

# **S&P/TSX 60 Carbon Efficient Indices** *Methodology*

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# Introduction

The S&P/TSX 60 Carbon Efficient Indices consist of the following two indices:

**S&P/TSX 60 Carbon Efficient Index.** The index is designed to measure the performance of companies in the S&P/TSX 60 while overweighting/(underweighting) those companies that have lower/(higher) levels of carbon emissions. The index retains the same constituents as S&P/TSX 60. However, index weights are adjusted to reflect each company's Carbon Footprint metric with respect to other companies within the same GICS<sup>®</sup> sector.<sup>1</sup>

**S&P/TSX 60 Carbon Efficient Select Index.** The index is designed to measure the performance of a subset of companies in the S&P/TSX 60 with relatively low carbon emissions. The main difference between this index and the S&P/TSX 60 Carbon Efficient Index is that the constituents of the S&P/TSX 60 Carbon Efficient Select Index undergo an optimization process, in order to create an index that closely tracks the returns of the S&P/TSX 60, while excluding those companies that have the largest relative carbon footprints.

The Carbon Footprint is calculated by Trucost Plc and is defined as the company's annual greenhouse gas (GHG) emissions, expressed as tons of carbon dioxide equivalent (CO<sub>2</sub>e), divided by annual revenues.

Through a set of well-defined rules, the indices seek to closely track the return of the S&P/TSX 60, while lowering exposure to the risks associated with carbon emissions.

## Collaboration

The indices are generated and published under agreements between S&P Dow Jones Indices and Trucost Plc.

## Highlights

The constituents of each index are investable and are members of the S&P/TSX 60. Each constituent is mapped to its recent Trucost Carbon Footprint and GICS<sup>®</sup> sector. For each index, constituent weight adjustments are applied to create an index portfolio where the overall exposure to the risks associated with carbon emissions is reduced versus the S&P/TSX 60.

At each rebalancing, index constituents are assigned a Carbon Footprint and are ranked by Carbon Footprint within their GICS<sup>®</sup> sector. For each index, individual constituent weights are then determined.

Additions to an index are made only at its corresponding rebalancing. Deletions are made to an index at the same time that the deletion is made to the S&P/TSX 60.<sup>2</sup>

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

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<sup>1</sup> For more information on the Global Industry Classification Standard (GICS), please refer to S&P Dow Jones Indices' GICS Methodology available at [www.spdji.com](http://www.spdji.com).

<sup>2</sup> For information on the criteria, construction and maintenance of the S&P/TSX 60, please refer to the S&P/TSX 60 Methodology available at [www.spdji.com](http://www.spdji.com).

## Index Family

**S&P/TSX 60 Carbon Efficient Index.** The index is part of the S&P Global 1200 Carbon Efficient Index Series. Other indices in the S&P Global 1200 Carbon Efficient Index Series include the following:

1. S&P Global 1200 Carbon Efficient Index
2. S&P Asia 50 Carbon Efficient Index
3. S&P/ASX All Australian 50 Carbon Efficient Index
4. S&P Europe 350 Carbon Efficient Index
5. S&P 500 Carbon Efficient Index
6. S&P Latin America 40 Carbon Efficient Index
7. S&P/TOPIX 150 Carbon Efficient Index

**S&P/TSX 60 Carbon Efficient Select Index.** The index is part of the S&P Global 1200 Carbon Efficient Select Index Series. Other indices in the S&P Global 1200 Carbon Efficient Select Index Series include the following:

1. S&P Global 1200 Carbon Efficient Select Index
2. S&P Asia 50 Carbon Efficient Select Index
3. S&P/ASX All Australian 50 Carbon Efficient Select Index
4. S&P Europe 350 Carbon Efficient Select Index
5. S&P 500 Carbon Efficient Select Index
6. S&P Latin America 40 Carbon Efficient Select Index
7. S&P/TOPIX 150 Carbon Efficient Select Index

*For information on the S&P Global 1200 Carbon Efficient Index Series and S&P Global 1200 Carbon Efficient Select Index Series, please refer to their respective methodology documents available at [www.spdji.com](http://www.spdji.com).*

# Eligibility Criteria and Index Construction

## S&P/TSX 60 Carbon Efficient Index

**Index Universe.** At each annual rebalancing, the index is constructed from the constituents of the S&P/TSX 60 (the underlying index).

*For more information on the S&P/TSX 60, please refer to the S&P/TSX 60 methodology document available at [www.spdji.com](http://www.spdji.com).*

**Carbon Footprint.** All companies in the S&P/TSX 60 are subjected to a ranking process within their GICS<sup>®</sup> sector. This ranking process determines a percentile rank for each company with respect to its Carbon Footprint.

The constituents must have an annual Carbon Footprint, calculated by Trucost Plc, prior to the annual rebalancing reference date. Trucost Plc evaluates the environmental performance of a given company and produces an annual carbon emissions figure. If a company does not have a recent annual Carbon Footprint then it is assigned one, based on a projection made by Trucost Plc using their proprietary Input-Output model.

**Constituent Weight Adjustments.** Constituent weight adjustments are made to reduce the portfolio's overall exposure to carbon emissions versus that of the underlying index.

Index constituents are assigned a Sector Rank with respect to its Carbon Footprint. Constituents with larger Carbon Footprints are assigned relatively higher ranks within their sectors versus those with lower Carbon Footprints.<sup>3</sup>

In order to reduce turnover, only specific sectors are targeted for potential carbon-related weight adjustments. Sectors in which the range of constituent Carbon Footprints (Max - Min) is above 500 are targeted. These sectors are deemed High Potential Markets (HPM).

Constituents in sectors where the range of constituent Carbon Footprints is 500 or less do not undergo weight adjustments. For these sectors, any carbon-related weight adjustments made would not warrant the increase in turnover that would occur. Generally, around half of the total number of sectors is deemed High Potential Markets.

Within each HPM, the top 1/3 of selected constituents are those constituents that have relatively large Carbon Footprints. The index weights of those constituents in the top 1/3 of their respective sector rankings are reduced to 30% of their original weights, with the remaining 70% of their original weights redistributed on a pro-rata basis (with respect to the inverse of constituents' Carbon Footprint per GICS Sector) to the bottom 1/3 of constituents in their respective sector.

Weights applied to the index at each annual rebalancing are derived from the weights of the S&P/TSX 60 in comparison to the S&P Global 1200. For example, if the S&P/TSX 60 comprises x% of the S&P Global 1200, then the S&P/TSX 60 Carbon Efficient Index will make up the same x% within the S&P Global 1200 Carbon Efficient Index. Weights are determined using constituents' float-adjusted market capitalization.

**Multiple Classes of Stock.** Some companies may have more than one share class line in the underlying index. In the S&P/TSX 60 Carbon Efficient Index, all multiple share class lines are considered for

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<sup>3</sup> Companies with lower Carbon Footprints are considered more carbon efficient than those with higher Carbon Footprints.

inclusion and are assigned identical Carbon Footprint Scores. All weight assignments are conducted at the company level.

**Shares Outstanding.** The share count used as inputs in the weighting model, are common shares outstanding. This count is float-adjusted to reflect only shares available to the general market. Specific share counts and float factors are calculated by S&P Dow Jones Indices.

*For float adjustment methodology, please refer to S&P Dow Jones Indices' Float Adjustment Methodology.*

## **S&P/TSX 60 Carbon Efficient Select Index**

**Index Universe.** At each quarterly rebalancing, the index is constructed from the constituents of the S&P/TSX 60 (the underlying index).

*For more information on the S&P/TSX 60, please refer to the S&P/TSX 60 methodology document available at [www.spdji.com](http://www.spdji.com).*

Through optimization, this index seeks to closely track the return of the underlying index, while excluding those companies that have the largest relative carbon footprints.

**Eligibility Factors.** All companies in the S&P/TSX 60 are subjected to a screening process which incorporates each company's carbon footprint. There are two screens, one focusing on carbon footprints and the other based on constituent list optimization with respect to the underlying index.

- **Carbon Footprint.** The constituents must have an annual Carbon Footprint, calculated by Trucost Plc, prior to the quarterly rebalancing reference date. Trucost Plc evaluates the environmental performance of a given company and produces an annual carbon emissions figure. In addition to the companies with the highest 20% of carbon footprints in the underlying index, any company that has not yet been assigned a carbon footprint by Trucost PLC is removed from consideration for index inclusion. Once the initial company selection is complete, the qualifying companies are optimized to generate a final list of no more than 75% of the number of companies in the S&P/TSX 60 with assigned weights that seeks to minimize the tracking error versus the underlying index. This may result in the removal of companies where the weight is *de minimis*.
- **GICS Sector Weight.** Stocks are classified according to the Global Industry Classification Standard (GICS). Each company in the underlying index has a GICS sector assigned to it. The 20% of companies with the highest carbon footprints that do not reduce an individual sector's weight in the underlying index by more than 50% are removed. In cases where the next company considered for exclusion reduces the sector weight beyond the 50% threshold, but not more than 55%, the company is excluded. If the next company considered for exclusion is in a sector which has already exceeded the 50% reduction threshold or reduces the sector weight beyond 55%, then the company remains eligible for index inclusion.
- **Multiple Share Classes.** Multiple share class lines are eligible for inclusion in the index provided they are constituents of the underlying index. At each rebalancing, the optimized weight of the multiple class companies is allocated proportionally to each share class line based on the float-adjusted market capitalization as of the pricing reference date.

**Constituent Weighting.** The index is modified market capitalization-weighted, based originally on float-adjusted common shares outstanding. The constituents and their weights are modified at each quarterly rebalancing to reflect the optimization process that seeks to closely track the underlying index.

- **Constituent List Optimization.** Index constituents are drawn from the underlying index and undergo an optimization process. No single company has an index weight of less than 0.015% or more than 5% at the time of each rebalancing. The qualifying companies are optimized using one of Northfield Information Service's optimization and risk models to generate a final list of companies of no more than 75% of the number of companies in the S&P/TSX 60, with assigned

weights that seek to minimize the tracking error versus the underlying index. This may result in the removal of companies where the weight is *de minimis*. Northfield Information Service's risk model used in the construction of the S&P/TSX 60 Carbon Efficient Select Index is detailed below.

Underlying Index	Northfield Fundamental Risk Model (Optimizer)	Max. # of Constituents After Optimization
S&P/TSX 60	Canada	45

For more information on the risk model, please visit [www.northinfo.com](http://www.northinfo.com).

The weight of each company in the index is determined by the output of the optimization process as specified above.

### Index Calculations

The indices are calculated by means of the divisor methodology used in all S&P Dow Jones Indices' equity indices.

On any given day, the index value is the quotient of the total float-adjusted market capitalization of the index's constituents and its divisor. Continuity in index values is maintained by adjusting the divisor for all changes in the constituents' share capital after the base date. This includes additions and deletions to the index, rights issues, share buybacks and issuances, and spin-offs. The divisor's time series is, in effect, a chronological summary of all changes affecting the base capital of the index. The divisor is adjusted such that the index value at an instant just prior to a change in base capital equals the index value at an instant immediately following that change.

For more information on the index calculation methodology, please refer to the *Modified Market Capitalization Weighted Indices* section of *S&P Dow Jones Indices' Index Mathematics Methodology*.



# Index Maintenance

## Rebalancing

**S&P/TSX 60 Carbon Efficient Index.** The index is rebalanced annually, after the close of business on the third Friday of December. The rebalancing reference date is the last business day of November. Constituents' weights are calculated using closing prices on the Wednesday prior to the second Friday of the rebalancing month as the reference price. In addition to the annual rebalancing, constituent shares and IWFs are reviewed quarterly. Changes to a constituent's shares and IWF as a result of the quarterly review are effective after the close of trading on the third Friday in March, June, September and December.

**S&P/TSX 60 Carbon Efficient Select Index.** Index membership is reviewed quarterly. Rebalancings occur after the close on the third Friday of March, June, September and December. The rebalancing reference date is the last business day of February, May, August and November, respectively. Constituents' weights are calculated using closing prices on the second Friday of the rebalancing month as the reference price.

Index share amounts are calculated and assigned to each stock to arrive at the weights determined on the reference date. Since index shares are assigned based on the reference prices, the actual weight of each stock at the rebalancing differs from these weights due to market movements.

At its sole discretion, the Index Committee may elect to rebalance the S&P/TSX 60 Carbon Efficient Select Index intra-quarter if the Committee determines that sufficient changes have occurred to the S&P/TSX 60 that warrant a rebalancing of the S&P/TSX 60 Carbon Efficient Select Index in order to best track the performance of the underlying index.

## Carbon Footprint Updates

Each company's Carbon Footprint is updated annually, approximately eight months following the company's fiscal year end. Any update to a company's Carbon Footprint is applied to the screening process at the subsequent rebalancing.

## Additions and Deletions

**Additions.** Index additions are generally made only during the corresponding rebalancing. Spin-offs, however, may necessitate the addition of the spun-off company to the indices. If the spun-off company is added to the S&P/TSX 60, it will also be added to the S&P/TSX 60 Carbon Efficient Indices.

**Deletions.** Index constituents may be removed from the indices following a takeover, merger, delisting, bankruptcy, indefinite suspension or if dropped from the S&P/TSX 60.

In the event that an index constituent is removed from the underlying index, it is also removed from the S&P/TSX 60 Carbon Efficient Indices and not replaced. As a result, the components of the S&P/TSX 60 Carbon Efficient Indices may differ slightly from those of the S&P/TSX 60.

## Corporate Actions

**S&P/TSX 60 Carbon Efficient Index.** The index follows the methodology and maintenance procedures of the S&P/TSX 60 with respect to the treatment of corporate actions. Index additions are generally made only during the annual rebalancing.

For more information on the corporate action treatment of the S&P/TSX 60, please refer to the S&P/TSX 60 methodology document available at [www.spdji.com](http://www.spdji.com).

**S&P/TSX 60 Carbon Efficient Select Index.** Corporate actions (such as stock splits, stock dividends, spin-offs and rights offerings) are applied after the close of trading on the day prior to the ex-date.

Corporate Action	Adjustment Made to Index	Divisor Adjustment?
Spin-off	If the spun-off stock is to be added and if an achievable market price is available it is used; if not, a theoretical price based on the spin-off terms is used. The price is adjusted to the Price of the Parent Company minus (Price of the Spun-off company/Share Exchange Ratio). Index shares change so that the company's weight remains the same as its weight before the spin-off.	No
Rights Offering	The price is adjusted to the Price of the Parent Company minus (the Price of the Rights Subscription/Rights Ratio). Index shares change so that the company's weight remains the same as its weight before the rights offering.	No
Stock Split	Index shares are multiplied by and price is divided by the split factor.	No
Share Issuance or Share Repurchase	None.	No
Special Dividends	The price of the stock making the special dividend payment is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.	Yes
Delisting, acquisition or any other corporate action resulting in the deletion of the company from the S&P/TSX 60	The stock is dropped from the S&P/TSX 60 Carbon Efficient Select Index.	Yes

For general information on corporate action treatments, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document located on our Web site, [www.spdji.com](http://www.spdji.com).

### Currency of Calculation

The indices are calculated in Canadian dollars and U.S. dollars.

### Exchange Rate

WM/Reuters foreign exchange rates are taken daily at 04:00 PM London time and used in the calculation of the indices. These mid-market fixings are calculated by the WM Company based on Reuters' data and appear on Reuters pages WMRA.

### Base Dates and History Availability

Index history availability, base dates and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P/TSX 60 Carbon Efficient Index	10/05/2015	12/19/2008	12/19/2008	100
S&P/TSX 60 Carbon Efficient Select Index	10/05/2015	12/19/2008	12/19/2008	100

### Investable Weight Factor (IWF)

All issues in the indices are assigned a float factor, called an Investable Weight Factor (IWF). The IWF ranges between 0 and 1 and is an adjustment factor that accounts for the publicly available shares of a company.

Please refer to S&P Dow Jones Indices' Float Adjustment Methodology for further details.

## **Other Adjustments**

In cases where there is no achievable market price for a stock being deleted, it can be removed at a zero or minimal price at the Index Committee's discretion, in recognition of the constraints faced by investors in trading bankrupt or suspended stocks.

# Index Data

## **Total Return Indices**

Total return index series are calculated for the S&P/TSX Canadian indices as well as the price return series.

The total return calculation includes stock dividends paid in kind, stock dividends paid with the securities of an issuer other than the issuer declaring such dividend, rights distributions, and cash distributions less than 4% of the underlying stock price based on the last traded board lot.

A dollar value is calculated for the distribution to be used in the total return index calculation.

*For details on total return calculations, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.*

# Index Governance

## Index Committee

The S&P/TSX Canadian indices are maintained by the S&P/TSX Canadian Index Committee. The Index Committee is comprised of four members representing S&P Dow Jones Indices and three members representing the Toronto Stock Exchange ("TSX"). The Index Committee is chaired by a member designated by S&P Dow Jones Indices. Meetings are held monthly, and from time to time, as needed.

The Index Committee is responsible for setting rules and policies for the S&P/TSX Indices, determining the composition of the Indices and administering the methodology. In fulfilling its responsibilities, the Index Committee has full and complete discretion to amend, apply or exempt the application of the methodology and other index policies as circumstances may require, and add, remove or by-pass any security in determining the composition of any of the indices.

The Index Committee may rely on any information or documentation submitted to or gathered by it that the Index Committee believes to be accurate. Where a public document used by the Index Committee is available in both official languages, the Index Committee shall assume that the contents of both versions are identical. The Index Committee reserves the right to reinterpret publicly available information and to make changes to the index based on a new interpretation of that information at its sole and absolute discretion.

Index corrections and changes to index composition are implemented at such time and in such manner, as the Index Committee deems appropriate. The timing of any index change made in response to a correction shall be at the sole and absolute discretion of the Index Committee.

Stock prices, VWAPs, and prices used to calculate QMV shall be prices determined by trading on the TSX. Trading volume shall be determined by trading on the TSX, Aequitas (Lit and Neo), Alpha, Chi-X, CSE (Pure Trading), CX2, Lynx, TMX Select (Excluded after September 2016 review) and Omega.

S&P Dow Jones Indices considers information about changes to its Canadian indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

*For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document located on our Web site, [www.spdji.com](http://www.spdji.com).*

## Advisory Panel

S&P Dow Jones Indices maintains an Index Advisory Panel to provide advice to the Index Committee, to S&P Dow Jones Indices and to the TSX on index related matters. The Advisory Panel meets at the request of the Index Committee to discuss matters related to the use of equity indices in Canada; typically the Advisory Panel meets annually. The Index Committee designates members of the Advisory Panel to provide representation of major financial market entities including leading institutional investors, investment banks, brokerage firms and others with an interest in the development of the equity markets in Canada. Meetings of the Advisory Panel are not open to the public or the press; however, the proceedings are not confidential and members are free to discuss them publicly.

# Index Policy

## Announcements

Whenever possible, announcements of additions or deletions of stocks or other index adjustments are made five trading days before the adjustments are implemented. In those cases when it is not possible to trade a stock five days after an announcement, the announcement period may be shortened. However, the implementation of an index adjustment is never earlier than the market close of the day following the announcement.

Announcements of additions and deletions for the S&P/TSX Canadian indices are generally made at 05:15 PM. Eastern Time. Press releases are released to major news services.

In addition, TMX Datalinx offers a fee-based subscription to Index Notices. The Index Notices provide the most detailed and comprehensive coverage of index changes. Complete data for index replication (including share counts, tickers and data on index levels and returns) are also available through TMX Datalinx. In order to subscribe, contact TMX Datalinx by phone at +1.416.947.4778 or by email at [marketdata@tmx.com](mailto:marketdata@tmx.com).

## Holiday Schedule

The S&P/TSX Canadian indices are calculated when the Canadian equity market is open.

*A complete holiday schedule for the year is available on the TMX Web site at [www.tmx.com](http://www.tmx.com).*

## Unscheduled Market Closures

In situations where the TSX is forced to close early due to unforeseen events, such as computer or electric power failures, weather conditions or other events, S&P Dow Jones Indices calculates the closing price of the indices based on (1) the closing prices published by the exchange, or (2) if no closing price is available, the last regular trade reported for each security before the exchange closed. If the exchange fails to open due to unforeseen circumstances, S&P Dow Jones Indices treats this closure as a standard market holiday. The indices will use the prior day's closing prices and shift any corporate actions to the following business day. If all exchanges fail to open or in other extreme circumstances, S&P Dow Jones Indices may determine not to publish the index for that day.

In the event of an unscheduled market closing, S&P Dow Jones Indices issue a statement concerning index calculation and the implementation of any pending index adjustments as soon as reasonably possible in an effort to keep the market fully informed.

## Treatment of Corporate Actions in the Event of Unscheduled Market Closures

Full-day closure occurs on the corporate action effective date: All market driven actions (splits, bonuses, rights, cash dividends, spinoffs, etc.) are moved to the next trading date. This involves the reposting of all affected files of each index to which each stock belongs. However, we follow the exchange's lead in such situations. If the exchange moves the corporate action ex-date, S&P Dow Jones Indices does the same. Adds and drops to the index and share/IWF updates remain unchanged, as trading was completed at the close before the effective date.

Partial closure occurs on the corporate action effective date: All market driven actions (splits, bonuses, rights, cash dividends, spin-offs, etc.) take place at the opening of the ex-date. Adds and drops to the

index and share/IWF updates remain unchanged, as trading was completed at the close of the day before the effective date.

Full-day or partial closure occurs on the day before the corporate action effective date: Adds and drops to the index, share/IWF updates and quarterly rebalancing would be moved to the close of the next trading date and use the closing prices of that day. All market driven actions scheduled for the opening of the next day are unaffected by an exchange closure on the day before the ex-date.

*For further information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document located on our Web site, [www.spdji.com](http://www.spdji.com).*

### **Recalculation Policy**

S&P Dow Jones Indices reserves the right to recalculate an index under certain limited circumstances. S&P Dow Jones Indices may choose to recalculate and republish an index if it is found to be incorrect or inconsistent within two trading days of the publication of the index level in question for one of the following reasons:

1. Incorrect or revised closing price
2. Missed corporate event
3. Late announcement of a corporate event
4. Incorrect application of corporate action or index methodology

Any other restatement or recalculation of an index is only done under extraordinary circumstances to reduce or avoid possible market impact or disruption as solely determined by the Index Committee.

*For more information on the recalculation policy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document located on our Web site, [www.spdji.com](http://www.spdji.com).*

### **Real-Time Calculation**

Real-time, intra-day, index calculations are executed for certain S&P/TSX Canadian indices whenever any of their primary exchanges are open. Real-time indices are not restated.

*For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document located on our Web site, [www.spdji.com](http://www.spdji.com).*

# Index Dissemination

The TMX Group (TMX) serves as the distributor of both real-time and historical index data. In addition, index levels are available on S&P Dow Jones Indices' Web site at [www.spdji.com](http://www.spdji.com).

## **FTP**

Daily stock levels and index data are available from the Toronto Stock Exchange on subscription. Please contact Market Data at 416-947-4778 or, by email, at [marketdata@tmx.com](mailto:marketdata@tmx.com).

*For further information, please refer to the TMX Web site at [www.tmx.com](http://www.tmx.com).*

## **Web site**

*For further information, please refer to S&P Dow Jones Indices' Web site at [www.spdji.com](http://www.spdji.com).*



# Appendix

## Trucost Methodology

Trucost Plc (“Trucost”) has analyzed the environmental performance of over 4,200 companies worldwide. Trucost has the world’s largest bank of standardized greenhouse gas (“GHG”) emissions data, which provides a proxy for carbon performance. To calculate the carbon intensity of any company included in the indices, Trucost reviews company annual reports and accounts, environmental/sustainability reports, public disclosures and corporate Web sites.

However many companies do not disclose their environmental or carbon impacts. Where there is no public disclosure, Trucost employs its environmental profiling system. This proprietary Input-Output model maps the GHG impacts of business activities in 464 sectors. Trucost’s broad coverage seeks to ensure that all non-disclosing companies are considered for index eligibility, not just those that disclose environmental information.

Six greenhouse gases (GHGs) are included in the analysis; these are all the GHGs regulated under the Kyoto protocol. Each gas has a different capacity to cause global warming. Although carbon dioxide (“CO<sub>2</sub>”) is the least potent of the GHGs, it is one of the most prevalent in terms of man-made emissions. The GHGs are calculated for each company and converted into tons of carbon dioxide equivalents based on the appropriate Global Warming Potential factors. The Global Warming Potential (“GWP”) index, published by the Intergovernmental Panel on Climate Change (“IPCC”), assesses the effect of the emissions of different gases over a 100-year time period, relative to the emission of an equal mass of CO<sub>2</sub>. GWP enables all the GHGs to be expressed in terms of CO<sub>2</sub> equivalents, or CO<sub>2</sub>e, and is used as the basis for the analysis and for index calculation.

Quantities of greenhouse gas emissions are, then, normalized by sales to calculate the company’s carbon footprint, or “carbon intensity”. The smaller the carbon footprint, the less investments contribute to climate change and the lower an index’s exposure to the rising costs of emitting carbon dioxide.

# S&P Dow Jones Indices' Contact Information

## **Index Management**

David M. Blitzer, Ph.D. – Managing Director & Chairman of the Index Committee  
david.blitzer@spglobal.com +1.212.438.3907

## **Product Management**

Emily Ulrich – Product Manager  
emily.ulrich@spglobal.com +1.212.438.0612

## **Media Relations**

Soogyung Jordan – Communications  
soogyung.jordan@spglobal.com +1.212.438.2297

## **Client Services**

[index\\_services@spglobal.com](mailto:index_services@spglobal.com)

# Disclaimer

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