

**S&P Global LargeMidCap
Carbon Budget Climate Index
*Methodology***

October 2024

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Introduction

Index Objective

The S&P Global LargeMidCap Carbon Budget Climate Index measures the performance of equity securities from the S&P Global LargeMidCap Index (the underlying index) selected and weighted to target (1) a defined level of carbon budget from Vintage Year 2024 to 2050 based on the Intergovernmental Panel on Climate Change (IPCC) estimate for worldwide emissions to limit global warming from pre-industrial levels to 1.5°C ; and (2) a defined level of revenue from climate impact solutions. The index is weighted in order to minimize the difference in constituent weights relative to the S&P Global LargeMidCap Index in terms of constituents, industries, sectors and countries.

For more information on the underlying index, please refer to the S&P Global BMI, S&P/IFCI Methodology, available at www.spglobal.com/spdji/.

Highlights

The index aims to achieve the carbon budget (as published by the IPCC) through a constraint on ownership of total Scope 1, 2 and 3 greenhouse gas (GHG) emissions that results in the following conditions:

- an initial GHG footprint reduction of 70% in the index Vintage Year 2024 relative to the underlying index
- a yearly absolute geometric decarbonization rate of 7%, and
- capping the absolute decarbonization to 90%.

For more information on initial carbon reduction and decarbonization rate calculations, please see *Appendix B*.

Data Sources

GHG Emissions: data is sourced from S&P Global Sustainable1 (Sustainable1).

For information on Sustainable1's methodology, please refer [here](#).

Percentage of Revenue from Climate Impact Solutions: data is sourced from Impact Cubed.

Climate impact solutions are categorized from Impact Cube's taxonomy of over 2,000 products and services. Activities included relate to renewable energy, alternative vehicles, public transport, plant-based foods, and more. Company revenues are mapped to the same taxonomy, which allows for identification of companies engaged in climate impact solutions.

For more information on Impact Cubed's, please refer to www.impactcubed.com.

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices' Index Mathematics Methodology	Index Mathematics Methodology
S&P Dow Jones Indices' Float Adjustment Methodology	Float Adjustment Methodology
S&P Dow Jones Indices' Global Industry Classification Standard (GICS) Methodology	GICS Methodology

The methodology is 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.

Eligibility Criteria

Index Universe

As of each rebalancing reference date, the index universe is all the constituents of the underlying index.

Eligibility Factors

At each rebalancing reference date, companies in the index universe must satisfy the following to be eligible for index inclusion:

- **GHG Emissions Coverage:**
 - have Scopes 1, 2 and 3 GHG emissions coverage.
 - have GHG emissions data within four financial years prior to the current rebalancing.

For information on Sustainable1's methodology, please refer [here](#).

- **Multiple Classes of Stock:** All publicly listed multiple share class lines are eligible for index inclusion subject to meeting the eligibility criteria. For more information regarding the treatment of multiple share classes, please refer to Approach A within the Multiple Share Classes section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Index Construction

Constituent Selection

At each rebalancing, select all eligible companies and form the index.

Constituent Weighting

At each rebalancing reference date, determine index weights (w_i), by minimizing the following objective function, as follows:

Objective Function

$$\begin{aligned}
 &= \sum_i \frac{1}{n} \frac{(w_i - \text{underlying weight}_i)^2}{\text{underlying weight}_i} \\
 &+ \sum_j \frac{1}{l} \frac{(\text{industry weight}_j - \text{underlying industry weight}_j)^2}{\text{underlying industry weight}_j} \\
 &+ \sum_k \frac{1}{m} \frac{(\text{sector weight}_k - \text{underlying sector weight}_k)^2}{\text{underlying sector weight}_k} \\
 &+ \sum_p \frac{1}{q} \frac{(\text{country weight}_p - \text{underlying country weight}_p)^2}{\text{underlying country weight}_p}
 \end{aligned}$$

where:

n = The number of stocks selected

l = The number of GICS industries in the underlying index

m = The number of GICS sectors in the underlying index

q = The number of countries of domicile in the underlying index

Optimization Constraints

As of each rebalancing reference date, the optimizer seeks to minimize the objective function for the index while satisfying the below constraints:

Table 1. Carbon Constraints

Constraint	Details	Data Source
Total Index Carbon Emissions _t	$\leq \text{Total Underlying Index Carbon Emissions}_{t=0} \times \max(10\%, (1 - 70\%) \times (1 - 7\%)^{t/n})$	Sustainable1
Scope 1 and 2 Index Carbon Emiss	$\leq \text{Scope 1 and 2 Underlying Index Carbon Emis} \times \max(10\%, (1 - 70\%) \times (1 - 7\%)^{t/n})$	Sustainable1

Carbon Emissions are defined in *Constraint-Related Definitions*. The 't=0' indicates Anchor Reference Date and 't' is the number of rebalancings since the Anchor Reference Date (See *Anchor Date*). The 'n' is the number of rebalancings in a year (See *Rebalancing*). The rebalancings prior to the Anchor Date are only subject to the 70% carbon reduction.

Table 2. Climate Impact Solutions Constraint

Constraint	Details	Data Source
Index Climate Impact Solutions Revenue Attribution (ClimateRev%)	$\geq \min(\text{underlying} \times 2, \text{underlying} + 10\%, 90\%)$ where: underlying = ClimateRev% of the underlying index	Impact Cubed
Index Total Revenue Intensity (RevIntensity)	$\geq 90\% \times \text{underlying}$ and $\leq 110\% \times \text{underlying}$ where: underlying = RevIntensity of the underlying index	N/A

Index ClimateRev% is defined in the *Constraint-Related Definitions* section below. Index RevIntensity is the denominator of Index ClimateRev%. Companies lacking coverage from Impact Cubed are presumed to derive 0 percentage of revenue from climate impact solutions.

Table 3. Index Construction Constraints

Constraint	Details
Diversification Relative Company Weight	$\pm 2\%$ from underlying index company weight
Diversification Absolute Max Company Weight	$\leq \max(5\%, \text{underlying company weight})$
Liquidity Max Stock Weight	$\leq \frac{\text{Hypothetical Days to Buy/Sell} \times \text{Daily Participation} \times \text{Liquidity}_i}{\text{Notional Portfolio Size}}$ where: Hypothetical Days to Buy/Sell = 5 Daily Participation = 10% Liquidity = 3-month Median Daily Value Traded For Liquidity Currency and Notional Portfolio Size = USD\$ 1 billion.
Minimum Stock Weight Lower Threshold	Existing constituents: $\geq 0.005\%$ New constituents: $\geq \max(0.01\%, \min(0.05\%, 0.2 \times \text{underlying index stock weight}))$

Anchor Date

Reference Anchor Date	Reference Rebalance Date
29 September 2023	1 November 2023

Constraint Relaxation Hierarchy

If the optimization fails to find a solution, the optimizer partially relaxes each constraint in the order listed below, and repeats, if necessary, until a solution is found. In each attempt at optimization the constraints are further relaxed in the stated order; however, the Index Committee may revise the order of relaxation hierarchy if a particular constraint prevents the optimizer from finding a solution.

- Diversification Absolute Max Company Weight
- Diversification Relative Company Weight
- Liquidity Max Stock Weight
- Climate Impact Solutions Constraint

The following constraints are considered hard constraints and are not relaxed:

- Carbon constraints
- Minimum Stock Weight Lower Threshold

Constraint-Related Definitions

Carbon Emissions. The *Total Underlying Index Carbon Emissions*₀ is the total absolute emissions of companies in the underlying index as of the Anchor Reference Date, apportioned on an equity ownership basis, only capturing the share of each company's emissions in proportion to the share of each company's total market capitalization in the S&P Global BMI. It calculates using the GHG emissions dataset provided by Trucost as follows:

$$\begin{aligned} \text{Total Underlying Index Carbon Emission}_{t=0} \\ = \sum_i \text{Underlying Index Equity Ownership}_{t=0,i} \times \text{Company Emissions}_{t=0,i} \end{aligned}$$

where:

$$\text{Underlying Index Equity Ownership}_{t=0,i} = \frac{\text{Underlying Index Mkt Cap}_{t=0,i}}{\text{TMC}_{t=0,i}}$$

$$\text{Company Emissions}_{t=0,i} = \text{GHG1}_{t=0,i} + \text{GHG2}_{t=0,i} + \text{GHG3}_{t=0,i}$$

where:

*Underlying Index Mkt Cap*_{t=0,i} = Index market capitalization (after free-float adjustment) for all stocks of company *i* in the underlying index as of the Anchor Reference Date.

*TMC*_{t=0,i} = The total market capitalization (without free float adjustment) for all the stocks of company *i* that are constituents of the S&P Global BMI as of Anchor Reference Date.

*GHG1*_{t=0,i} = Scope 1 GHG emissions in tCO₂e for the company *i* as of the Anchor Reference Date.

*GHG2*_{t=0,i} = Scope 2 GHG emissions in tCO₂e for the company *i* as of the Anchor Reference Date.

*GHG3*_{t=0,i} = Scope 3 (upstream and downstream) GHG emissions in tCO₂e for the company *i* as of the Anchor Reference Date.

The *Total Index Carbon Emissions*_t is the total absolute emissions of companies in the index as of the *t*th rebalancing reference date, apportioned on an equity ownership basis, only capturing the share of each company's emissions in proportion to the share of each company's total market capitalization in the S&P Global BMI, and calculates as follows:

$$\text{Total Index Carbon Emission}_t = \sum_i \text{Equity Ownership}_{t,i} \times \text{Company Emissions}_{t,i}$$

where:

$$\text{Equity Ownership}_{t,i} = \frac{\text{Adjusted Index Mkt Cap}_{t,i}}{\text{TMC}_{t,i}}$$

$$\text{Company Emissions}_{t,i} = \text{GHG1}_{t,i} + \text{GHG2}_{t,i} + \text{GHG3}_{t,i}$$

where:

*Adjusted Index Mkt Cap*_{t,i} = *Index Weight*_{t,i} × *Adjusted Index Total Mkt Cap*_t

*Adjusted Index Total Mkt Cap*_t = *Underlying Index Total Mkt Cap*_{t=0} × (1 + *Index Total Return since Anchor Rebalance Date*)

$Underlying\ Index\ Total\ Mkt\ Cap_{t=0}$	= The sum of index market capitalization (after free-float adjustment) for all the stocks in the underlying index as of the Anchor Reference Date.
$TMC_{t,i}$	= The total market capitalization (without free float adjustment) for all the stocks of company i that are constituents of the S&P Global BMI as of the t^{th} rebalancing reference date.
$GHG1_{t,i}$	= Scope 1 GHG emissions in tCO ₂ e for the company i as of the t^{th} rebalancing reference date
$GHG2_{t,i}$	= Scope 2 GHG emissions in tCO ₂ e for the company i as of the t^{th} rebalancing reference date
$GHG3_{t,i}$	= Scope 3 (upstream and downstream) GHG emissions in tCO ₂ e for the company i as of the t^{th} rebalancing reference date.

The *Scope 1 and 2 (Underlying) Index Carbon Emissions* calculate following the same formula for *Total (Underlying) Index Carbon Emissions* but removing $GHG3_{t=0,i}$ from the *Company Emissions* definition.

Index Climate Impact Solutions Revenue Attribution (*ClimateRev%*)

$$Index\ ClimateRev\% = \frac{\sum w_i \times ClimateRev\%_i \times \frac{TR_i}{TMC_i}}{\sum w_i \times \frac{TR_i}{TMC_i}}$$

where:

w_i	= Weight of the company i in the index
$ClimateRev\%_i$	= Percentage of revenue of the company i derived from climate impact solutions
TR_i Sustainable1.	= Total revenue of the company i for the corresponding year (in USD) is from Sustainable1.
TMC_i	= The total market capitalization (without free float adjustment) of the company i

For more information on revenue from climate impact solutions, please refer to <https://www.impactcubed.com>.

Index Calculations

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

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

Index Maintenance

Rebalancing

The index reconstitutes semi-annually, effective after the close of the last business day of April and October. The rebalancing reference date for each rebalance is the last trading day of the prior month. As part of the rebalancing process, constituent stock weights are updated. Weights calculated as a result of the reference date data are implemented in the index using closing prices seven business days prior to the rebalancing effective date. Since index shares are assigned based on prices prior to the rebalancing effective date, the actual weight of each stock at the rebalancing differs from these weights due to market movements.

Additions and Deletions

Additions. Except for spin-offs, no stocks are added to the index between rebalancing dates.

Spin-offs. Spin-offs follow the same treatment as the underlying index.

Deletions. Stocks removed from the underlying index are removed from the index simultaneously. Between rebalancings, a stock can be deleted from an index due to corporate events such as mergers, takeovers, delistings, suspensions, spin-offs/demergers, or bankruptcies.

Corporate Actions

For more information on Corporate Actions, please refer to the Non-Market Capitalization Indices section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Ongoing Maintenance

Index constituents are drawn from the Underlying Index. Specific changes to index constituents, such as share changes, Investable Weight Factor (IWF) changes, dividend distributions, and price adjustments, follow the policies of the underlying index.

For more information on Share Updates, Float Adjustment, and IWFs, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology and S&P Dow Jones Indices' Float Adjustment Methodology.

The index is reviewed on an ongoing basis to account for corporate events such as mergers, takeovers, delistings, suspensions, spin-offs/demergers, or bankruptcies. Changes to index composition and related weight adjustments are made as soon as they are effective. These changes are typically announced prior to the implementation date.

Currency of Calculation and Additional Index Return Series

The index calculates in U.S. dollars.

WMR foreign exchange rates are taken daily at 4:00 PM London time and used in the calculation of the indices. These mid-market fixings are calculated by WMR based on LSEG data and appear on LSEG pages.

In addition to the indices detailed in this methodology, additional return series versions of the indices may be available, including, but not limited to the following: currency, currency hedged, decrement, fair value,

inverse, leveraged, and risk control versions. For a list of available indices, please refer to the [S&P DJI Methodology & Regulatory Status Database](#).

For information on index calculation, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

For the inputs necessary to calculate certain types of indices, including decrement, dynamic hedged, fair value, and risk control indices, please refer to the Parameters documents available at www.spglobal.com/spdji/.

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 Global LargeMidCap Carbon Budget Climate Index	01/08/2024	01/11/2022	01/11/2022	1000

Index Data

Calculation Return Types

S&P Dow Jones Indices calculates multiple return types which vary based on the treatment of regular cash dividends. The classification of regular cash dividends is determined by S&P Dow Jones Indices.

- Price Return (PR) versions are calculated without adjustments for regular cash dividends.
- Gross Total Return (TR) versions reinvest regular cash dividends at the close on the ex-date without consideration for withholding taxes.
- Net Total Return (NTR) versions, if available, reinvest regular cash dividends at the close on the ex-date after the deduction of applicable withholding taxes.

In the event there are no regular cash dividends on the ex-date, the daily performance of all three indices will be identical.

For a complete list of indices available, please refer to the daily index levels file (“.SDL”).

For more information on the classification of regular versus special cash dividends as well as the tax rates used in the calculation of net return, please refer to S&P Dow Jones Indices’ Equity Indices Policies & Practices Methodology.

For more information on the calculation of return types, please refer to S&P Dow Jones Indices’ Index Mathematics Methodology.

Index Governance

Index Committee

An Index Committee maintains the indices. The Index Committee meets regularly. At each meeting, the Index Committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the index to the market, companies that are being considered as candidates for addition to the index, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

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

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Index Policy

Announcements

All index constituents are evaluated daily for data needed to calculate index levels and returns. All events affecting the daily index calculation are typically announced in advance via the Index Corporate Events report (.SDE), delivered daily to all clients.

Pro-forma Files

In addition to the corporate events file (.SDE), S&P Dow Jones Indices provides constituent pro-forma files each time the indices rebalance. The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents as well as their corresponding weights and index shares effective for the upcoming rebalancing.

Please visit www.spglobal.com/spdji/ for a complete schedule of rebalancing timelines and pro-forma delivery times.

Holiday Schedule

The index calculates daily, throughout the calendar year. The only days an index is not calculated are on days when all exchanges where an index's constituents are listed are officially closed or if WMR exchange rates services are not published.

A complete holiday schedule for the year is available at www.spglobal.com/spdji/.

Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Recalculation Policy

For information on the recalculation policy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Contact Information

For any questions regarding an index, please contact: index_services@spglobal.com.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/, major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

Tickers

The table below lists the headline index covered by this document. All versions of the index that may exist are also covered by this document. Please refer to the [S&P DJI Methodology & Regulatory Status Database](#) for a complete list of indices covered by this document.

Index	Return Type	BBG	RIC
S&P Global LargeMidCap Carbon Budget Climate Index (USD)	Price Return	SPGCBCUP	.SPGCBCUP
	Total Return	SPGCBCUT	.SPGCBCUT
	Net Total Return	SPGCBCUN	.SPGCBCUN

Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, www.spglobal.com/spdji/en/contact-us.

Website

For further information, please refer to S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/.

Appendix A

The appendix seeks to show how the carbon budgets, initial, and annual decarbonization rates are used at each rebalancing, and how the choice of annual decarbonization rate (rounded up to the whole percentage) results in the remaining absolute emissions budget (as at the launch date of the index) so as to not be exhausted at the 2050 rebalancing.

Rebalancing Since Launch 't'	Year 'y'	Remaining Absolute GtCO ₂ Budget, prior to rebalancing before index launch	Annual AGE _y (GtCO ₂)	Decarbonization Rate (%)	Target AGE _y (GtCO ₂)	Projected Remaining Absolute GtCO ₂ Budget after the annual rebalancing (GtCO ₂)
	2020	300	34.3			
	2021	265.7	36.5			
	2022	229.2	36.8			
	2023	192.4	37.1			
0	2024	155.3	37.1 ¹	70.00%	11.13	144.17
1	2025			72.10%	10.35	133.82
2	2026			74.05%	9.63	124.19
3	2027			75.87%	8.95	115.24
4	2028			77.56%	8.33	106.91
5	2029			79.13%	7.74	99.17
6	2030			80.59%	7.20	91.97
7	2031			81.95%	6.70	85.27
8	2032			83.21%	6.23	79.05
9	2033			84.39%	5.79	73.25
10	2034			85.48%	5.39	67.87
11	2035			86.50%	5.01	62.86
12	2036			87.44%	4.66	58.20
13	2037			88.32%	4.33	53.86
14	2038			89.14%	4.03	49.84
15	2039			89.90%	3.75	46.09
16	2040			90.00%	3.71	42.38
17	2041			90.00%	3.71	38.67
18	2042			90.00%	3.71	34.96
19	2043			90.00%	3.71	31.25
20	2044			90.00%	3.71	27.54
21	2045			90.00%	3.71	23.83
22	2046			90.00%	3.71	20.12
23	2047			90.00%	3.71	16.41
24	2048			90.00%	3.71	12.70
25	2049			90.00%	3.71	8.99
26	2050			90.00%	3.71	5.28

¹ For the initial AGE reduction in the vintage year, the starting point for the reduction is the prior year's AGE.

Appendix B

Initial Carbon Reduction and Decarbonization Rate Calculations

Calculate the fixed annual global emissions decarbonization rate using the latest Intergovernmental Panel on Climate Change’s (IPCC) estimate for the remaining global planetary GHG emissions budget that would limit global warming from pre-industrial levels to 1.5°C. This rate represents the required annual reduction in the observed global planetary emissions from at the start of the Vintage Year 2024 that would ensure the resultant cumulative global planetary emissions towards 2050 would be at, or below, the global emissions budget at the start of the Vintage Year 2024. Apply the global emissions reduction rate to the index is the annual decarbonization rate (‘Decarbonization Rate’).

Derive the carbon budget pathway from 2024 to 2050 using the following estimates, assumptions, and equations:

$$\begin{aligned} \text{Estimated Global Carbon Budget (GCB)}^2 \text{ from 2020} &= 300 \text{ GtCO}_2 \\ \text{Estimated Annual Global Emissions}^3 \text{ in year } y &= (AGE_y) \end{aligned}$$

Year, y	Estimated Annual Global Emissions in Year, y, (AGE _y) (Gigatons of carbon dioxide emissions, GtCO ₂)
2020	34.3
2021	36.5
2022	36.8
2023	37.1 ⁴

Global Carbon Budget Remaining from 2024 (GCB₂₀₂₄)

$$(GCB_{2024}) = GCB - \sum_{y=2020}^{2023} AGE_y$$

Determine the index’s decarbonization rate after defining the initial carbon reduction:

Initial Carbon Reduction	Decarbonization Rate
70%	7%

Apply the ‘Initial Carbon Reduction’ to the Annual Global Emissions (‘AGE’) for 2023. The annual ‘Decarbonization Rate’ calculation is then solved for such a rate that satisfies the following equation, using the GCB₂₀₂₄ and the specified initial carbon reduction rate.

$$(GCB_{2024}) = \sum_{t=0}^{2050-2024} AGE_{2023} \times \max(10\%, (1 - \text{Initial Carbon Reduction}) \times (1 - \text{Decarbonization Rate})^t)$$

where:

Decarbonization Rate = An annual decarbonization rate (rounded up to the whole percentage) of AGE that satisfies the equation. The rate is the smallest rate that results in positive remaining emissions budget in 2050.

t = Number of years since index Anchor Date.

² IPCC’s global carbon budget estimate at the start of 2020 for all emitters to limit global warming from pre-industrial levels to 1.5°C with an 83% probability.

³ IEA Global CO₂ emissions from energy combustion and industrial processes ([here](#)).

⁴ The 2023 emission number is extrapolated based on prior year emissions, calculated as: 2022 emission² / 2021 emission.

Disclaimer

Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates (“S&P DJI”) defines various dates to assist our clients by providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index’s Launch Date are considered back-tested. S&P DJI defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company’s public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed “Date of introduction”) is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index’s public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index’s launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

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will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not represent the results of actual trading of investable assets/securities. S&P DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any assets.

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