

INDEX GUIDELINE

Solactive WTI 1-Day Rolling Futures Index

Version 1.0

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TABLE OF CONTENTS

Introduction	3
1 Index Specifications	4
1.1 Scope of the Index	4
1.2 Identifiers and Publication	4
1.3 Initial Level of the Index	4
1.4 Prices and calculation frequency	4
1.5 Licensing	5
2 Index Selection	6
2.1 Roll Period	6
2.1.1 Scheduled Roll Start Day	6
2.1.2 Triggered Roll Start Day	6
2.2 Roll Schedule	6
2.3 Weighting of the index components	7
3. Calculation of the Index	8
3.1. Index formula	8
3.2. Accuracy	8
3.3. Adjustments	8
3.4. Market Disruption	9
4. Miscellaneous	10
4.1. Discretion	10
4.2. Methodology Review	10
4.3. Changes in calculation method	10
4.4. Termination	11
4.5. Oversight	11
5. Definitions	12
Contact	12



INTRODUCTION

This document (the "**GUIDELINE**") is to be used as a guideline with regard to the composition, calculation and maintenance of the **Solactive WTI 1-Day Rolling Futures Index** (the "**INDEX**"). Any amendments to the rules made to the **GUIDELINE** are approved by the **INDEX COMMITTEE** specified in Section 4.5. The Index is calculated, administrated and published by Solactive AG ("**SOLACTIVE**") assuming the role as index administrator (the "**INDEX ADMINISTRATOR**") under the Regulation (EU) 2016/1011 (the "**BENCHMARK REGULATION**" or "**BMR**"). The name "Solactive" is trademarked.

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

The INDEX tracks the performance of the CME (NYMEX) active month WTI Crude Oil future and rolls the exposure over one day from the ACTIVE CONTRACT into the NEXT ACTIVE CONTRACT.

1.2 IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Solactive WTI 1-Day Rolling Futures Index	DE000SLOA3B5	USD	ER	.SOLWTI1	SOLWTI1 Index

The INDEX is published 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. In the event that data cannot be provided to the price marketing services of Boerse Stuttgart GmbH the INDEX cannot be published.

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 BASE DATE as of 2nd January 2014 is 100. Historical values 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 TRADING DAY at 16:50 EST, based on the SETTLEMENT PRICES on the respective EXCHANGES on which the INDEX COMPONENTS are listed. Should there be no current SETTLEMENT PRICE for an INDEX COMPONENT available, the most recent TRADING PRICE is used in the 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 INDEX SELECTION

INDEX COMPONENTS are selected according to the ROLL PERIOD specified in Section 2.1 and in accordance with the ROLL SCHEDULE defined in Section 2.2.

2.1 ROLL PERIOD

During the ROLL PERIOD, the ACTIVE CONTRACT is rolled over a one-day period into the NEXT ACTIVE CONTRACT. The ROLL PERIOD starts either on SCHEDULED ROLL START DAY defined in Section 2.1.1. or on TRIGGERED ROLL START DAY defined in Section 2.1.2. The CONTRACT ROLL WEIGHT of the ACTIVE CONTRACT is then decreased by 100% after the CLOSE OF BUSINESS of each TRADING DAY of the ROLL PERIOD starting at 100% while the CONTRACT ROLL WEIGHT of the NEXT ACTIVE CONTRACT is increased by 100% after the CLOSE OF BUSINESS of each TRADING DAY of the ROLL PERIOD starting at 0%. After the end of the ROLL PERIOD, the NEXT ACTIVE CONTRACT becomes the ACTIVE CONTRACT. The ROLL SCHEDULE is listed in the following Section 2.2

2.1.1 Scheduled Roll Start Day

SCHEDULED ROLL START DAY occurs on the **fifth** TRADING DAY of each month given the TRIGGERED ROLL START DAY did not occur in a given month.

2.1.2 Triggered Roll Start Day

In order to mitigate the risk of illiquidity of the ACTIVE CONTRACT and to reduce potential high rolling costs associated with it, a ROLL SIGNAL is introduced. A ROLL SIGNAL aims at comparison of daily TRADING VOLUME of an ACTIVE CONTRACT versus to that of the NEXT ACTIVE CONTRACT during the SIGNAL MONITORING WINDOW. If on any TRADING DAY during the SIGNAL MONITORING WINDOW, daily TRADING VOLUME of the NEXT ACTIVE CONTRACT is larger than that of the ACTIVE CONTRACT, the ROLL SIGNAL is triggered and the ROLL PERIOD START DAY occurs on the **second** following TRADING DAY, called TRIGGERED ROLL START DAY.

SIGNAL MONITORING WINDOW is the time window whenever the ROLL SIGNAL can be triggered. It starts on the TRADING DAY that follows the SPOT CONTRACT LAST TRADE DAY and ends **two** TRADING DAYS before the SCHEDULED ROLL PERIOD START DAY or if the ROLL SIGNAL is triggered in a given SIGNAL MONITORING WINDOW, on a day of such trigger.

2.2 ROLL SCHEDULE

The SPOT CONTRACT, ACTIVE CONTRACT, and the NEXT ACTIVE CONTRACT are selected based on the current/next month as follows:

SPOT CONTRACT:



Contract/Month 1 2 3 4 5 6 7 8 9 10 11 12
 CL F G H J K M N Q U V X Z

ACTIVE CONTRACT:

Contract/Month 1 2 3 4 5 6 7 8 9 10 11 12
 CL G H J K M N Q U V X Z F+

NEXT ACTIVE CONTRACT:

Contract/Month 1 2 3 4 5 6 7 8 9 10 11 12
 CL H J K M N Q U V X Z F+ G+

A “+” defines a contract of the following year.

The following naming convention of the contracts holds:

Identifier	Month	Identifier	Month
F	January	N	July
G	February	Q	August
H	March	U	September
J	April	V	October
K	May	X	November
M	June	Z	December

2.3 WEIGHTING OF THE INDEX COMPONENTS

The weighting of the futures in the INDEX is done as described in Section 2.1.



3. CALCULATION OF THE INDEX

3.1. INDEX FORMULA

The INDEX is calculated as an Excess Return index and published in US Dollar.

The value of the INDEX on any given TRADING DAY t is calculated in accordance with the following formula:

$$I_t = I_{t-1} \cdot \left(\frac{CRW_{A,t} \cdot SP_{A,t}}{SP_{A,t-1}} + \frac{CRW_{NA,t} \cdot SP_{NA,t}}{SP_{NA,t-1}} \right)$$

where:

I_{t-1} is the level of the INDEX on the TRADING DAY immediately preceding TRADING DAY t .

$CRW_{A,t}$ is the CONTRACT ROLL WEIGHT of the ACTIVE CONTRACT on TRADING DAY t .

$CRW_{NA,t}$ is the CONTRACT ROLL WEIGHT of the NEXT ACTIVE CONTRACT on TRADING DAY t .

$SP_{A,t}$ is the SETTLEMENT PRICE of the ACTIVE CONTRACT on TRADING DAY t .

$SP_{NA,t}$ is the SETTLEMENT PRICE of the NEXT ACTIVE CONTRACT on TRADING DAY t .

3.2. ACCURACY

The INDEX Level will be rounded to 2 decimal places.

3.3. ADJUSTMENTS

SOLACTIVE makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the index determination process may occur from time to time for variety 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 depending on the underlying and is specified in the SOLACTIVE [Correction Policy](#), which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/>.



3.4. 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/>. 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.



4. MISCELLANEOUS

4.1. DISCRETION

Any discretion which may need to be exercised in relation to the determination of the Index (for example the determination of the Index Universe (if applicable), the selection of the INDEX COMPONENTS (if applicable) or any other relevant decisions in relation to the Index) shall be in accordance with the SOLACTIVE's Discretion Policy, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/>.

4.2. METHODOLOGY REVIEW

The methodology of the Index is subject to regular review. 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 [Methodology Policy](#), which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/>.

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

4.3. CHANGES 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. 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 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 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.



4.4. 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 4.2 “Methodology Review”) in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of an 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 Termination Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/>.

4.5. OVERSIGHT

An INDEX COMMITTEE composed of staff from SOLACTIVE and its subsidiaries (the “**INDEX 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 INDEX COMMITTEE for prior approval and will be made in compliance with the “Solactive Methodology Policy”, which is available at <https://www.solactive.com/documents/>.



5. DEFINITIONS

“**ACTIVE CONTRACT**” means the contract given in the ROLL SCHEDULE under Section 2.2.

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

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

“**CLOSE OF BUSINESS**” is the calculation time of the closing level of the INDEX as outlined in Section 1.4.

“**CONTRACT ROLL WEIGHT**” means the weight of an ACTIVE or NEXT ACTIVE CONTRACT on any given TRADING DAY during the ROLL PERIOD determined in the Section 2.1.

“**EXCHANGE**” means the New York Mercantile Exchange (NYMEX; MIC: XNYM)

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

“**INDEX CALCULATOR**” is SOLACTIVE or any other appropriately appointed successor in this function.

“**INDEX COMPONENT**” is any contract currently included in the INDEX.

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

“**LAST TRADE DAY**” is the final day when trading may occur in a given futures contract month as provided by the EXCHANGE.

“**LIVE DATE**” is 23 July, 2021.

“**NEXT ACTIVE CONTRACT**” means the contract given in the ROLL SCHEDULE under Section 2.2.

“**ROLL PERIOD**” means a number of TRADING DAYS as defined in Section 2.1, over which the roll from ACTIVE CONTRACT into NEXT ACTIVE CONTRACT occurs.

“**ROLL SCHEDULE**” should have its meaning as defined in Section 2.2.

“**ROLL SIGNAL**” should have its meaning as defined in Section 2.1.2.

“**ROLL START DAY**” means the first day of the ROLL PERIOD.

“**SCHEDULED ROLL START DAY**” means the 5th TRADING DAY of each month given the TRIGGERED ROLL START DAY did not occur in a given month.

“**SETTLEMENT PRICE**” is in respect of an INDEX COMPONENT and a TRADING DAY the average price at which an ACTIVE CONTRACT trades calculated at the close of each TRADING DAY by the EXCHANGE.

“**SIGNAL MONITORING WINDOW**” means the time window whenever the ROLL SIGNAL can be triggered as defined in Section 2.1.2.

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

“**SPOT CONTRACT**” means the contract given in the ROLL SCHEDULE under Section 2.2.

“**START DATE**” is the 2nd January 2014.



"TRADE VOLUME" is in respect of an INDEX COMPONENT and a TRADING DAY is the TRADE VOLUME to be used in the ROLL SIGNAL determination on this TRADING DAY determined in accordance with the EXCHANGE regulations.

"TRADING DAY" is in respect of the Index and an INDEX COMPONENT 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 normal EXCHANGE closing time. The INDEX CALCULATOR is ultimately responsible as to whether a certain day is a TRADING DAY with regard to the INDEX or an INDEX COMPONENT or in any other connection relating to this document.

"TRADING PRICE" is in respect of an INDEX COMPONENT and a TRADING DAY is the most recent price to be used in the index calculation on this TRADING DAY determined in accordance with the EXCHANGE regulations. If the EXCHANGE has no TRADING PRICE for an INDEX COMPONENT for such TRADING DAY, the most recent TRADING PRICE for the preceding TRADING DAY is used in the calculation.

"TRIGGERED ROLL START DAY" should have its meaning as defined in Section 2.1.2.

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