

INDEX GUIDELINE

SOLACTIVE EUROPE 50 ESG SELECT RC 10% ER EUR

Version 0.1

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INTRODUCTION

This document (the "**GUIDELINE**") is to be used as a guideline with regard to the composition, calculation and maintenance of the Solactive Europe 50 ESG Select RC 10% ER (EUR) Index (the "**INDEX**"). Any amendments to the rules made to the **GUIDELINE** are approved by the OVERSIGHT COMMITTEE specified in Section 5.5. The **INDEX** is owned, calculated, administered and published by Solactive AG ("**SOLACTIVE**") assuming the role as administrator (the "**INDEX ADMINISTRATOR**") under the Regulation (EU) 2016/1011 (the "**BENCHMARK REGULATION**" or "**BMR**"). The name "Solactive" is trademarked.

The text uses defined terms which are formatted with "SMALL CAPS". Such Terms shall have the meaning assigned to them as specified in Section 6 (Definitions).

The **GUIDELINE** and the policies and methodology documents referenced herein contain the underlying principles and rules regarding the structure and operation of the **INDEX**. **SOLACTIVE** does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the **INDEX** nor the level of the **INDEX** at any certain point in time nor in any other respect. **SOLACTIVE** strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for **SOLACTIVE** – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the **INDEX**. The publication of the **INDEX** by **SOLACTIVE** does not constitute a recommendation for capital investment and does not contain any assurance or opinion of **SOLACTIVE** regarding a possible investment in a financial instrument based on this **INDEX**.



1. INDEX SPECIFICATIONS

1.1. SCOPE OF THE INDEX

Category	Description
Asset Class	Equity
Strategy	Representation of European securities with high ESG rating while applying an excess return and volatility target layer on top.
Regional Allocation	Europe
Volatility Target	10%
Reference Rate	One-month euro interbank offered rate (Euribor 1 month)

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Solactive Europe 50 ESG Select RC 10% ER (EUR) Index	DE000SLOHPZ4	EUR	NTR*/ER*	.SOLEE50V	SOLEE50V Index

NTR means that the Base Index is calculated as Net Total Return Index as described in the Equity Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>. ER means there is a volatility control index is calculated as excess return.

The INDEX is published on the website of the INDEX ADMINISTRATOR (www.solactive.com) and is, in addition, available via the price marketing services of Boerse Stuttgart GmbH and may be distributed to all of its affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute or display the INDEX via its information systems.

Any publication in relation to the INDEX (e.g. notices, amendments to the GUIDELINE) will be available at the website of the INDEX ADMINISTRATOR: <https://www.solactive.com/news/announcements/>.

1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the 04/09/2012, the START DATE, is 100. Historical values from the 01/02/2023 the LIVE DATE, will be recorded in accordance with Article 8 of the BMR. Levels of the INDEX published for a period prior to the LIVE DATE have been back-tested.



1.4. PRICES AND CALCULATION FREQUENCY

The level of the INDEX is calculated on each CALCULATION DAY from 9:00 a.m. to 10:50 p.m. CET based on the TRADING PRICES on the EXCHANGES on which the INDEX COMPONENTS are listed. TRADING PRICES of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the current Intercontinental Exchange ("ICE") spot foreign exchange rate. Should there be no current TRADING PRICE for an INDEX COMPONENT, the later of: (i) the most recent CLOSING PRICE; or (ii) the last available TRADING PRICE for the preceding TRADING DAY is used in the calculation.

In addition to the intraday calculation a closing level of the INDEX for each CALCULATION DAY is also calculated. This closing level is based on the CLOSING PRICES for the INDEX COMPONENTS on the respective EXCHANGES on which the INDEX COMPONENTS are listed. The CLOSING PRICES of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the 4pm London time WM Fixing quoted by Refinitiv. If there is no 4pm London time WM Fixing for the relevant CALCULATION DAY, the last available 4pm London time WM Fixing will be used for the closing level calculation.

1.5. LICENSING

Licenses to use the INDEX as the underlying value for financial instruments, investment funds and financial contracts may be issued to stock exchanges, banks, financial services providers and investment houses by SOLACTIVE.



2. CALCULATION OF THE INDEX

2.1. INDEX FORMULA

The level of the INDEX is (i) calculated based on the level of the BASE INDEX, which performs as a Net Total Return, is (ii) adjusted by an excess return formula based on the REFERENCE RATE and is (iii) adjusted with a volatility target formula of 10%.

The level of the INDEX is calculated according to the following formula:

$$Index_t = Index_{t-1} * \left(1 + exp_{t-1} * \left(\frac{ER_t}{ER_{t-1}} - 1 \right) - |exp_t - exp_{t-1}| * RC \right)$$

$$ER_t = ER_{t-1} \left(\frac{BIL_t}{BIL_{t-1}} - \frac{rate_{t-1}}{100} \frac{DC_{t,t-1}}{360} - FC \frac{DC_{t,t-1}}{365} \right)$$

On the Excess Return Start Date $ER_t = 100$

Where:

$Index_t$: The level of the INDEX as of CALCULATION DAY t.

$Index_{t-1}$: The level of the INDEX as of CALCULATION DAY t-1.

exp_{t-1} : The exposure as of CALCULATION DAY t-1

BIL_t : Means the closing level of the Base Index in respect of Calculation Day t

BIL_{t-1} : Means the closing level of the Base Index in respect of the Calculation Day immediately preceding Calculation Day t

$rate_{t-1}$: The latest available level of the REFERENCE RATE expressed in % as of CALCULATION DAY t-1.

$DC_{t,t-1}$: The number of calendar days between CALCULATION DAY t (including) and CALCULATION DAY t-1 (excluding),

RC : The Rebalancing Cost of .03%.

FC : The Financing Cost of .30%.

The exposure as of CALCULATION DAY t (following the index start date) is calculated according to the following:

If:

$$abs\left(\frac{exp_{t-1} - target_exp_t}{exp_{t-1}}\right) > 5\%$$



then:

$$exp_t = target_exp_t$$

Else:

$$exp_t = exp_{t-1}$$

On the index start date:

$$exp_t = target_exp_t$$

The target exposure as of CALCULATION DAY t is calculated according to the following:

$$target_exp_t = \min(maxExp, targetVol/realizedVol_{t-1})$$

Where:

maxExp: The maximum exposure, which equals 100%.

targetVol: The level of the target volatility of 10%.

realizedVol_{t-1}: The realized volatility as of CALCULATION DAY t-1.

The realized volatility as of CALCULATION DAY t is calculated according to the following:

$$realizedVol_t = \max(Vol20d_t, Vol80d_t)$$

Where:

Vol20d_t: The 20 day volatility as of CALCULATION DAY t.

Vol80d_t: The 80 day volatility as of CALCULATION DAY t.

The n-day volatility (where n = 20 or n = 80) is calculated according to:

$$Volnd_t = \sqrt{\frac{252}{n-1} * \sum_{i=0}^{n-1} \left(\ln\left(\frac{ER_{t-i}}{ER_{t-i-1}}\right) - \frac{1}{n} \sum_{j=0}^{n-1} \left(\ln\frac{ER_{t-j}}{ER_{t-j-1}} \right) \right)^2}$$

Where:

ER_t: Has the definition specified in the beginning of section 2.1



2.2. ACCURACY

The level of the INDEX will be rounded to 2 decimal places.

2.3. RECALCULATION

SOLACTIVE makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the determination process may occur from time to time for a variety of reasons (internal or external) and therefore, cannot be completely ruled out. SOLACTIVE endeavors to correct all errors that have been identified within a reasonable period of time. The understanding of "a reasonable period of time" as well as the general measures to be taken are generally dependent on the INDEX COMPONENT and are specified in the Solactive Correction Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/correction-policy/>.

2.4. MARKET DISRUPTION

In periods of market stress SOLACTIVE calculates its indices following predefined and exhaustive arrangements as described in the Solactive Disruption Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/disruption-policy/>. Such market stress can arise due to a variety of reasons, but generally results in inaccurate or delayed prices for one or more INDEX COMPONENTS. The determination of the INDEX may be limited or impaired at times of illiquid or fragmented markets and market stress.



3. MISCELLANEOUS

3.1. DISCRETION

Any discretion which may need to be exercised in relation to the determination of the INDEX shall be limited to (i) exercising routine judgment (in the expert view of the INDEX ADMINISTRATOR) in the administration of the Index rules, provided, however, that such routine judgment does not include deviations or alterations to the Index rules that are designed to improve the financial performance of the Index, (ii) correcting errors in the implementation of the rules or calculations made pursuant to the rules, or (iii) making an adjustment to respond to an unanticipated event outside of SOLACTIVE's control.

3.2. METHODOLOGY REVIEW

The methodology of the INDEX is subject to regular review, at least annually. In case a need of a change of the methodology has been identified within such review (e.g. if the underlying market or economic reality has changed since the launch of the INDEX, i.e. if the present methodology is based on obsolete assumptions and factors and no longer reflects the reality as accurately, reliably and appropriately as before), such change will be made in accordance with the Solactive Methodology Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.

Such change in the methodology will be announced on the SOLACTIVE website under the Section "[Announcement](https://www.solactive.com/news/announcements/)", which is available at <https://www.solactive.com/news/announcements/>. The date of the last amendment of this INDEX is contained in this GUIDELINE.

3.3. CHANGES IN CALCULATION METHOD

The application by the INDEX ADMINISTRATOR of the method described in this document is final and binding. The INDEX ADMINISTRATOR shall apply the method described above for the composition and calculation of the INDEX. However, it cannot be excluded that the market environment, supervisory, legal and financial or tax reasons may require changes to be made to this method. The INDEX ADMINISTRATOR may also make changes to the terms and conditions of the INDEX and the method applied to calculate the INDEX that it deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The INDEX ADMINISTRATOR is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the INDEX ADMINISTRATOR will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.



3.4. TERMINATION

SOLACTIVE makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Where necessary, SOLACTIVE follows a clearly defined and transparent procedure to adapt Index methodologies to changing underlying markets (see Section 3.2 "Methodology Review") in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of the INDEX may be indicated. This is usually the case when the underlying market or economic reality, which an index is set to measure or to reflect, changes substantially and in a way not foreseeable at the time of inception of the index, the index rules, and particularly the selection criteria, can no longer be applied coherently or the index is no longer used as the underlying value for financial instruments, investment funds and financial contracts.

SOLACTIVE has established and maintains clear guidelines on how to identify situations in which the cessation of an index is unavoidable, how stakeholders are to be informed and consulted and the procedures to be followed for a termination or the transition to an alternative index. Details are specified in the Solactive Termination Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/termination-policy/>.

3.5. OVERSIGHT COMMITTEE

An oversight committee composed of staff from SOLACTIVE and its subsidiaries (the "OVERSIGHT COMMITTEE") is responsible for decisions regarding any amendments to the rules of the INDEX. Any such amendment, which may result in an amendment of the GUIDELINE, must be submitted to the OVERSIGHT COMMITTEE for prior approval and will be made in compliance with the Methodology Policy, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.



4. DEFINITIONS

“BASE INDEX” means Solactive Europe 50 ESG Select EUR Index NTR.

“**BENCHMARK REGULATION**” shall have the meaning as defined in Section “Introduction”.

“**BMR**” shall have the meaning as defined in Section “Introduction”.

“**BUSINESS DAY**” is a day on which the Helsinki Stock Exchange (MIC: XHEL), Euronext Amsterdam (MIC: XAMS), Frankfurt Stock Exchange (MIC: XFRA), SIX Swiss Exchange (MIX: XSWX), Paris Stock Exchange (MIC: XPAR), London Stock Exchange (MIC: XLON), and the Bolsa de Madrid (MIC: XMAD) are open for general business.

“**CALCULATION DAY**” is a day on which the Helsinki Stock Exchange (MIC: XHEL), Euronext Amsterdam (MIC: XAMS), Frankfurt Stock Exchange (MIC: XFRA), SIX Swiss Exchange (MIX: XSWX), Paris Stock Exchange (MIC: XPAR), London Stock Exchange (MIC: XLON), and the Bolsa de Madrid (MIC: XMAD) are open for general business.

“CLOSING PRICE” in respect of an INDEX COMPONENT and a TRADING DAY is a security's final regular-hours TRADING PRICE published by the EXCHANGE and determined in accordance with the EXCHANGE regulations. If the EXCHANGE has no or has not published a CLOSING PRICE in accordance with the EXCHANGE rules for an INDEX COMPONENT, the last TRADING PRICE will be used.

“Excess Return Start Date” is 02/05/2012

“EXCHANGE” means the Helsinki Stock Exchange (MIC: XHEL), Euronext Amsterdam (MIC: XAMS), Frankfurt Stock Exchange (MIC: XFRA), SIX Swiss Exchange (MIX: XSWX), Paris Stock Exchange (MIC: XPAR), London Stock Exchange (MIC: XLON), and the Bolsa de Madrid (MIC: XMAD)

“GUIDELINE” shall have the meaning as defined in Section “Introduction”.

“INDEX” shall have the meaning as defined in Section “Introduction”.

“INDEX ADMINISTRATOR” shall have the meaning as defined in Section “Introduction”.

“INDEX COMPONENT” is each security reflected in the INDEX.

“INDEX CURRENCY” is the currency specified in the column “Currency” in the table in Section 1.2.

“LIVE DATE” shall have the meaning as defined in Section 1.3.

“OVERSIGHT COMMITTEE” shall have the meaning as defined in Section 3.6.

“REFERENCE RATE” is the one-month euro interbank offered rate (RIC: EURIBOR1M=)

“SOLACTIVE” shall have the meaning as defined in Section “Introduction”.

“START DATE” shall have the meaning as defined in Section 1.3.

“TRADING DAY” is, with respect to an INDEX COMPONENT included in the INDEX at the REBALANCE DAY and every INDEX COMPONENT included in the INDEX at the CALCULATION DAY immediately following the REBALANCE DAY (for



clarification: this provision is intended to capture the TRADING DAYS for the securities to be included in the INDEX as new INDEX COMPONENTS with close of trading on the relevant EXCHANGE on the REBALANCE DAY), a day on which the relevant EXCHANGE is open for trading (or a day that would have been such a day if a market disruption had not occurred), excluding days on which trading may be ceased prior to the scheduled EXCHANGE closing time and days on which the EXCHANGE is open for a scheduled shortened period. The INDEX ADMINISTRATOR is ultimately responsible as to determining whether a certain day is a TRADING DAY.

“TRADING PRICE” in respect of an INDEX COMPONENT and a TRADING DAY is the most recent published price at which the INDEX COMPONENT was traded on the respective EXCHANGE.

CONTACT

Solactive AG
German Index Engineering

Platz der Einheit 1
60327 Frankfurt am Main
Germany

Tel.: +49 (0) 69 719 160 00

Fax: +49 (0) 69 719 160 25

Email: info@solactive.com

Website: www.solactive.com

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