



# Tortoise Recycling Decarbonization UCITS Index<sup>SM</sup> (RECYCLE)

## Index Methodology Guide

February 2023

---

## Table of contents

<b>Company background</b>	3
<b>Index introduction</b>	3
<b>Constituent eligibility criteria</b>	3
<b>Constituent Weightings</b>	4
<b>Security data</b>	4
<b>Index construction and maintenance</b>	5
<b>Index dissemination</b>	6
<b>Index Committee</b>	7
<b>Definitions</b>	8
<b>Disclaimer</b>	8

## Company background

### About Tortoise Index Solutions

Tortoise Index Solutions, LLC ("Tortoise Index Solutions") d/b/a TIS Advisors provides research-driven indices that can be used as a realistic basis for exchange-traded products and thought leadership in the universe of essential assets. Its indices are intended to fill a void in the market and provide benchmarks and investable asset class universes for use by investment professionals, research analysts and industry executives to analyze relative performance as well as to provide a basis for passively managed exchange-traded products.

### Index introduction

Decarbonization is a global mega trend as the world strives to achieve climate goals. The Tortoise Recycling Decarbonization UCITS Index<sup>SM</sup> is designed to track the performance of publicly traded companies involved in waste-to-energy and recycling technologies as part of the global decarbonization mega trend. Waste-to-Energy is the process of generating energy from waste such as garbage, animal manure, agriculture products and/or animal fats and thus includes companies that primarily produce renewable natural gas and diesel as well as ethanol. Recycling includes companies that recycle plastic waste, lithium-ion batteries as well as carbon capture sequestration.

The Index is taking environmental, social, and governance (ESG) considerations into account. Companies that do not meet the Global Standards Screening (GSS) or are involved in Controversial Weapons, Tobacco or Thermal Coal activities are excluded from the eligible investment universe.

### Index detail

The Index level is calculated on both a USD price-return and a USD net total-return basis. The real-time Index level for the price-return version of the Index is available from major market data providers under the ticker "RECYCLE." The real-time net total-return Index level is available under the ticker "RECYCLET."

The Index is independently calculated by Solactive AG with a base level of 100 as of January 31, 2022.

### Constituent eligibility criteria

**Index constituents** may include the following equity securities of eligible companies from developed and developing markets: 1) common stock; 2) interests in master limited partnerships ("MLPs"); and 3) interests in limited liability companies ("LLCs").

### Index eligibility

Stocks that meet the eligibility criteria operate businesses related to waste-to-energy and recycling. The preliminary universe of companies is identified based on any of the following screens:

- Companies that derive revenue, operating profit, own assets or capital expenditures in decarbonizing waste-to-energy and recycling related businesses included in the TortoiseEcofin proprietary database of 462 global energy companies with an aggregative market cap of \$8.0 trillion.
  - **Waste-to-energy** business activity includes production of renewable natural gas and renewable diesel. It also includes production of ethanol and other biomass like wood waste
  - **Recycling** business activity includes traditional recycling activities such as glass, paper and cardboard recycling as well as recycling plastics into original materials such as polypropylene for re-use. In addition, includes lithium-ion battery recycling as well as companies engaged in carbon capture and sequestration
- Companies that derive revenue, operating profit, own assets or capital expenditures from operating decarbonizing waste-to-energy and recycling related businesses in the following GICSSub-industries
 

○ Environmental & Facilities Services (20201050)	○ Industrial Machinery (20106020)
○ Renewable Electricity (55105020)	○ Construction & Engineering (20103010)
○ Commodity Chemicals(15101010)	○ Packaged Foods & Meats (30202030)

- Specialty Chemicals (15101050)
- Oil & Gas Refining & Marketing (10102030)
- Agricultural Products (30202010)

To be eligible for the Index, a company also needs to meet the following criteria:

**Market capitalization** Companies must have a total equity market capitalization of at least U.S. \$200 million for two consecutive quarters at the time of inclusion in the index. To remain in the Index, a company must maintain an average equity market capitalization of at least U.S. \$200 million for a minimum of 20 trading days before the reference date.

**Trading volume:** companies must have a minimum U.S. \$1 million average daily trading volume for 3 months before the index reference date.

**Listing exchange:** In the developed markets, companies must list their shares on one of the stock exchanges in the U.S., Europe (i.e., Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, or the United Kingdom), the Tokyo Stock Exchange, or on stock exchanges in Israel, New Zealand, Hong Kong, Singapore or Canada. In the developing markets, companies must have their shares listed on a stock exchange in one of the following countries: Brazil, Chile, China, Czech Republic, Hungary, Indonesia, Korea, Malaysia, Mexico, Philippines, Poland, South Africa, Taiwan, Thailand, or Turkey. Securities must be incorporated in one of these Emerging Market Countries. In the case of China, companies that are incorporated or domiciled in China and trade on one of the stock exchanges in the developed world are eligible for inclusion. In addition, Chinese domestic listed companies that are part of the stock connect program and meet index requirements will be selected for inclusion.

**ESG screening:** The Index includes an assessment of environmental, social, and governance (ESG) considerations. Companies that are “non-compliant” or “watchlist” as per the Global Standards Screening (GSS), or are involved in Controversial Weapons, or derive more than 5% of revenues from activities related to Small Arms, Tobacco, Thermal Coal, Oil Sands, Arctic Oil & Gas Exploration, or Shale Energy are excluded from the eligible investment universe.

- Global Standards Screening (GSS): the Index will exclude companies that are non-compliant based on the ESG data providers’ GSS assessment. GSS identifies companies that violate or are at risk of violating commonly accepted international norms and standards, such as the United Nations Global Compact (UNGC) Principles, the UN Guiding Principles on Business and Human Rights (UNGPs), the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and their underlying conventions. In addition, companies are excluded based on the GSS assessment if they are determined to be at risk of causing or contributing to severe negative impacts (harm) to stakeholders and/or the environment, but for which not all requirements for a non-compliant status could be established.
- Controversial Weapons: the Index will exclude the companies that are involved in controversial weapons, such as the activities in anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
- Small Arms: the Index will exclude companies that derive over 5% revenue from activities connected to small arms. Such activities include the manufacturing and selling of small arms, or the manufacturing and selling of key components involved in small arms manufacture, or being involved in the distribution of small arms.
- Tobacco: the Index will exclude the companies that are involved in tobacco production and supplying of tobacco-related products/services, or companies that derive over 5% revenue from tobacco distribution, as identified by the ESG data providers.
- Thermal Coal: the Index will exclude companies that derive more than 5% revenue from thermal coal extraction, or having more than 5% revenue or capacity from thermal coal-based power generation.
- Oil Sands: the Index will exclude companies that derive more than 5% revenue from extracting oil sands.
- Arctic Oil & Gas Exploration: the Index will exclude companies that derive more than 5% revenue from Oil & Gas exploration in the Arctic regions.
- Shale Energy: the Index will exclude companies that derive more than 5% revenue from shale energy exploration and/ or production.

## Constituent Weightings

No individual security in the index may be more than a 7% weight of the total index market cap as of the reference date. In addition, the combined weights of all securities with 5% weights shall not exceed 35% at rebalance. Any excess weight will be distributed on a proportional market capitalization weighted basis to other members of the index that do not at the time exceed the thresholds.

**Liquidity adjustment:** In the event a security has a calculated volume factor defined as average daily volume traded

over the preceding three months / weight in the index that is less than \$500 million, its weight will be reduced such that weight after volume adjustment equals weight before adjustment times calculated volume factor divided by \$500 million. Any excess weight will be distributed on a proportional market capitalization weighted basis to other members of the index.

The sum of the weights of Tier 4 securities will not exceed 20% of the index.

## Security data

### Reference documentation

The following documents are used to calculate shares outstanding:

- Press releases
- Annual reports pursuant to Sections 13 and 15(d) of the Securities and Exchange Act of 1934 (10-K, 20-F) and Parts 4, 5 and 6 of National Instrument 51-102 (AIF)
- Quarterly reports pursuant to Section 13 and 15(d) of the Securities Exchange Act of 1934 (10-Q, 6-K) and Parts 4 and 5 of National Instrument 51-102 (IFS)
- Certain registration statements pursuant to Rules 415 and 462 of the Securities Act of 1933 (S-1, S-3)
- Prospectuses and prospectus supplements pursuant to Rule 424(b)
- Proxy statements pursuant to Section 14(a) of the Securities Exchange Act of 1934 (DEF 14A)
- Current reports pursuant to Sections 13 and 15(d) of the Securities Exchange Act of 1934 (8-K, 6-K)

### Shares outstanding

The shares counted for index calculation are shares outstanding, and are essentially “basic shares” as defined by The Financial Accounting Standards Board (FASB) in Generally Accepted Accounting Principles (GAAP). This count is float-adjusted to reflect only available shares.

Changes in a company’s shares outstanding (and float changes), to include those due to mergers and acquisitions, greater than 5% are applied on a weekly basis by the index calculation agent. All other de minimis changes are accumulated and implemented with quarterly share rebalancing and annual float updates.

## Index construction and maintenance

### Index selection

Exposure and carbon emission assessment

Each stock that meets the eligibility criteria is evaluated for exposure to waste-to-energy and recycling activities. Revenues, operating profit, assets, and capital expenditures are evaluated to determine exposure to waste-to-energy and recycling activities based on data provided in the company’s most recent annual report or quarterly report, and/or sustainability report.

Furthermore, companies’ emissions data is reviewed to evaluate emissions avoided as disclosed by the company relative to Scope 1 and 2 emissions reported in the company’s annual sustainability report.

#### Selection

Based on the above exposure assessment, only companies with greater than 20% of revenue, or operating profit, or assets, or capital expenditures are selected and further classified into the following categories:

- **Tier 1 (Deep green)** category includes companies with greater than 50% of revenue, operating profit, assets, capital expenditures, and generate negative carbon emissions (i.e., carbon avoided based on their renewable products and recycling > Scope 1 and 2 emissions).
- **Tier 2 (Green)** category contains companies with 20% - 50% of revenue, operating profit, assets, capital expenditures, and generate negative carbon emissions.
- **Tier 3 (Light green)** category contains companies with greater than 50% of revenue, operating profit, assets, capital expenditures, but generate positive or not reporting carbon emissions.
- **Tier 4 (Orange)** category contains companies with 20% - 50% of revenue, operating profit, assets, capital

expenditures, but generate positive or not reporting carbon emissions.

### Index calculation equations

The index is calculated by Solactive AG using the following equations:

Each security in the index will initially be equally weighted based on the total number of securities in the Index. The initial weights are adjusted based on the tiers discussed in the table below, such that Tier 1 (Deep Green) and Tier 2

(Green) categories will be overweighted.

- Securities in **Tier 1 (Deep green)** category will have their initial weights adjusted by 2.0x.
- Securities in **Tier 2 (Green)** category will have their initial weights adjusted by 1.5x.
- Securities in **Tier 3 (Light green)** category will have their initial weights adjusted by 1x.
- Securities in **Tier 4 (Orange)** category will have their initial weights adjusted by 0.75x.

The selection and weighting process is summarized in the table below:

Selection and weighting	Reported negative carbon emission	Reported positive or not reporting carbon emission
Revenue, operating profit, assets, and/or capital expenditures > =50%	<b>Tier 1 (Deep green)</b> 2x Equal weight	<b>Tier 3 (Light green)</b> 1x Equal weight
20% <= Revenue, operating profit, assets, and/or capital expenditures < 50%	<b>Tier 2 (Green)</b> 1.5x Equal weight	<b>Tier 4 (Orange)</b> 0.75x Equal weight
Revenue < 20%	Excluded	Excluded

### Index rebalancing

The Index is rebalanced semi-annually on the third Friday of each March and September rebalances are effective at the open of the next trading day. In the event major US exchanges are closed on the third Friday of March or September, the rebalancing will take place after the market close on the immediately preceding trading day. Reference dates for rebalancing are nine calendar days prior to the rebalance dates. Underlying constituent shares and constituent caps will be applicable as of the reference dates. As such, due to market fluctuations between reference dates and rebalance dates, constituent caps may not hold on the rebalance dates.

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. Share changes resulting from exchange offers are made on the ex-date.

### Additions

No companies will be added to the Index between rebalance dates.

### Deletions

Between rebalance dates, a constituent can be deleted from the Index due to corporate events such as mergers, acquisitions, bankruptcies, takeovers, or delistings.

### Industry classifications

Constituents will be reviewed semi-annually for eligibility.

### Treatment of dividends and distributions

The price return index does not account for cash dividends or cash distributions. The net total return index accounts for cash dividends or cash distributions net of tax based on withholding tax rates as per country of incorporation, and by reinvesting them across the Index after market close on the ex-date. Stock dividends are treated as corporate actions and result in offsetting adjustments to price and units outstanding.

### Base date

The base date for the Index is January 31, 2022, with a base value of 100.

---

## Index dissemination

The real-time Index level for the price return version of the Index is available from major market data providers under the ticker "RECYCLE." The real-time net total return Index level is available under the ticker "RECYCLET." The index is published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether they will distribute/ display the Index via their information systems. Additionally, index values, constituents and announcements regarding constituent changes, can be found by visiting [www.tortoiseecofin.com](http://www.tortoiseecofin.com)

## Prices and calculation frequency

The Index is calculated daily throughout the year. The Index is not calculated on days when U.S. and Canada exchanges are officially closed.

In situations where an exchange is forced to close early due to unforeseen events, such as computer or electric power failures, weather conditions or other events, the closing price of the Index will be calculated 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 stock before the exchange is closed. In all cases, the prices will be from the exchange listing included in the Index.

If an exchange fails to open due to unforeseen circumstances, the Index will use the prior day's closing prices. If all exchanges fail to open, the Index may not be published for that day.

## Index Committee

The Index Committee of Tortoise Index Solutions oversees the integrity of the rules governing constituent composition and index computation, and provides clarifying guidance on the rules-based methodology where required. Every effort is made to ensure the rules are clear and non-discretionary. The Index Committee approves quarterly rebalances and directs public announcement relating to the indices.

### Members

The Index Committee will consist of between three to five voting members, one of whom will act as Chair. For their particular work on the Index Committee, Index Committee members will not receive a salary or other financial remuneration (or any benefit in kind).

### Meetings, quorum and voting

Index Committee members shall receive at least five business days' notice of Index Committee meetings.

A quorum of Index Committee members is required for all voting matters. "Quorum" is defined as at least two members, one of whom must be the Index Committee chair.

Each Index Committee member shall be entitled to one vote at each Index Committee meeting. All motions or matters before the Index Committee may be carried by simple majority.

### Confidentiality

Matters discussed or handled by the Index Committee will be considered confidential until such time as they are made public. Without limiting the generality of the foregoing, the minutes of the Index Committee are confidential information and may not be discussed with anyone outside of the Index Committee without the prior written approval of the Chair and the Chief Compliance Officer of Tortoise Index Solutions.

Decisions by the Index Committee regarding rules, ambiguous cases or discretionary additions or deletions from indices may be made public via such mechanic (internet or otherwise) as Tortoise Index Solutions decides from time to time.

### Conflicts of interest

Any Index Committee member who has a conflict of interest with respect to an issue before the Index Committee must excuse him/herself from participating or voting in relation to that issue. In participating in the Index Committee's

activities, all Index Committee members will aim to observe the highest standards of market practice, avoid appearances of impropriety, and remain mindful of their regulatory responsibilities surrounding issues such as market abuse, dealing ahead and insider trading. Without limiting the generality of the foregoing, the Board of Directors and the Index Committee are subject to, and shall comply with, the information barriers and other procedures set forth in Tortoise Index Solutions' Procedures Governing Management of Passive Exchange-Traded Funds.

## Definitions

**Reference Date:** The Reference date for the rebalance occurs nine calendar days prior to the rebalance date (typically the preceding Wednesday). Underlying constituent shares and constituent caps will be applied as of the reference dates.

**Rebalance Date:** The Index is rebalanced quarterly on the third Friday of each March, and September, and rebalances are effective at the open of the next trading day. In the event major US exchanges are closed on the third Friday of March or September, the rebalancing will take place after the market close on the immediately preceding trading day.

**Index Rebalance:** The date at which the changes made on the reference date replace the existing index

**Business Day:** A day on which any stock exchange that any index constituent trades is open.

**Index Calculation Agent:** The current calculation agent for the Index is Solactive AG. The index calculation agent applies the index methodology rules to the list of included companies. They also provide daily constituent files to Tortoise Index Solutions and select data providers.

**Index Constituent:** Security included in the index which fills all inclusion criteria specified in the methodology.

**Base Level:** The Index has a base level of 100 as of the launch date, January 31, 2021.

## Disclaimer

**This data is provided for informational purposes only and is not intended for trading purposes. This document shall not constitute an offering of any security, product or service. The addition, removal or inclusion of a security in the Index is not a recommendation to buy, sell or hold that security, nor is it investment advice. It is not possible to invest directly in an Index. Index performance does not reflect the deduction of any fees and expenses. Past performance is not a guarantee of future returns.**

The information contained in this document is current as of the publication date. Tortoise Index Solutions makes no representations with respect to the accuracy or completeness of these materials and will not accept responsibility for damages, direct or indirect, resulting from an error or omission in this document. The methodology involves rebalancing and maintenance of the Index that is made periodically during each year and may not, therefore, reflect real time information.

This document contains the underlying principles and regulations regarding the structure and the operation of 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 Index nor the Index value at any certain point in time, nor in any other respect. The Index is 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 this Index.