

## **GUIDELINE**

# **Solactive ISS US Low Carbon Leaders Index Target Vol 8**

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This document contains the underlying principles and regulations regarding the structure and the operating of the Solactive ISS US Low Carbon Leaders Index Target Vol 8 ("the Index"). Solactive AG shall make every effort to implement regulations. Solactive AG does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the Indices nor the Index values at any certain point in time nor in any other respect. The Indices are merely calculated and published by Solactive AG and it strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for Solactive AG – 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 AG is no recommendation for capital investment and does not contain any assurance or opinion of Solactive AG regarding a possible investment in a financial instrument based on these Indices.

# Introduction

This document is to be used as a guideline with regard to the composition, calculation and management of the Solactive ISS US Low Carbon Leaders Index Target Vol 8 Index. Any changes made to the guideline are initiated by the Committee specified in section 1.6 of this document. The Index is calculated and published by Solactive AG. The name “Solactive” is copyrighted.

## 1 Index specifications

The ISS US Low Carbon Leaders Index Target Vol 8 Index is calculated and distributed by Solactive AG.

The index is a Volatility Target version of the Solactive ISS US Low Carbon Leadership Index (NTR and GTR versions) and aims to achieve an annualized volatility of 8%. The index therefore notionally invests in the Solactive ISS US Low Carbon Leadership Index and a hypothetical money market position at the 3 month USD LIBOR rate.

The Indices are published in USD.

### 1.1 Short name and ISIN

The Indices are distributed under the following identifiers:

Name	ISIN	WKN	Characteristic	Reuters	Bloomberg
Solactive ISS US Low Carbon Leaders Index Target Vol 8 (GTR)	DE000SLA1W48	SLA1W4	Volatility Target	.USCARG8E	USCARG8E Index
Solactive ISS US Low Carbon Leaders Index Target Vol 8 (NTR)	DE000SLA1W55	SLA1W5	Volatility Target	.USCARN8E	USCARN8E Index

### 1.2 Initial value

The Indices are launched with a level of 100 at the close on the start date, May 2nd, 2011.

### 1.3 Distribution

The Indices are published via the price marketing services of Boerse Stuttgart AG and are distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether he will distribute/display the Solactive ISS US Low Carbon Leaders Index Target Vol 8 Index via his information systems.

### 1.4 Prices and calculation frequency

The prices of the Indices are calculated on each Business Day on which the Solactive ISS US Low Carbon Leadership Index is published. Should there be no price available on Reuters for any Business Day for the 3 month USD LIBOR rate, the most recent price on Reuters for the preceding Business Day is used in the index calculation.

The Solactive ISS US Low Carbon Leaders Index Target Vol 8 Index is calculated every Business at 16:35pm, EST. In the event that data cannot be provided to Reuters or to the pricing services of Boerse Stuttgart AG the Index cannot be distributed.

Any incorrect calculation is adjusted on a retrospective basis.

## **1.5 Weighting**

The weights of the index components can change on a daily basis. The weights are adjusted if the target exposure of the index differs from the current exposure by more than 10% in absolute value.

The determination of the weights is described in detail in section 3.

## **1.6 Decision-making bodies**

A Committee composed of staff from Solactive is responsible any amendments to the rules (in this document referred to as the “Index Committee”).

## **1.7 Publication**

All specifications and information relevant for calculating the Index are made available on the <http://www.solactive.de> web page and sub-pages.

## **1.8 Historical data**

Historical data will be maintained from the launch of the Index on May 18th 2016.

## **1.9 Licensing**

Licences to use the Index as the underlying for investment products issued by stock exchanges, banks, financial services providers and investment houses or for benchmark usage are granted by Solactive AG.

## **2 Composition of the Index**

### **2.1 Selection of the Index Components**

The index is composed of the following two underlyings:

- 1) Solactive ISS US Low Carbon Leadership Index
- 2) The 3 month USD LIBOR rate.

### **2.2 Ordinary adjustment**

Not applicable

### **2.3 Extraordinary adjustment**

Not applicable.

## 3 Calculation of the Index

### 3.1 Index formula

The Index Value on any Business Day is calculated in accordance with the following formula:

$$IL_t = IL_{t-1} \left( 1 + Exp_{t-1} * \left( \frac{UI_t}{UI_{t-1}} - 1 \right) + (1 - Exp_{t-1}) * (Libor_{t-1}) * \frac{DC_{t,t-1}}{360} - (Libor_{t-1} + AF) * \frac{DC_{t,t-1}}{360} \right)$$

with:

$IL_t$  = Index Level as of Business Day t

$Exp_{t-1}$  = Exposure as of Business Day t-1

$UI_t$  = Level of the underlying index as of Business Day t

$Libor_{t-1}$  = 3 month USD libor rate as of Business Day t

$DC_{t,t-1}$  = Number of Calendar Days from (and excluding) Business Day t-1 to (and including) Business Day t

$AF$  = Adjustment Factor

$Exp_t$  is adjusted according to the following formula:

$$Exp_t = \begin{cases} TE_t & \text{if } \left| \frac{Exp_{t-1} - TE_t}{TE_t} \right| > 10\% \\ Exp_{t-1} & \text{else} \end{cases}$$

with  $Exp_0 = 1$

$TE_t$  is the target exposure, which is calculated according to

$$TE_t = \min \left( \max \text{exposure}, \frac{\text{target vol}}{\sigma_{t-1}} \right)$$

$\sigma_{t-1}$  calculated according the following formula:

$$\sigma_t = \max(\sigma_t^{20d}, \sigma_t^{60d})$$

$\sigma_t^{20d}$  and  $\sigma_t^{60d}$  are the 20 day and 60 day annualized realized volatility of the underlying index. They are calculated according to

$$\sigma_t^{nd} = \sqrt{\frac{252}{n} \sum_{i=1}^n \left( \ln \left( \frac{UI_{t-i+1}}{UI_{t-i}} \right) \right)^2}, n \in \{20, 60\}$$

### 3.2 Precision

The value of the Index will be rounded to 4 decimal places.

The Number of Index Shares of the Index Components will be rounded to 6 decimal places.

### 3.3 Adjustments

Not applicable.

### **3.4 Dividends and other distributions**

Not applicable.

### **3.5 Corporate actions**

Not applicable.

### **3.6 Calculation of the Index in the event of a Market Disruption Event**

The Index is not calculated in the event of a Market Disruption Event or Force Majeure Event. If the Market Disruption Event or Force Majeure Event continues over a period of eight Trading Days, then the Committee will determine the necessary action (including but not limited to taking into account the market conditions prevailing at this point in time, the last quoted Trading Price for each of the Index Components as well as any other conditions that it deems relevant for calculating the Index value) such that the affected securities resulting from the Market Disruption Event are no longer causing such disruption to occur.

#### 4. Definitions

**“Index Component”** is the underlying index and the 3 month USD LIBOR rate (as published on Reuters under the RIC: USD3MFSR=)

**“Underlying Index”** is the Solactive ISS US Low Carbon Leaders Index (NTR) and the Solactive ISS US Low Carbon Leaders Index (GTR) (as published on Reuters under the RICs .USCARBTR and .USCARBGR)

A **“Business Day”** is any day where the New York Stock Exchange and/or NASDAQ are open for trading.

The **“Target Volatility”** is 8%.

The **“Max Exposure”** is 150%.

The **“Adjustment Factor”** is 0.95% for the GTR version and 0.5% for the NTR version.

The **“Index Calculator”** is Solactive AG or any other appropriately appointed successor in this function.

The **“Index Currency”** is USD.

**“Market Disruption Events”** relate to all events causing a halt to regular pricing for any of the index components or the market in general.



## **5 Appendix**

### **5.1 Contact data**

#### **Information regarding the Solactive ISS US Low Carbon Leaders Strategy Index**

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### **5.2 Calculation of the Index – change in calculation method**

The application by the Index Calculator of the method described in this document is final and binding. The Index Calculator shall apply the method described above for the composition and calculation of the Index Series. However it cannot be excluded that the market environment, supervisory, legal, financial or tax reasons may require changes to be made to this method. The Index Calculator may also make changes to the terms and conditions of the Indices and the method applied to calculate the Indices, which he 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 Calculator is not obliged to provide information on any such modifications or changes. Despite the modifications and changes the Index Calculator will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.