a Z-score of 0 is assigned.

- Companies outside ICB sub-sectors 1771, 1775 and 0530 which are identified via FTSE Sustainable Investment data to own coal reserves, are assigned the average Z-score of companies outside the ICB sub-sectors 1771, 1775 and 0530 which own reserves and for which data is available. If there are no companies outside the ICB sub-sectors 1771, 1775 and 0530 with reserve data, a Z-score of 0 is assigned.

5.4.4 Companies with zero Fossil Fuel Reserve Intensities are treated as having missing data when calculating the Z-Scores in Rule 4.4.1. At the end of the process they are assigned a Z-Score of -3.
Section 6

Eligible Securities

6.0 Eligible Securities

6.1.1 The eligible securities of each Climate index are the constituents of the corresponding underlying index shown in Table 1.

6.1.2 Securities that are members of the applicable exclusion list are not eligible for membership of the relevant Climate index.

6.2 Multiple Lines

6.2.1 All lines of the same company that are eligible securities are eligible for inclusion in the index.

6.3 Climate Indexes

The FTSE Global Climate Index Series consists of the following indexes.

Table 1: Climate Indexes

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Underlying Universe</th>
<th>Exclusion List(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE All-World ex CW Climate Indexes</td>
<td>FTSE All-World Index</td>
<td>Controversial Weapons (see Rule 4.3.1)</td>
</tr>
<tr>
<td>FTSE All-World ex CW ex UN Controversies Climate Index</td>
<td>FTSE All-World Index</td>
<td>Controversial Weapons (see Rule 4.3.1) UN Controversies (see Rule 4.3.2)</td>
</tr>
<tr>
<td>FTSE Developed Climate Index</td>
<td>FTSE Developed Index</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>FTSE Developed ex US Climate Index</td>
<td>FTSE Developed ex US Index</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Russell 1000 Climate Index</td>
<td>Russell 1000 Index</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

6.3.1 The Controversial Weapons (CW) exclusions list includes companies that manufacture or provide specific parts for anti-personnel mines, cluster munitions, chemical and biological weapons. The controversial weapon (CW) exclusions will be reviewed semi-annually in March and September.

6.3.2 The UN Controversies exclusion list includes companies that potentially breach the United Nations Global Compact (UNGC) principles which are available on the United Nations Global Compact website.

The principles are classified into four categories; Human Rights, Labour, Environment and Anti-Corruption. Companies are monitored using multiple information sources including media and press,
NGO sources, company reports, and regulatory filings. FTSE Russell conducts its own research in addition to using third party data. The UN Controversies exclusions will be reviewed quarterly in March, June, September and December.
Section 7

Periodic Review of Constituent Companies

7.0 Periodic Review of Constituent Companies

7.1 Review Dates

5.1.1 The FTSE Global Climate Indexes are reviewed annually in June or September.

<table>
<thead>
<tr>
<th>FTSE Indexes</th>
<th>Review Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE All-World ex CW Climate Index</td>
<td>September</td>
</tr>
<tr>
<td>FTSE All-World ex CW ex UN Controversies Climate Index</td>
<td>September</td>
</tr>
<tr>
<td>FTSE Developed Climate Index</td>
<td>September</td>
</tr>
<tr>
<td>FTSE Developed ex US Climate Index</td>
<td>September</td>
</tr>
<tr>
<td>Russell 1000 Climate Index</td>
<td>June</td>
</tr>
</tbody>
</table>

7.1.2 Index reviews will use Green Revenue and Carbon characteristics data as of the last business day of August (the data cut-off date).

7.1.3 Index reviews will use stock prices available as at the close of business on the Wednesday before the first Friday of the review month (price cut-off date), except for the Russell 1000 Climate Index whose price cut-off date is the Wednesday before the second Friday of the review month.

7.1.4 The review will be implemented after the close of business on the third Friday of the review month except for the Russell 1000 Climate Index that is implemented on the same date as the Russell 1000 annual reconstitution.

7.1.5 Index reviews will incorporate constituent changes associated with reviews of the underlying eligible universe as of the review effective date.
Section 8

Weighting Methodology

8.0  Weighting Methodology

8.1  Index Weights

8.1.1  Constituent weightings in the FTSE Global Climate Index Series are based on three aspects of climate change.

8.1.2  The climate change adjustments are:

- Fossil Fuel Reserves
  - Reserves Rule 1: Separate Coal and Oil & Gas Reserves adjustments
  - Reserves Rule 2: Fossil Fuel Reserves adjustment
- Operational Carbon Emissions: Low Operational Carbon Emissions and Low Operational Carbon Emissions sector adjustment
- Green Revenue adjustment

8.1.3  The FTSE Global Climate Indexes use either Reserves Rule 1 or 2:

<table>
<thead>
<tr>
<th>FTSE Indexes</th>
<th>Reserve Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE All-World ex CW Climate Index</td>
<td>Reserves Rule 2</td>
</tr>
<tr>
<td>FTSE All-World ex CW ex UN Controversies Climate Index</td>
<td>Reserves Rule 2</td>
</tr>
<tr>
<td>FTSE Developed Climate Index</td>
<td>Reserves Rule 2</td>
</tr>
<tr>
<td>FTSE Developed ex US Climate Index</td>
<td>Reserves Rule 2</td>
</tr>
<tr>
<td>Russell 1000 Climate Index</td>
<td>Reserves Rule 2</td>
</tr>
</tbody>
</table>

8.1.4  The unconstrained review weight of each constituent in the FTSE Global Climate Index Series is:

\[
w_i = \frac{v_i}{\sum_j v_j}
\]

where under Reserves Rule 1

\[
v_i = w_i^I \times A_i^{CR} \times A_i^{OG} \times A_i^{CE} \times A_i^{CS} \times A_i^{GR} \times A_i^{MQ} \times A_i^{CP}
\]

And under Reserves Rule 2

\[
v_i = w_i^I \times A_i^{FF} \times A_i^{CE} \times A_i^{CS} \times A_i^{GR} \times A_i^{MQ} \times A_i^{CP}
\]
where

- $w'_i$ is the market capitalisation weight of stock $i$ in the underlying eligible universe.
- $A_i^{CR}$ and $A_i^{OG}$ are the Coal Reserves and the Oil & Gas Reserves adjustments for stock $i$ (rule 8.2).
- $A_i^{FF}$ is the Fossil Fuel Reserves adjustment for stock $i$ (rule 8.3).
- $A_i^{CE}$ and $A_i^{CS}$ are the Low Operational Carbon Emissions adjustment and the Low Operational Carbon Emissions sector adjustment respectively of stock $i$ (rule 8.4).
- $A_i^{GR}$ is the Green Revenue adjustment of stock $i$ (rule 8.5).

8.2 Fossil Fuel Reserves Rule 1: Coal Reserves and Oil & Gas Reserves Adjustments

8.2.1 Rule 1 has two components; $A_i^{CR}$ the Coal Reserves and $A_i^{OG}$, the Oil & Gas Reserves adjustments.

8.2.2 Annual Fossil Fuel Reserves data are sourced from third party data providers.\(^2\)

8.2.3 Coal Reserves Adjustment

- Companies classified as Industry Classification Benchmark (ICB) sub-sector Coal Mining (1771) will be assigned a Coal Reserves adjustment of 0: $A_i^{CR} = 0$.
- Companies not classified as ICB sub-sector Coal Mining (1771), that own coal reserves will be assigned a Coal Reserves adjustment of 0.25: $A_i^{CR} = 0.25$.
- The Coal Reserves adjustment of the remaining constituents is calculated as:

$$A_i^{CR} = \frac{1 - 0.25 \times w'_{other}}{1 - (w'_i + w'_other)}$$

where $w'_{coal}$ and $w'_{other}$ are the aggregate market capitalisation weights of ICB sub-sector Coal Mining (1771) and stocks assigned a Coal Reserves adjustment of 0.25 respectively.

8.2.4 Oil & Gas Reserves Adjustment

- Companies classified as ICB sector Oil & Gas Producers (0530) and Oil Equipment, Services & Distribution (0570) will be assigned an Oil & Gas Reserves adjustment of 0.75: $A_i^{OG} = 0.75$.
- The remaining constituents are assigned the following Oil & Gas Reserves adjustment

$$A_i^{OG} = \frac{1 - 0.75 \times w'_OG}{1 - w'_OG}$$

where $w'_OG$ is the market capitalisation weight of ICB sector Oil & Gas Producers (0530) and Oil Equipment, Services & Distribution (0570) in the underlying eligible universe.

- Companies classified as ICB sector Oil & Gas Producers (0530) only are further adjusted towards low Carbon Reserve Intensity companies. Carbon Reserve Intensity is defined as the natural logarithm of the estimated CO\(_2\) equivalent greenhouse gas (GHG) emissions in metric tons through the use and combustion of recoverable oil and gas reserves scaled by full market capitalisation (in USD). Data is from the latest published accounts at the data cut-off date. The Carbon Reserve Intensity measure is converted to a Z-Score and subsequently to an S-Score as detailed in FTSE Global Factor Index Series Ground Rules. The S-Score is the Oil & Gas Reserve factor adjustment:

\(^2\) Third party providers may include modelled, as well as collected, data.
Companies not classified as ICB sector Oil & Gas Producers (0530), are awarded a neutral score of 0.5: $S_{OG}^{i} = 0.5$. The Oil & Gas Reserves adjustment is formed by combining the sector adjustments with the Carbon Reserve Intensity S-Score:

$$A_{i}^{OG} = A_{i}^{OG*} \times S_{i}^{OG}$$

8.3 **Fossil Fuel Reserves Rule 2: Fossil Fuel Reserves Adjustment**

8.3.1 Rule 2, adjustment is derived directly from company total coal, oil and gas reserves.

8.3.2 Annual fossil fuel reserve data are sourced from third party data providers.3

8.3.3 For companies which own fossil fuel reserves, the Carbon Reserve Intensity is calculated. Carbon Reserve Intensity is defined as the natural logarithm of the estimated CO2 equivalent greenhouse gas (GHG) emissions in metric tons generated by the combustion of a company’s fossil fuel reserves, divided by the full company market capitalisation (in USD). Data is from the latest published accounts at the data cut-off date. The Carbon Reserve Intensity measure is converted to a Z-Score and subsequently to an S-Score as detailed in FTSE Global Factor Index Series Ground Rules. The S-Score is the Fossil Fuel Reserve adjustment: $A_{i}^{FF}$. Companies which do not own fossil fuel reserves are awarded a score of 1: $A_{i}^{FF} = 1$.

8.3.4 Companies with missing fossil fuel reserve data are identified and treated on a peer group basis:

- Companies in the ICB sub-sector Coal Mining (1771) which do not have reserve data available are assigned the average Z-score of companies in the Coal Mining sub-sector. If there are no companies in the Coal Mining sub-sector with reserve data, the Z-score of 0 is assigned.

- Companies in the ICB sector Oil & Gas Producers (0530) and Oil & Gas Services & Distributions (0570) which do not have reserve data available are assigned the average Z-score of companies in the Oil & Gas Producers sector and Oil & Gas Services & Distributions. If there are no companies in the Oil & Gas Producers sector and Oil & Gas Services & Distributions with reserve data, the Z-score of 0 is assigned.

- Companies in the ICB sub-sector General Mining (1775) which do not have specific reserve data available, but which are identified via FTSE Sustainable Investment data to own coal reserves, are assigned the average Z-score of companies in the General Mining sub-sector which own reserves and for which data is available. If there are no companies in the General Mining sub-sector with reserve data, the Z-score of 0 is assigned.

- Companies outside ICB (sub-)sectors 1771, 1775 and 0530 which do not have specific reserve data available, but which are identified via FTSE Sustainable Investment data to own coal reserves, are assigned the average Z-score of companies outside the ICB (sub-)sectors 1771, 1775 and 0530 which own reserves and for which data is available. If there are no companies outside the ICB (sub-)sectors 1771, 1775 and 0530 with reserve data, the Z-score of 0 is assigned.

8.4 **Operational Carbon Emissions Adjustment**

8.4.1 Operational Carbon Emissions are defined as the latest annual Operational Carbon Emissions of CO2 equivalent GHG emissions in metric tons scaled by annual sales in excess of the ICB sector average. Operational Carbon Emissions data defined as GHG Protocol Scope 1 and 2 emissions and annual sales data is sourced from third party data providers.

---

3 Third party providers may include modelled, as well as collected, data.
8.4.2 Operational Carbon Emissions are converted to a Z-Score and subsequently to an S-Score as detailed in FTSE Global Factor Index Series Ground Rules to form the Low Operational Carbon Emissions adjustment of each stock: $A_{i}^{CE}$.

8.4.3 The Low Operational Carbon Emissions sector neutrality adjustment, $A_{i}^{CS}$, adjusts stock weights to limit the sector effects arising from the Low Operational Carbon Emissions stock adjustment described in rule 8.4.2. For constituent $i$ of sector $H$, the adjustment is calculated as:

$$A_{i}^{CS} = \frac{\sum_{j \in H} w_{j}^{'} \times A_{j}^{CE}}{\sum_{j \in H} A_{j}^{CE} \times w_{j}^{'}} , \forall i \in H$$

where $w_{j}^{'}$ is the market capitalisation weight of stock $j$ in the underlying eligible universe.

8.5 Green Revenue Adjustment

8.5.1 The FTSE Green Revenues factor for a company is the ratio of revenues as classified by the FTSE Green Revenues Classification System to total revenue.

8.5.2 All constituent securities are assigned a FTSE Green Revenues factor value. The FTSE Green Revenues factor can be:

- Zero if a constituent company has no exposure to the Green Economy.
- A greater than zero value, when exact Green Revenues were disclosed by a constituent company.
- The minimum of the stated range of possible Green Revenues, when a company discloses insufficient information for a precise determination of the FTSE Green Revenues factor.

8.5.3 The Green Revenue adjustment for each stock, $A_{i}^{GR}$, is assigned using the following process 8.5.4-8.5.6:

8.5.4 Constituents with exposure to the Green Economy and non-zero Green Revenues have their Green Revenue adjustments set to $(1 + GRF_{i}^{1})$, where $GRF_{i}$ is the FTSE Green Revenues factor.

8.5.5 Constituents with exposure to the Green Economy via a stated range with a minimum of zero Green Revenues have their Green Revenue adjustments set to 1.

8.5.6 Constituents with no exposure to the Green Economy have their Green Revenue adjustments set to $1 - \frac{\sum_{j \in G} (w_{j}^{'} \times GRF_{j})}{\sum_{j \in G^{*}} w_{j}^{'}}$ to reflect the overweighting in 8.5.4, where $w_{j}^{'}$ is the market capitalisation weight of stock $j$ in the underlying universe, $G$ is the collection of constituents with Green Revenues, and $G^{*}$ is the collection of constituents with no Green Revenues.

8.5.7 In the event that the aggregate weight of constituents with no exposure to the Green Economy is less than the aggregate overweighting from 8.5.4, i.e. $\frac{\sum_{j \in G} (w_{j}^{'} \times GRF_{j})}{\sum_{j \in G^{*}} w_{j}^{'}} > 1$ additional rules 8.5.8 to 8.5.10 are applied:

8.5.8 Constituents with exposure to the Green Economy via non-zero Green Revenues have their investable market capitalisation weights increased by $(1 + \alpha \times GRF_{i})$, where $\alpha$ reflects the feasible level of over weighting.

---

4 For further details of the FTSE Green Revenues Classification System, please refer to FTSE Russell Sustainable Investment Data available at https://qsd.ftserussell.com.
\[ \alpha = \frac{\sum_{i \in G} w'_i \cdot \sum_{j \in G^*} w'_j \times GRF_j}{\sum_{i \in G} w'_i} \]

where \( w'_i \) (or \( w'_j \)) is the market capitalisation weight of stock \( i \) (or \( j \)) in the underlying universe, \( G \) is the collection of constituents with Green Revenues, and \( G^* \) is the collection of constituents with no Green Revenues.

8.5.9 Constituents with exposure to the Green Economy via a stated range with a minimum of zero Green Revenues have their Green Revenue adjustments set to 1.

8.5.10 Constituents with no exposure to the Green Economy have their Green Revenue adjustments set to 0.

8.6 **Capacity, Constraints and Minimum Stock Weights**

8.6.1 The maximum stock level capacity ratio and constraints are applied to the index without narrowing as detailed in the FTSE Global Factor Index Series Ground Rules.

8.6.2 A minimum stock weight threshold is applied to the final indexes. Any stock weight that is less than the minimum weight threshold is treated as having a zero weight in the relevant index. Any resulting excess weight will be redistributed amongst the remaining constituents proportional to their index weights. The minimum stock weight is 0.5bps for all FTSE Global Climate Indexes.

8.7 **Index Back-Histories**

8.7.1 The annual Fossil Fuel Reserves, Operational Carbon Emissions and annual sales data prior to the launch of the FTSE Global Climate Index Series are lagged by one year.
Section 9

Changes to Constituent Companies

9.0 Changes to Constituent Companies

9.1 Intra-review Additions

9.1.1 Additions into the FTSE Global Climate Index Series will be considered for inclusion at the next annual review.

9.2 Intra-review Deletions

9.2.1 A constituent will be removed from the FTSE Global Climate Index Series if it is removed from the underlying universe. If the index is a Russell derived FTSE Global Climate Index a minimum of 2 days notice will be provided and its weight will be distributed pro-rata amongst the remaining constituents in the relevant index.

9.3 Intra-review Changes to Exclusion Lists

9.3.1 A constituent will be removed from the FTSE Global Climate Indexes if it is added to a relevant exclusion list. The deletion will be concurrent with its addition to the exclusion list.

9.3.2 A stock that is removed from a relevant exclusion list will be considered for inclusion at the next periodic review.
Section 10

Corporate Actions and Events

10.0 Corporate Actions and Events

10.1 If a constituent has a stock split, stock consolidation, rights issue, bonus issue, a change in the number of shares in issue or a change in free-float, the constituent’s weighting in the FTSE Global Climate Index Series remains unchanged pre and post such an event.

10.2 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide for Non Market Capitalisation Weighted Indexes using the following link:

Corporate_Actions_and_Events_Guide_for_Non_Market_Cap_Weighted_Indices.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 will provide notice advising of the timing of the change.

10.3 Suspension of Dealing

Suspension of Dealing rules can be found within the Corporate Actions and Events Guide for Non Market Capitalisation Weighted Indexes.

10.4 Takeovers, Mergers and Demergers

The treatment of takeovers, mergers and demergers can be found within the Corporate Actions and Events Guide for Non Market Capitalisation Weighted Indexes.
Section 11

Treatment of Dividends

11.0 Treatment of Dividends

11.1 Declared dividends are used to calculate the Standard Total Return Index of the FTSE Global Climate Index Series. All dividends are applied as at the ex-div date.

11.2 Net of tax Total Return Indexes are also calculated based on dividends received following deduction of withholding tax at the rates applicable to a UK pension fund that benefits from double-taxation treaties.

Withholding tax rates used in the net-of-tax indexes can be accessed using the following link:

Withholding_Tax_Service

Please also refer to the FTSE Russell Withholding Tax Guide which can be accessed using the following link:

FTSE_Russell_Withholding_Tax_Guide.pdf
Section 12

Industry Classification Benchmark (ICB)

12.0 Industry Classification Benchmark (ICB)\(^5\)

12.1 Classification Structure

12.1.1 The FTSE Global Climate Index Series constituents are classified into Industries, Supersectors, Sectors and Subsectors, as defined by the Industry Classification Benchmark (ICB).

12.1.2 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

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\(^5\) Russell indexes will migrate to the new ICB classification system in September 2020 and FTSE indexes in March 2021.
Section 13

Indexes Algorithm and Calculation Method

13.0 Indexes Algorithm and Calculation Method

13.1 Prices

13.1.1 The FTSE Global Climate Index Series uses actual closing mid-market or last trade prices, where available, for securities with local market quotations. Further details can be accessed using the following link:

Closing Prices Used For Index Calculation.pdf

13.2 Calculation Frequency

13.2.1 The FTSE Global Climate Index Series will be calculated on an end of day basis and displayed to eight decimal points.

13.3 Index Calculation

The FTSE Global Climate Index Series are calculated using the algorithm described below:

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

Where,

- \(i=1,2,...,N\)
- \(N\) 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.
• $c$ is the Weight Adjustment Factor (WAF) 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.
Appendix A: 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 Global Climate Index Series visit [www.ftserussell.com](http://www.ftserussell.com) or e-mail [info@ftserussell.com](mailto:info@ftserussell.com). Contact details can also be found on this website.

Website: [www.ftserussell.com](http://www.ftserussell.com)

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