



# INDEX RULE BOOK

# Low Carbon 100 Europe<sup>®</sup> PAB Index

Version 21-01

Effective from 1 March 2021

[indices.euronext.com](https://indices.euronext.com)

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## 1. INDEX SUMMARY

Factsheet	Low Carbon 100 Europe® PAB
Objective	The Low Carbon 100 Europe® PAB Index is designed to reflect price level trends of companies in Europe that have the relative best climate score while aiming to comply with the current regulatory requirements of the Paris Aligned Benchmark (PAB).
Administrator	Euronext Paris
Index type	Price index; Net return index and Gross return index versions are also available.
Index governance structure	The Expert Committee of the Low Carbon 100 Europe® PAB Index is the Independent Supervisor of the index and is also responsible for overseeing the appropriateness of the rules governing the Low Carbon Europe 100® PAB Index. The interpretations of these rules and the day-to-day management are the responsibility of the Index Design department of Euronext.
Index Universe	The Index Universe is made of the 300 highest Free Float Market Capitalisations of the Euronext® Europe 500 Index minus the: <ul style="list-style-type: none"> <li>• 30 worst performers in term of Social and Governance score,</li> <li>• Exclusions related to the UNGC,</li> <li>• ICB Subsectors Tobacco, Defense, Aerospace and Oil Equipment &amp; Services,</li> <li>• Companies involved in fossil fuel activities,</li> <li>• Companies involved in Nuclear activities</li> <li>• Companies involved in Controversial and Conventional Weapons</li> <li>• ESG controversies</li> <li>• The Green companies.</li> </ul>
Selection	Up to 15 Green Companies ('N <sub>G</sub> ') with the highest percentage of activity related to "low carbon" technologies are selected (from the 1000 highest European Free Float Market Capitalisations) From the index Universe, 100-'N <sub>G</sub> ' companies are selected based of their Climate score (best in class approach).
Number of constituents	100
Weighting	Modified weighting based on Climate score, sectorial & Green allocation and Free Float Market Capitalisation. Weighting adjustments to meet Paris Aligned Benchmark objectives.
Capping	10%
Review cut-off date	Penultimate Friday of February
Review of composition	Effective after the first Wednesday of April
Review of free float, capping and number of shares	Annual in March
Base Currency	Euro

Note: the factsheet is a summary of the rule book for information purposes only. The text of the rulebook is leading.

## Reference Data

Index name	Isincode	Mnemo	Bloomberg Code	Reuters code	Base date	Base value	Publication since
Low Carbon 100 Europe® PAB Index	QS0011131735	LC100	LC100	.LC100	29-12-06	100	13-10-08
Low Carbon 100 Europe® PAB Index NR	QS0011131743	LC1NR	LC1NR	.LC1NR	29-12-06	100	13-10-08
Low Carbon 100 Europe® PAB Index GR	QS0011131750	LC1GR	LC1GR	.LC1GR	29-12-06	100	13-10-08

### Version notes:

18-01 Change of definition of Free Float Factor

18-01 Addition of the exclusion rules for some energy companies

18-01 Addition of some rules to arrive to '100- Ng' companies

19-01 Full methodology updated, see announcement No 2019-93

19-02 Review dates modified from December to March (annual review) and from June to September (semi-annual) + exclusion of the ICB Subsectors Oil Equipment & Services.

The perimeter of exclusions at semi-annual review includes the UNGC principles.

20-01 Update of the CDP Equivalence table: "Not requested to respond" set at 0 instead of 0.5.

20-02 Integration of ESG Disclosures and update for ICB classification definition changes

20-03 Addition of PAB compliance mechanisms

20-04 Low Carbon 100 Europe® Index renamed to Low Carbon 100 Europe® PAB Index

21-01 Annual review implementation date modified to the first Wednesday of April instead of the third Friday of March, new rule weighting rule for the Green pocket, addition of exclusions related to Nuclear, Conventional weapons and Controversial weapons.

## **2. GOVERNANCE AND DISCLAIMER**

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### **2.1 INDICES**

This rule book applies to the following indices (hereinafter “index”) owned by Euronext N.V. or its subsidiaries (hereinafter jointly “Euronext”):

- Low Carbon 100 Europe® PAB Index

### **2.2 ADMINISTRATOR**

Euronext Paris is the Administrator of the index. The responsibilities of the Administrator are described in the Governance Euronext Indices document available on the Euronext website. The management and operation of the index is overseen by the Index Design department of Euronext.

### **2.3 SUPERVISOR**

The Expert Committee acts as independent supervisor of the index (“Supervisor”). The Supervisor is responsible for monitoring the selection of constituents for the index and ensuring that the index offers a reliable and representative view of the market. All Supervisor decisions will be published without delay following the decision (after market close).

### **2.4 CASES NOT COVERED IN RULES**

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of the index. Operational adjustments may also take place if, in the opinion of the Administrator, it is desirable to do so to maintain a fair and orderly market in derivatives on this index and/or this is in the best interests of the investors in products based on the index and/or the proper functioning of the markets. The Administrator will report to the Supervisor if it took a decision about a case which is not specifically covered in the rules for comments and review.

### **2.5 RULE BOOK CHANGES**

These rules may be supplemented, amended in whole or in part, revised or withdrawn at any time. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the index is compiled or calculated or affect the index in another way. The Administrator will submit all decisions regarding supplementing, amending, revising or withdrawing these rules to the Supervisor for recommendations or approval.

### **2.6 LIABILITY**

Euronext, the Administrator and the Supervisor are not liable for any losses resulting from supplementing, amending, revising or withdrawing the rules for the index.

The Administrator will do everything within its power to ensure the accuracy of the composition, calculation, publication and adjustment of the index in accordance with relevant rules. However, neither Euronext, nor the Administrator, nor the Supervisor are liable for any inaccuracy in index composition, share prices, calculations and the publication of the index, the information used for making adjustments to the index and the actual adjustments. Furthermore, Euronext, the Administrator and the Supervisor do not guarantee the continuity of the composition of the index, the continuity of the method of calculation of the index, the continuity of the dissemination of the index levels, and the continuity of the calculation of the index.

### **2.7 OWNERSHIP AND TRADEMARKS**

Euronext owns all intellectual and other property rights to the index, including the name, the composition and the calculation of the index. Low Carbon 100 Europe® is a registered trademark of Euronext.

## **3. PUBLICATION**

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### **3.1 DISSEMINATION OF INDEX VALUES**

#### **3.1.1 Opening**

The opening level is calculated using the last known prices of traded constituents or in the case of constituents that have non-traded, halted or suspended status, the previous day reference prices or estimated prices (for IPOs, buyouts and swap offers).

The official opening level is the first level published after a share price is available for all constituents. Index levels published before the official opening level is published are considered pre-opening index levels.

If, for whatever reason, share prices are not available for all constituents five minutes after Euronext Markets (as defined in the Euronext harmonised rule book) started regular daytime trading, the official opening level will be published as soon as the companies whose share prices are available of the current trading day represent at least 80% of the value of the index at the close of the previous trading day.

#### **3.1.2 Calculation and dissemination**

The index is calculated based on the most recent prices of transactions concluded on Euronext Markets. The level of the index is in principle published every 15 seconds. The index is calculated from 09:00 hours until Euronext Markets stop regular daytime trading on the days when the Euronext Markets are open for trading.

#### **3.1.3 Closing level**

The closing level is the last level disseminated on the trading day.

### **3.2 EXCEPTIONAL MARKET CONDITIONS AND CORRECTIONS**

In the event that part of the constituents is reserved, suspended from trading or if technical problems prohibit normal trading, index values will continue to be calculated and published. For those constituent stocks that are not available for trading, the last known value will be used when determining index values.

The general procedures in case of index outages and other situations in which the normal provision of indices is interrupted are described in Euronext Indices Correction Policy on [indices.euronext.com/index-rules](https://indices.euronext.com/index-rules).

### **3.3 ANNOUNCEMENT POLICY**

The announcement policy is described in the Euronext Indices Announcement policy document that is available on [indices.euronext.com/index-rules](https://indices.euronext.com/index-rules).

## 4. CALCULATION

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### 4.1 CALCULATION OF THE PRICE INDEX

The index is calculated on a price return basis. The calculation is based on the current Free Float (see section 8. Definitions) market capitalization divided by the divisor. The divisor was determined on the initial capitalization base of the index and the base level. The divisor is adapted as a result of corporate actions and composition changes.

### 4.2 CURRENCY CONVERSION

The base currency of the index is Euro (“Base Currency”).

Share prices that are quoted in other currencies than the Base Currency will be converted to the Base Currency using the last known exchange rate observed on Reuters. Closing prices will be converted based on the most recent WM/Reuters spot rates, which are published each business day around 17:00 CET.

### 4.3 TOTAL RETURN INDEX CALCULATION

#### 4.3.1 Return indices

A net total return index as well as a gross total return index, is calculated and disseminated at the same frequency as the price index. The return indices are obtained by reinvesting the net and gross dividends respectively.

#### 4.3.2 Withholding tax rate

The net dividend is calculated as the gross dividend minus the applicable withholding tax. A table detailing the percentages that are applied is available on the website of Euronext.

#### 4.3.3 Ordinary dividends in shares

If a dividend is distributed in the form of shares only and if this is regarded as ordinary dividend, the return index will be reinvesting a cash equivalent of the dividend. If shareholders may choose between cash or shares the amount which is reinvested will be based on the cash option.

#### 4.3.4 Conversion of dividends declared in other currencies

If a dividend for a constituent is declared in another currency than the Base Currency of the index, then in first instance the Base Currency amount will be used if investors have the option to be paid in that currency. If the dividend amount is available only in currencies that deviate from the Base Currency, the dividend amount will be converted using the reference rate for the cum-day (the business day prior to the ex-date). In principle the reference rate will be based on the foreign exchange reference rates as published daily by the ECB.

## 5. INDEX REVIEWS

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### 5.1 GENERAL AIM AND FREQUENCY OF REVIEWS

#### 5.1.1 General aim of the periodical review

The general aim of the periodical review of the index is to ensure that the selection and weighting of the constituents continues to reflect the underlying market or market segment it represents.

#### 5.1.2 Review Cut-Off Dates and Review Effective Dates

##### ANNUAL REVIEW

The Review Cut-Off Date (see 9. Definitions) is after the market close of the penultimate Friday day of February.

The Review Announcement Date is at least six trading days before the Review Effective Date.

The Review Composition Announcement Date is at least two trading days before the Review Effective Date.

The Review Effective Date is after market close of the first Wednesday of April.

##### SEMI-ANNUAL REVIEW

The semi-annual review aims at replacing companies subject to strong controversies or at risk with the UNGC principles.

The Review Cut-Off Date (see 9. Definitions) is after the market close of the last trading day of August.

The Review Effective Date is after market close of the third Friday of September.

### 5.2 INDEX METHODOLOGY PRINCIPLES

#### 5.2.1 General methodology objectives

The Index seeks compliance with Paris Aligned Benchmark (PAB) objectives.

The Index targets 100 constituents after a stringent exclusion process and with a Climate best-in-class approach. Among them a Green pocket with a weight of 5% is composed of stocks with high proportion of turnover linked to renewables or energy efficiency.

Compliance with PAB is aimed to via weight adjustments following core selection and preliminary weights.

The weight of the highest Weighted Carbon Intense stock in the index is diminished up to 30% and rebalanced in its Super-sector, to less Carbon Intense companies. We reiterate this process with a second company if needed and so on, until the index is compliant with the PAB Carbon Intensity requirements.

#### 5.2.2 Basic Definitions and Data Partners

##### Green Stocks

- These companies should have at least 50% of their turnover related to *low carbon* technologies (renewables or energy efficiency) and being part of the following ICB sectors:
  - Renewable Energy (601020)
  - Construction & Materials (501010)
  - Electricity (651010)
  - Electronic & Electrical Equipment (502020)
  - Industrial Engineering (502040)
  - Industrial Transportation (502060)
- The list of Green Companies is constructed out of the 1000 highest European free float market capitalization at the annual cut-off date
- Should this list count less than 10 companies, the '50% of turnover' condition may be alleviated by the Expert Committee
- The list of Green Companies with their respective turnover related to *low carbon* technologies will be made public after the Annual review on Euronext website:  
<https://www.euronext.com/fr/products/indices/QS0011131735-XAMS/market-information>

## Non-Green Stocks

- For the purposes of this index, any stocks not deemed as Green are labelled non-Green
- The label is for classification only and makes no statement about the degree of environmental involvement of the company

## Investable Universe

- 300 highest Free Float Market Capitalisations of the Euronext® Europe 500 Index + Green Stocks outside of this 300

## Index Universe

- 300 highest Free Float Market Capitalisations of the Euronext® Europe 500 Index after baseline exclusions
- For details, see section 5.3

## Climate Impact sections

- Grouping of companies based on NACE section classification (Annex I to EC Regulation No 1893/2006) into two sections
  - High Climate Impact section
    - NACE Sections A to H and Section L
  - Low Climate Impact section
    - NACE Section that are not part of the High Climate Impact section

NACE Section	NACE Section Name	Climate Impact Section Group
A	AGRICULTURE, FORESTRY AND FISHING	High
B	MINING AND QUARRYING	High
C	MANUFACTURING	High
D	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLIES	High
E	WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES	High
F	CONSTRUCTION	High
G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES	High
H	TRANSPORTATION AND STORAGE	High
I	ACCOMMODATION AND FOOD SERVICE ACTIVITIES	Low
J	INFORMATION AND COMMUNICATION	Low
K	FINANCIAL AND INSURANCE ACTIVITIES	Low
L	REAL ESTATE ACTIVITIES	High
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	Low
N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	Low
O	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY	Low
P	EDUCATION	Low
Q	HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	Low
R	ARTS, ENTERTAINMENT AND RECREATION	Low
S	OTHER SERVICE ACTIVITIES	Low
T	ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE	Low
U	ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES	Low

### 5.2.3 Outline of key steps of the index review

#### A) Core Method of Selection and Preliminary Weights

- **Creation of Index Universe**
  - Eligible companies after stringent baseline exclusions (S&G, Controversies)
- **Stock selection**
  - Green pocket
    - Based on company turnover linked to renewable energy
  - Non-Green
    - Target number of companies per super-sector to maintain as close as possible sector neutrality with Index Universe
- **Preliminary weights**
  - Green pocket aggregate weight set at 5%
    - Individual green stocks are equally weighted subject to liquidity constraints
  - The total weight Non-Green companies is (100% - weight of Green pocket) = 95%
    - Weights of ICB super-sectors in line with Index Universe
    - Based on FFMC subject sectorial exposure constraint

#### B) Adjustments to Preliminary Weights targeting PAB Compliance

- **Climate impact allocation constraint**
  - Aggregate weight of high climate impact sectors to be at least equal to that of the Index Universe
- **Iterative re-weighting process to meet decarbonization objectives**
  - The weights of stocks with highest contribution to the target carbon metric of the index will be decreased compared to their preliminary weights in a stepwise procedure

### 5.3 CREATION OF INDEX UNIVERSE

The Index Universe is made of the 300 highest Free Float Market Capitalisations of the Euronext® Europe 500 Index after exclusion of the:

- Worst performers in term of Social and Governance score
- Companies a critical controversy in regards to the UNGC
- ICB Subsectors Tobacco, Defense, Aerospace and Oil Equipment & Services
- Companies involved in Fossil Fuel activities
- Companies involved in Nuclear activities
- Companies involved in Controversial and Conventional Weapons
- ESG controversies as determined by the Expert Committee
- Green companies

Detailed steps are described in the following sections:

**Step 1:** Selection of N highest Free Float Market Capitalisation Companies from the pool of eligible companies

Index Name	Pool of eligible companies	Top N stocks considered
Low Carbon 100 Europe PAB	Euronext® Europe 500 Index	300

All the stocks expected to be included in the respective pool of eligible companies after the close of business of the Review Date are ranked by Free Float Market Capitalisations. The top N are selected.

**Step 2a:** Removal of companies / Social and Governance score

The companies from step 1 are assigned a Social and Governance score. This score is computed as the average between the Social and Governance scores as defined by Vigeo-Eiris Moody's. Ten percent of companies with

worst scores are removed. In case of equal average score, the company with the best Social score will be preferred. Please refer to the “Data Providers” section for more information about the score.

**Step 2b:** Removal of companies / United Nations Global Compact

The companies that do not meet or are at risk with the fundamental responsibilities in the areas of human rights, labour, environment and anti-corruption as defined by the Ten Principles of the United Nations Global Compact (UNGC), as evaluated by Vigeo-Eiris Moody’s, are excluded. Please refer to the “Data Providers” section for more information about the methodology.

**Step 2c:** Removal of companies / ICB

The companies belonging to the ICB Subsectors Tobacco (45103010), Defense (50201010), Aerospace (50201020) and Oil Equipment & Services (60101030) are excluded.

**Step 2d:** Removal of companies / Fossil Fuel

The companies involved in the following activities will be excluded from the index by the Expert Committee at the reviews:

- a. Companies with fossil fuel reserves,
- b. Companies searching, collecting, treating, refining or transporting coal, oil or gas,
- c. Utilities that use fossil fuels to produce electricity.

**Step 2e:** Removal of companies / Nuclear

- a. Companies involved in Uranium mining ;
- b. Companies that base their electricity generation on nuclear energy (>5% turnover);
- c. Operators of nuclear power plants and/or manufacturers of essential components for nuclear power plants (>5% turnover).

**Step 2f:** Removal of companies / Controversial and Conventional Weapons

Companies involved in key parts or full weapon systems for controversial weapons (anti-personnel landmines, cluster munitions, nuclear weapons, biological & chemical weapons, ammunition containing depleted uranium, Incendiary weapons, Non detectable fragments, White phosphorous, Blinding lasers) and Manufacturers of conventional weapons/armaments and/or their essential components (>5% turnover) as determined by Vigeo-Eiris Moody’s are removed from the index Universe.

**Step 2g:** Removal of companies / Expert committee

In case of serious controversies that have arisen after the cut-off date and/or controversies that are deemed to be incompatible with the index spirit, the Expert committee can decide to exclude certain companies. The decision ground includes Environmental, Social or corporate Governance (ESG) controversies

**Step 2h:** Removal of companies / The Green companies

Any company that is part of the Green pocket and at the same time is also part of the selection of the highest Free Float Market Capitalisation companies selected in Step 1 is removed. These Green companies will be added to the index at a later stage alongside the rest of the Green pocket. This step is done in order to prevent conflicts in the calculations of sectorial constraints and targets for the non-Green companies.

**5.4 STOCK SELECTION**

**5.4.1 Target number of companies**

Target number of companies in the indices is as follows:

Index Name	Target Number of Companies in the Index
Euronext Low Carbon 100 Europe PAB	100

### 5.4.2 Green pocket

This section is composed entirely of Green Companies. The target number of Green Companies is set to 15. The sum of the number of Green Companies ('N<sub>G</sub>') and non-Green Companies will be the total number of index constituents.

Should the number of Green Companies available for inclusion into the index be below 15, the number of non-Green companies will be increased so that the total number of index constituents reaches the Target number of companies.

### 5.4.3 Non-Green companies

This section is composed of companies from the Index Universe. Any stocks not deemed as Green are labelled non-Green. Total target number of non-Green companies is equal to the Target number of index constituents minus the number of Green Companies.

The selection of the non-Green companies aims to provide a best-in-class collection of companies based on climate score while respecting sectorial constraints with respect to the Index Universe. This procedure is described in the following sections.

#### Step 1: Determination of climate score for non-Green companies

Euronext calculates a climate score for each non-Green Company by combining Carbone4 number-based CIA score with CDP letter-based scores (Chapter 7). For each company, the Carbone4 score (1 being excellent and 5 being poor) will be tilted with a bonus/malus system, ranging from -0.5 to +0.5 using the CDP equivalence table from Chapter 7. For example, a company with a Carbone 4 score of 2 and a CDP score of A- (equivalent to a bonus of -0.4) will get a climate score of 1.6.

The climate score will serve as the basis for ranking of candidate companies. The lower the climate score, the higher the stock will rank in terms of its eligibility for the index. Companies with very high, i.e. poor, climate score will not be selected. Details on this follow.

#### Step 2: Determination of the target number of non-Green companies within each ICB super-sector

The target number of non-Green companies within each super-sector of the index is proportional to the number of companies in the super-sectors of the Index Universe. This number is then rounded-up.

Ex:	Index Universe	Low Carbon 100 Europe® PAB Index
Number of companies	211	100 - 'N <sub>G</sub> ', ex: 91
Number of companies in the ICB super-sector "Personal & Household Goods"	15	Round-up $(15/211*91) = 7$

#### Step 3: Selection of non-Green companies

Within each ICB super-sector, the companies are ranked from the best (lowest) to the worst (highest) climate score. The 'n' best companies will be selected, 'n' being the target number of companies in the super-sector, as determined in the previous step.

Due to the rounding of target number of companies in each super-sector, the sum of these super-sector target numbers can be above the aggregate total target for non-Green companies. In this case, the surplus of companies above the non-Green target will be removed as follows. The companies with worst (highest) climate scores are removed sequentially, under the constraint that only one company is excluded per super-sector and that at least 2 companies are kept in the final selection per super-sector. In case of equal climate score, the company with lower Free Float Market Capitalisations will be removed first. If needed, iterations are performed until the number of companies is equal to the target number of non-Green companies.

#### 5.4.4 Index Constituent Selection

The union of Green and non-Green companies selected using the principles and methodology above will be the final Index selection and will not change with any of the additional methodology procedures described in the following sections.

### 5.5 PRELIMINARY WEIGHTS

#### 5.5.1 Green pocket

Aggregate target weight of this section is currently set to 5% and may be increased as a result of Step 2 below. The 5% allocation is revised annually by the Expert committee, considering different criteria such as the number of Green companies, their Free Float Market Capitalisation and average daily traded value. In the long term, an increase in the target weight is envisaged.

The weights of the individual Green Companies are subject to liquidity constraints. These constraints aim at maintaining the replicability of the index in real-life market conditions.

- Step 1 - The Green companies are equally weighted (EW) for a total size of the Green pocket of 5%, under Liquidity Constraints<sup>1</sup>;
- Step 2 - The Green companies weight is the higher of:
  - EW from Step 1
  - The theoretical Free Float Market Capitalization (FFMC) weight<sup>2</sup>, subject to the liquidity constraint;
- Step 3 - If step 2 is activated, the total weight of the green pocket goes beyond 5% and is capped at 10%.

#### <sup>1</sup>Liquidity Constraints:

Considering a €2 billion portfolio size, the weights of the Green Companies should fulfil the following criteria:

- Each Green Company can be fully sold (i.e. after-sale portfolio weight of 0%) within 5 days
- The daily volume required for this sale cannot exceed 30% of the last 3 months daily average volume

The companies not capped by the liquidity constraint are equally weighted.

where :

$$W_{\text{green}} = \text{Min} (\text{Liquidity Constraint}; W_{\text{gmax}})$$

$$\text{Liquidity Constraint} = \frac{(PX)_i * (\text{VOL\_AV\_3M})_i * 30\% * 5}{\text{€2bn}}$$

$$\sum W_{\text{green}} = 5\%$$

$$W_{\text{EW}} = (\sum W_{\text{green}} - W_{\text{gc}}) / N_{\text{gnc}}$$

$N_{\text{gnc}}$  = number of Green companies not capped by the liquidity constraint

$W_{\text{green}}$  = Weight of a specific Green Company

$W_{\text{EW}}$  = weight of a Green Company not capped (Equal weight)

$W_{\text{gc}}$  =  $\sum W_{\text{green}}$  capped by the liquidity constraint

$N_{\text{gnc}}$  = Number of Green Companies non capped by the liquidity constraint

PX = Last price expressed in EUR

VOL\_AV\_3M = Average daily volume over the last 3 months as of the cut-off date

#### <sup>2</sup>The theoretical FFMC weight

The theoretical FFMC weight of a Green company is the weight the Green company would have in a LC100 where all the companies would be weighted accordingly to their FFMC at the review cut-off date.

#### 5.5.2 Non-Green companies

Aggregate target weight of this section is a direct consequence of the target weight of Green pocket. It shall thus be  $(100\% - \sum W_{\text{green}})$  where  $\sum W_{\text{green}}$  is the target weight of the Green pocket. Given that the aggregate target weight of the Green Pocket is currently set to 5%, the aggregate target weight of the non-Green companies is  $100\% - 5\% = 95\%$ .

The weights of the individual non-Green Companies are subject to sectorial constraints and set proportional to the Free Float Market Capitalization using the following two principles:

## i) Super-sector weights

- The weight of each super-sector comprised of non-Green stocks in the index will be made proportional to the weight of the super-sector in the Index Universe, taking into account the aggregate target weight of all non-Green companies.
- Weight of super-sector<sub>i</sub> in Low Carbon Index = Weight of super-sector<sub>i</sub> in Index Universe \* (100% -  $\sum W_{green}$ )

Ex:	Index Universe	Low Carbon 100 Europe® PAB Index (ex-Green companies)
Weight of the super-sector "Personal & Household Goods"	9.45%	9.45% * 95% = <b>8.98%</b>

N.B.: The final weight of each super-sector, once the Green companies are added to the index, will deviate from the target weight as determined by the Index Universe.

## ii) Individual company weights

- After the previous proportional adjustments of super-sector weights, the weight of each individual non-Green company within each super-sector will be made proportional its Free Float Market Capitalisation relative to the Free Float Market Capitalisation of the super-sector.

Ex:	Weight	Free Float Market Capitalisation
Super-sector "Personal & Household Goods" in the Index (ex-Green companies)	8.98%	6 companies for 220 000 000 000 €
Considering company A = 80 000 000 000€, then the weight of A = 80/220 * 8.98% = <b>3.27%</b>		

A maximum weighting of 10% is applied to each non-Green index constituent at the annual review. The surplus weight (weight above the capping for a specific company) is rebalanced to all the other index components, proportional to their size and up to the capping constraint

Ex:	Company A	Company B
Weight before capping	12%	6%
Surplus	12% - 10% = 2%	N/A
Weight after capping	10%	6% + 6% / (1-12%) * 2% = <b>6.14%</b>

### 5.5.3 Preliminary Index Weights

The union of Green and non-Green weights resulting from the procedures described in the preceding sections, together representing 100% of index weight, will be referred to as Preliminary Index Weights. These preliminary weights will be adjusted according to procedures aiming at PAB compliance described in the following sections.

The weights of Green companies are locked from this point onwards and will not change due to any modifications described in the following sections.

## 5.6 CLIMATE IMPACT ALLOCATION CONSTRAINT

PAB indices must comply with exposure constraints to sectors linked to climate impact. This will be achieved via proportional adjustments of the Preliminary Index Weights that were computed in sections above.

Each stock in the Index selection is assigned to a NACE Letter Section. Companies belonging to NACE Sections A to H and L (subject to change in line with regulation) will be collectively referred to as High Climate Impact Section (HCIS). The rest of stocks in the Index selection will be referred to as Low Climate Impact Section (LCIS).

The Preliminary Index Weights will be aggregated and grouped by the two Climate Impact Sections. The same will be done with weights of the Investable Universe. Depending on the comparison of these weights, the index preliminary weight may or may not be adjusted, as described in the following two sections. Options 1 and 2 outlined below are mutually exclusive and only one of them will be true at any given Index Review.

### Option 1)

If the sum of Preliminary Index Weights in the HCIS is *lower* than the sum of weights in the HCIS of the Investable Universe, adjustments will be performed. The objective is to increase the exposure of the index to the HCIS and make it at least equivalent to the exposure of the Investable Universe.

Ex:	Index Preliminary Weights	Investable Universe	Adjustments Needed to Index Preliminary Weights?
High Climate Impact Section	60%	70%	Yes, +10%
Low Climate Impact Section	40%	30%	Yes, -10%

- N.B.: The Climate Impact sections can contain both Green and non-Green stocks. Only the preliminary weights of non-Green stocks will be adjusted.
- Preliminary weights of non-Green companies will be multiplied by an Adjustment Ratio (AR)
- For each stock in the Index, the adjusted weights can be expressed as

$$\text{Adjusted Index Weight} = \begin{cases} \text{Preliminary Index Weights} & \text{if company is Green} \\ \text{Preliminary Index Weights} * AR_i & \text{if company is non-Green} \end{cases}$$

where  $AR_i$  is the Adjustment Ratio depending on the Climate Section (i) of the corresponding stock whose weight is being adjusted, according to the following definition

Value of i	Climate Section Name	$AR_i$
HCIS	High Climate Impact	$AR_{HCIS} = \frac{MIU_{HCIS} - PREL\_GREEN_{HCIS}}{PREL_{HCIS} - PREL\_GREEN_{HCIS}}$ <p>where</p> <p><math>MIU_{HCIS}</math> = Weight of HCIS in the Investable Universe</p> <p><math>PREL_{HCIS}</math> = Preliminary Index Weight of HCIS (Green &amp; non-Green)</p> <p><math>PREL\_GREEN_{HCIS}</math> = Preliminary Index Weight of HCIS (Green only)</p>
LCIS	Low Climate Impact	$AR_{LCIS} = \frac{MIU_{LCIS} - PREL\_GREEN_{LCIS}}{PREL_{LCIS} - PREL\_GREEN_{LCIS}}$ <p>where</p> <p><math>MIU_{LCIS}</math> = Weight of LCIS in the Investable Universe</p> <p><math>PREL_{LCIS}</math> = Preliminary Index Weight of LCIS (Green &amp; non-Green)</p> <p><math>PREL\_GREEN_{LCIS}</math> = Preliminary Index Weight of LCIS (Green only)</p>

- A maximum weight of 10% is still maintained for each non-Green index constituent. The surplus weight resulting from the Climate Impact Section adjustments (weight above the capping for a specific

company) is rebalanced to the other index components in the same Climate Impact Section, proportional to their size and up to the capping constraint

Ex:	Company A	Company B
Weight before capping	12%	6%
Surplus	12% - 10% = 2%	N/A
Weight after capping	10%	6% + 6% / (1-12%) * 2% = <b>6.14%</b>

## Option 2)

If the sum of Preliminary Index Weights in the HCIS is *higher or equal* than the sum of weights in the HCIS of the Investable Universe, no adjustments will be performed.

Ex:	Index Preliminary Weights	Investable Universe	Adjustments Needed to Index Preliminary Weights?
High Climate Impact Section	80%	70%	No
Low Climate Impact Section	20%	30%	No

### 5.6.1 Climate Impact Section-Adjusted Preliminary Weights

Following the process above, the weights of the index will be referred to as Climate impact Section-Adjusted Preliminary Weights. This is for differentiation purposes and consistency, even if no adjustments were made due to Option 2. Once the total weights of the two sections are established, they are locked and will not change on aggregate, even if individual stock weights within each of these sections can be adjusted further to comply with decarbonization objectives, as described in the next section.

## 5.7 DECARBONIZATION OBJECTIVES

### 5.7.1 Carbon Intensity calculation and targets

Euronext will calculate the Carbon Intensity (CI) (see Step 2 below) for each of the companies in the Index as well as for each company in the Investable Universe.

The target metric for decarbonization objectives is the Weighted Average Carbon Intensity (WACI) (see Step 3 below). The following two objectives need to be respected at the same time – they form the **PAB Double Cap**.

#### i) Carbon Intensity reduction of the Index vs the Investable Universe of at least 50%

- The WACI of the Index each year will be compared to the WACI of the Investable Universe

#### ii) Year-on-year self-decarbonization trajectory of the Index

- During the review in base year Euronext will calculate the WACI of the Index and calculate a decreasing trajectory of carbon intensity target for future years, with 7% annual geometrical decrease
- This self-decarbonization trajectory will be made public

Ex:	Index WACI Trajectory	Trajectory Formula
Base Year T	1000	$WACI_T$
Year T+1	930	$(1 - 0.07) * WACI_T$
Year T+2	864.9	$(1 - 0.07)^2 * WACI_T$

### 5.7.2 Weight adjustments to achieve decarbonization objectives

Climate Impact Section-Adjusted Preliminary Weights (see section above) will be further adjusted iteratively, one company at a time, until the WACI of the Index complies with the targets. This process is described in the following steps.

#### Step 1: Initialize the Temporary Index weights

- The initial stock weights used for the Index in this iterative process are set to be the Climate Impact Section-Adjusted Preliminary Weights (section 5.6.1)

#### Step 2: Establish the CI and weighted CI of all companies individually

- For each stock in Index and in the Investable Universe calculate:

$$CI = \frac{\text{Sum of Emissions}}{\text{Enterprise Value incl. Cash}}$$

- Emissions are Scope 1+2+3 carbon emission, provided by Carbone4
- Enterprise Value incl. Cash = Market capitalization + Debt

- For Index:

$$\text{Stock-level weighted CI} = CI * \text{Temporary Index weight}$$

- For Investable Universe:

$$\text{Stock-level weighted CI} = CI * \text{FFMC weight}$$

#### Step 3: Establish the WACI of the Index and the Investable Universe

- Both follow a generic calculation for a portfolio of stocks
- WACI of Portfolio =  $\sum$  Stock-level weighted CI

#### Step 4: Establish the targets for decarbonization objectives

- Target 1 = 50% \* WACI of Investable Universe in the year of the review
- Target 2 = WACI value of the self-decarbonization trajectory in the year of the review
  - N.B.: Target 2 in Base Year (2020) is not applicable, applies only from Base Year + 1
- The minimum of Target 1 and Target 2 is the PAB Double Cap

#### Step 5: Compare the WACI of the Index from Step 3 with the PAB Double Cap from Step 4

- Condition: WACI of the Index needs to be lower or equal to the PAB Double Cap
  - If this condition is satisfied, stop with the process, no more adjustments to the Temporary Index weights are done and they become the final index weights, proceed to Step 11
  - If this condition is *not* satisfied, continue with the process

Next steps comprise the iterative process itself and are only executed if the condition in Step 5 is not satisfied.

#### Step 6 [Outer Loop]: Determine the candidate stock for reduction of Temporary Index weight

- 1<sup>st</sup> iteration only
  - Choose the company with the highest weighted CI
- 2<sup>nd</sup> - 5<sup>th</sup> iteration
  - Choose the company with the highest weighted CI subject to the ICB super-sector of the stocks in 1<sup>st</sup>-5<sup>th</sup> iteration being different

- Principle - perform loops in batches of 5 iterations where stocks will be selected based on highest weighted CI but always from different ICB super-sector (6<sup>th</sup>-10<sup>th</sup> iter., 11<sup>th</sup>-15<sup>th</sup> iter. and so on) until the targets are met
  - N.B.: As a consequence of these rules and as an example of permissible action, if stock has had its weight reduced in the first batch (1<sup>st</sup>-5<sup>th</sup> iteration), its weights can be further reduced in the next batches if it happens to still have the highest weighted CI at any point

**Step 7 [Inner Loop]:** Decrease the Temporary weight of the candidate stock from Step 6

- First decrease of -10%
- If PAB targets not met (Step 10), further 2 decreases, each of -10%, for an aggregated maximum reduction of -30%

Ex:	Weight of Stock ABC
Temporary weight when entering Step 7	4%
Temporary weight after -10%	$3.6\% = 4\% \times (1 - 0.1)$
Temporary weight after -20%	$3.2\% = 4\% \times (1 - 0.2)$
Temporary weight after -30%	$2.8\% = 4\% \times (1 - 0.3)$

**Step 8:** Determine stocks eligible for rebalancing the weight decreased in Step 7

Companies with the following attributes are eligible for weight increase rebalancing:

- Same ICB super-sector and the same Climate Impact Section as stock from Step 6
- non-Green Company
- Lower CI (*not necessarily weighted CI*) compared to stock from Step 6
- No weight reduction so far
  - N.B.: this in no way contradicts the further 10% decrements in Step 7 as the stocks being eligible for weight rebalancing are by definition different from the stock in step 7

**Step 9:** Rebalance the weight taken in Step 7 to eligible companies from Step 8

- The weight redistribution is proportional to  $1/(\text{Carbon Intensity})$ , taking into account only the CI of the eligible companies, subject to the following constraints:
  - Maximum stock weight in the index is 10%
  - Stocks will be also subject to transactional liquidity cap:
    - Considering a €1 billion portfolio size, the turnover required to trade the weight changes between the old Index weights at the cut-off date and the new Index weights cannot exceed 30% of the last 3 months daily average volume of the stock
    - The size of the portfolio (€1 billion) to calculate the cap will be revised each year by the Expert Committee, notably by taking into account the size of the fund(s) tracking the Low Carbon index family along with the market conditions and index specificities
  - If a stock reaches one of the weight limits before the reallocation of the weight corresponding to its proportion according to the  $1/(\text{Carbon Intensity})$  principle, the weight is capped at maximum and the excess weight that was not allocated is distributed among the rest of the eligible stocks using the  $1/(\text{Carbon Intensity})$  principle again, excluding the Carbon Intensity of the capped stock
  - If the weight to be rebalanced from Step 7 is higher than the total weight that can be allocated to the eligible companies due to the maximum weight limit of 10% and/or liquidity cap mechanism, the weight decrease from Step 7 will be adjusted to be as large as possible while respecting these limits

Ex:	Temporary weight (Step 1)	Carbon Intensity (Step 2)	Weighted Carbon Intensity (Step 2)	Stock weight to be decreased? (Step 6)	Eligible to rebalance into? (Step 8)	1/(Carbon Intensity) [absolute; relative]	Weight changes (Step 9)
Stock 1	4%	100	4	Yes, -10%	-	-	-0.4% = -10%*4%
Stock 2	2%	150	3	No	No	-	-
Stock 3	5%	70	3.5	No	Yes	0.014; 36%	+0.15% = 36%*0.4%
Stock 4	7%	40	2.8	No	Yes	0.025; 64%	+0.25% = 64%*0.4%

**Step 10:** Compare the new WACI of the re-weighted Index against the PAB Double Cap

- Condition: WACI of the Index needs to be lower or equal to PAB Double Cap
- If this condition is satisfied, stop with the iterations and proceed to Step 11
- If this condition is *not* satisfied, continue with the iterations
  - If the weight in stock in Step 7 has been decreased *less than 3 times* within this instance of the inner loop
    - Stay within the inner loop, go back to Step 7 and decrease the weight by further 10%
  - If the weight in stock in Step 7 has been decreased *3 times* within this batch of iterations
    - Keep the rebalanced weights, exit the inner loop and go back to Step 6 to select a different stock

**Step 11:** Final weights, publish index and the final WACI

### 5.7.3 Replacement of constituents at the semi-annual review

At the semi-annual review, the companies that do not meet or are at risk with the fundamental responsibilities in the areas of human rights, labour, environment and anti-corruption as defined by the Ten Principles of the United Nations Global Compact (UNGC) as evaluated by Vigeo-Eiris Moody's, are excluded. Please refer to the "Data Providers" section for more information about the methodology.

Are also excluded companies with strong controversies related to ESG topics and weapons as determined by the Expert Committee.

If a company is removed, it will be replaced (same weight) by the next best ranked\* company in that same super-sector. If 2 or more companies are excluded from the same sector, the highest weight will be assigned to the best ranked\* company and so on.

If not enough stocks are available in that super-sector, the best ranked\* companies excluded to arrive target number of non-Green companies during the annual review will be added (same weight). If 2 or more companies are needed, the highest weight will be assigned to the best ranked\* company and so on.

*\*The ranking is the one from the annual review and is made on the climate score. In case of equal score, the second criteria for the ranking is the free float market capitalisation on the annual review cut-off date.*

## 6. CORPORATE ACTIONS

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### 6.1 GENERAL

The index may be adjusted in order to maintain the continuity of the index level and the composition. The underlying aim is that the index continues to reflect as closely as possible the value of the underlying portfolio.

Adjustments take place in reaction to events that occur with constituents in order to mitigate or eliminate the effect of that event on the index.

### 6.2 REMOVAL OF CONSTITUENTS

A constituent will be removed from the index if it has appeared that the liquid trading will be significantly affected due to a takeover, merger, bankruptcy or has ceased to be a viable constituent as defined by the rules. The constituent in question will either be removed or will be replaced by the acquiring company.

If a company is removed from the index, the divisor will be adapted to maintain the index level.

#### 6.2.1 Mergers and acquisitions

If a constituent is subject to a take-over offer, a merger, an acquisition or a similar situation or has in the opinion of Index Design ceased to be a viable constituent as defined by the rules, the constituent in question will be removed on a day determined by Index Design.

If an index component is acquired by another company (component or non-component of the index), the former will be removed on a day determined by Index Design.

#### 6.2.2 Delistings, suspensions and company distress

If a constituent is suspended, Index Design will consider whether the constituent should be removed on the understanding that a transitional period with a maximum of three months may be observed.

If a constituent will be delisted from Euronext, it will be removed from the index as soon as possible and on a day determined by Index Design.

The company will be deleted from the index based on either the last known price established during regular daytime trading or else a price determined by Index Design, whereby the company may also be deleted at EUR 0.

In the event that the trading in shares is suspended, the last known price established during regular daytime trading will be used.

### 6.3 SPLIT UP / SPIN-OFF

In the event that a company included in the index is split up, the companies resulting from the split, including the original company where appropriate will continue to be included in the index providing they still qualify as an eligible company in their own right. The index may then temporarily consist of fewer than, or more than the standard number of constituents until the next periodical review takes place.

For the purposes of these rules a split up is taken to mean a legal demerger, a spin-off or another situation which Index Design deems to be similar.

In case the shareholder of the company which was originally included in the index does not automatically receive shares in a company which is created as a result of the split up, this company is considered to be a newly listed company.

The removal of any non-qualifying company resulting from a split up will take place after the close of the first day of trading in the shares of that company. If all companies resulting from the split are to be removed, the removal will take place at the close of the last trading day before the split.

### 6.4 EARLY INCLUSION OF NON-CONSTITUENTS

As a rule newly listed companies are considered for inclusion in the index at the time of the periodical index rebalancing.

### 6.5 DIVIDENDS

#### 6.5.1 Distinction ordinary and special dividend

The price index will be adjusted for dividends that are special.

The following criteria will be applied to decide whether a dividend should be considered a special dividend:

- a) The declaration of a company of a dividend additional to those dividends declared as part of the company's normal results and dividend reporting cycle; merely an adjustment to the timing of the declaration of a company's expected dividend would not be considered as a special dividend circumstance; or
- b) The identification of an element of a dividend paid in line with a company's normal results and dividend reporting cycle as an element that is unambiguously additional to the company's normal payment.

For the purpose of clarification, no adjustment will be made for the following situations:

1. Payment of ordinary dividends, irrespective of how they are financed;
2. Issue of redeemable shares or any other entitlement in lieu of an ordinary dividend; or
3. Unexpected increase or decrease, resumption or cessation, or change in frequency to an ordinary dividend.

#### **6.5.2 Adjustment for special dividend**

The adjustment of the index takes place by a reduction of the closing price of the share in question. Subsequently the divisor will be adapted in order to maintain the index level. The adjustments will be based on gross amounts.

### **6.6 RIGHTS ISSUES AND OTHER RIGHTS**

In the event of a rights issue the new shares will be included in the index on the ex-date of the rights issue and an adjusted closing price will be applied. The adjustment will be made based on the shares currently in the index. The divisor will be adapted in such a way that the level of the index remains the same.

The new shares are only added if less than 0.4 share is issued for every share that is currently held and if the new shares are fungible with the existing line of shares (e.g. no dividend disadvantage). Otherwise the index is adjusted based on the value of the rights only.

The index will be adjusted only if the rights represent a positive value.

The index will also be adjusted if a value can be attributed to a subscription right for convertible bonds, bonds with warrants or warrants with preferential rights for shareholders or similar situations.

### **6.7 BONUS ISSUES, STOCK SPLITS AND REVERSE STOCK SPLITS**

For bonus issues, stock splits and reverse stock splits, the number of shares included in the index will be adjusted in accordance with the ratio given in the corporate action. The divisor will not be changed because of this. Index Design may regard a bonus issue as the issue of an entitlement in lieu of an ordinary dividend and therefore treat this in accordance with 6.5.1.

### **6.8 CHANGES IN NUMBER OF SHARES OR FREE FLOAT**

In between the reviews the number of shares included in the index and free float factors will remain unchanged.

### **6.9 PARTIAL TENDER OFFERS ON OWN SHARES**

The divisor of the index will be adjusted if the premium represents more than 5% of the share price of the close on the penultimate day before the ex-date (the day prior to the last day before the ex-day). The premium is calculated as the difference between the offered price and the closing price, multiplied by the percentage of the share capital targeted in the offer. If the divisor is adjusted, the number of shares in the index will be adjusted as well.

## 7. DATA PROVIDERS

### 7.1 CDP

#### 7.1.1 Core principles

CDP is a global not-for-profit organization that holds the largest and most comprehensive collection globally of primary corporate climate change, water and forest-risk information.

##### Principles of scoring

Scoring at CDP is mission-driven, focusing on CDP's principles and values for a sustainable economy, and highlighting the business case to do this. Scoring provides a roadmap to companies to achieve best practice and by developing the scoring methodology over time, we are able to drive changes in company behavior to improve environmental performance. The scoring methodologies have been designed to incentivize actions that are applicable to a certain extent to all companies, in all sectors and in all geographies. For companies that have a good understanding of the scoring methodology, the score provides a snapshot of how they compare with other companies.

##### Points allocation

Responding companies will be assessed across four consecutive levels which represent the steps a company moves through as it progresses towards environmental stewardship. The levels are:

- 1) Disclosure;
- 2) Awareness;
- 3) Management;
- 4) Leadership.

#### 7.1.1 CDP Equivalence Table

CDP Score Alphabet	Bonus (-)/Malus(+)
A	-0.5
A-	-0.4
B	-0.3
B-	-0.2
C	0
C-	0.2
D	0.3
D-	0.4
F**	0.5
Not requested to respond	0

F\*\*: Failure to provide sufficient information to be evaluated. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information. This does not necessarily mean a failure of environmental stewardship

### 7.2 CARBONE 4

Carbone 4 is a leading consulting firm specialized in the energy and climate transition. Carbone 4 advises public and private entities, assisting them in the transition to a low-carbon economy.

#### 7.2.1 Core principles

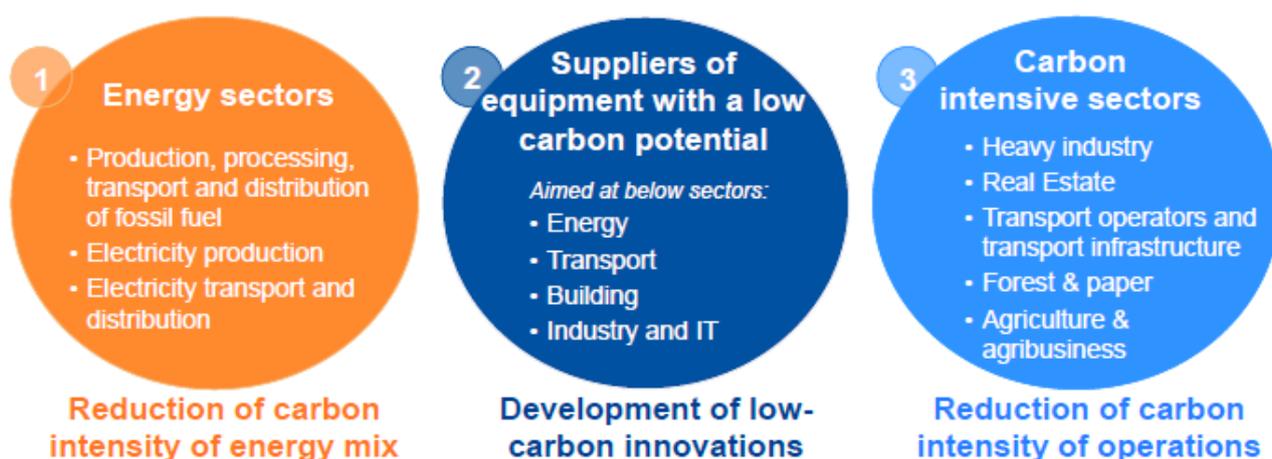
“Bottom-up” analysis:

The analysis of the carbon impact of a portfolio begins with an in-depth assessment of each underlying firm, followed by aggregation at the portfolio level. This allows for differentiation between companies in the same business sector, and enables recognition of companies' efforts in integrating climate and energy-related issues in their strategic decisions and reporting.

Sectorial approach with specific insights for "high stakes" sectors:

Challenges regarding the low-carbon transition vary depending on the characteristics of each economic sector. Therefore, Carbon Impact Analytics differentiates "high stakes" and "low stakes" sectors, and provides specific insights for "high stakes" sectors with tailored calculation principles for each sector.

"High stakes" sectors for which a detailed Carbon Impact analysis is performed are detailed below:



Low stakes sectors include companies with a limited impact on global warming as well as companies for which the current standards of disclosure are insufficient to perform a reliable CIA analysis.

### 7.2.2 The Carbon Impact Ratio

The carbon impact ratio (CIR) is the ratio of avoided emissions (emissions which would exist unless the company had actively made an effort to decrease them) to induced emissions. It is an easy-to-read indicator of the carbon impact of a company, and enables comparison between the carbon impact of a company and the impacts of its sectorial peers.

Evaluating the forward-looking trend of induced and avoided emissions requires analysis of investments and R&D expenditures which will contribute to decreasing carbon emissions in the future, as well as analysis of the firm's positioning and strategy regarding the low-carbon transition. Given that the vast majority of firms do not directly report on the share of their investments and R&D expenditures that contribute to decreasing GHG emissions, this metric is obtained through a qualitative indicator.

Finally, a global rating (aka "climate score") is provided for each company. This rating seeks to assess the company's impact on climate change and its contribution to reduced GHG emissions, while taking into account induced emissions, avoided emissions and the forward-looking analysis.

## 7.3 VIGEO-EIRIS MOODY'S

### 7.3.1 Social Score

The **Social Score** gathers all the criteria that pertain to the company's social and societal impacts, in terms of:

- **internal Human Resources** (e.g. Social dialogue, Responsible Reorganisations, Career management, Health & Safety),
- ✓ the company's respect of **Human Rights** in the community (e.g. Fundamental Human Rights, Right to privacy, to personal security, Property Rights etc.),
- ✓ the company's **Community Involvement** (Promotion of sustainable contributions to the economic and social development of local areas, optimisation of the economic and social

- impact of the company's activities, development of voluntary initiatives and efforts to take into account the impacts of company's products and services on the community etc.),
- ✓ the company's **Relations with Customers** (Information to customers, Responsible customer relations),
- ✓ the company's **Sustainable Relations with Suppliers** and **Integration of Social factors in the company's supply chain** (Freedom of association, Abolition of child or forced labour, Non-discrimination, etc),
- ✓ and for some sectors, the Social pillar also includes the company's management of **Product safety** (eg: Food companies are responsible for ensuring the safety of their products for customers as the failure to do so might have irreversible impacts on the health of consumers).

### 7.3.2 Governance Score

The **Governance Score** gathers:

- ✓ all the criteria that pertain to the company's **internal governance bodies and systems** (namely the topics of the Board of Directors, Audit & Internal controls, Shareholders, Executive remuneration),
- ✓ as well as the company's behaviour in terms of business **ethics** (namely the Prevention of corruption, Prevention of anti-competitive practices, Responsible Lobbying).

### 7.3.3 United Nations Global Compact

FEBELFIN Standards			Vigeo-Eiris Moody's research	
Category	Topic	Thresholds required by 2025	VE Research line	Exclusion threshold
UN Global Compact violations	Unacceptable GHG emissions	Investor Decision	<b>Carbon Footprint Grade (A, B, C, D)</b>  Carbon Footprint Grade : This is a scale attached to the absolute carbon footprint, scope 1 & 2, including the following greenhouse gases: Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, Sulfur Hexafluoride, Nitrogen Trifluoride  A – Moderate : <100 000 teq CO2 B – Significant : 100 000 – 1 000 000 teq CO2 C – High : 1 000 000 – 10 000 000 teq CO2 D- Intense : >= 10 000 000 teq CO2  <b>Energy Transition Score (0-100)</b>  Energy transition Score reflects the strategic approach to reduce companies emissions and adapt their business model to address the risks and opportunities tied to the transition to a low carbon economy.	Exclusion if carbon grade = D and Energy transition Score < 50
	Serious or systematic human right violations		UN Global Compact Research <b>Level of Integration of GC principles</b>	Non communicative and/or controversial
	Serious violations in situation of war or conflict		5-scale opinion regarding overall integration of UNGC principles. The UNGC analysis covers Human Rights, Labour, Environment, Corruption topics. It also takes in account controversies affecting	
	Gross corruption			

	Severe environmental damage		the topics mentioned above, revenues from controversial weapons and tobacco
	Violation of fundamental ethical norms		Advanced High Average Limited Non communicative and/or controversial

## 8. INDEX CALCULATION FORMULAS

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The general formula for the **price index** is:

$$I_t = \frac{\sum_{i=1}^N Q_{i,t} F_{i,t} f_{i,t} C_{i,t} X_{i,t}}{d_t}$$

Where:

- t Time of calculation
- N Number of constituent equities in index
- Q<sub>i,t</sub> Number of shares of equity i included in the index on day t
- F<sub>i,t</sub> Free Float factor of equity i <sup>1</sup>
- f<sub>i,t</sub> Capping factor of equity i <sup>1</sup>
- C<sub>i,t</sub> Price of equity i on t
- X<sub>i,t</sub> Current exchange rate on t <sup>1</sup>
- d<sub>t</sub> Divisor of the index on day t

The **total return index** calculation takes two steps: the first step is to transpose the announced dividend payment into index points. This is called the XD adjustment. This uses the following formula:

$$\text{XD adjustment} = \sum_{i=1}^N \frac{g_i * w_i}{d}$$

Where:

- N Number of constituent equities in index
- g<sub>i</sub> The announced dividend per share of the i<sup>th</sup> component stock (for net return index withholding tax is deducted from this dividend);
- w<sub>i</sub> The weighting of the i<sup>th</sup> component stock in the index, based on number of shares included in the index, Free Float factor, capping factor and exchange rate;
- d Divisor of the index.

The second step of the calculation uses the figures calculated in step one (XD adjustment). The dividend is assumed to be reinvested at the close of the ex-date.

$$\text{TR}_t = \text{TR}_{t-1} \left( \frac{\text{IV}_t + \text{XD}}{\text{IV}_{t-1}} \right)$$

Where:

- TR<sub>t-1</sub>: Total return index value yesterday;
- TR<sub>t</sub>: Total return index value on t;
- IV<sub>t-1</sub>: Underlying price index yesterday;
- IV<sub>t</sub>: Underlying price index on t;

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<sup>1</sup> Factor is equal to 1 if not applied for the index

## 9. DEFINITIONS

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### 9.1 FREE FLOAT FACTOR

The Free Float Factor is the percentage representing all listed securities of the selected line of the relevant company eligible for index inclusion (as described in section 5.2), minus any shareholdings that are considered non-free float. The Free Float Factor is based on public information available on the Review Cut-Off Date. The Free Float Factor will be rounded to the nearest 5%.

The following shareholdings are considered non-free float (based on public information available on the Review Cut-Off Date):

- Any single shareholder who holds 5% or more of the listed securities in the selected line eligible for index inclusion, with the exception of collective entities or pension funds. Collective entities are those entities that fulfill all the following criteria:
  - i. are open for investment to investors or tradable on the market; and
  - ii. have a diversified portfolio; and
  - iii. have an open ended structure.Collective entities include mutual funds and other open end-funds.
- Collective entities or pension funds that hold 5% or more of the listed securities in the selected line eligible for index inclusion and are represented in any governing body of the company in question.
- Parties acting in concert that collectively hold 5% or more of the listed securities in the selected line eligible for index inclusion.
- Employee shareholding plans, employee pension plans, individual employees, management or members of the board of directors of the relevant company when their cumulative shareholding is 5% or more of the listed securities in the selected line eligible for index inclusion.
- Shares held by the relevant company that represent 5% or more of the listed securities in the selected line eligible for index inclusion (e.g. treasury shares).

### 9.2 THE EXPERT COMMITTEE

Committee consisting of independent persons which acts as Supervisor to the index and to which all decisions regarding supplementing, amending, revising or withdrawing these rules are submitted for approval.

### 9.3 REVIEW RELEVANT DATES

The **Index Universe Cut-Off Date** is the date on which, after the market close, relevant data are gathered that will serve as basis to construct the Large Universe.

The **Review Cut-Off Date** is the date on which, after the market close, relevant data are gathered that will serve as basis for the periodical review of the index.

The **Review Announcement Date** is the date on which, after the market close, the changes relating to the periodical review are announced as well as the preliminary free float factors.

The **Review Composition Announcement Date** is the date on which, after the close, the full details are announced regarding the index composition that will come into effect after the review effective date. This includes numbers of shares, free float factors and capping factors of all companies included in the new index portfolio.

The **Review Effective Date** is the date on which, after the market close, the changes relating to the periodical review are being effectuated in the index portfolio.

## 10. ESG DISCLOSURES

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY	
Item 1. Name of the benchmark administrator.	Euronext Paris
Item 2. Type of benchmark	Equity Benchmark
Item 3. Name of the benchmark or family of benchmarks.	<b>Low Carbon 100 Europe®PAB index</b>
Item 4. Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	Yes
Item 5. If the response to Item 4 is positive, please find below the ESG factors that are taken into account in the benchmark methodology and how they are used for selection, weighting and exclusion	
a) List of environmental factors considered:	<p>Selection :</p> <ul style="list-style-type: none"> <li>•10 to 15 ('NG') best "green companies" that have the highest of their turnover related to "low carbon" technologies (renewables or energy efficiency) and being part of the ICB sectors Renewable Energy (601020), Construction &amp; Materials (501010), Electricity (651010), Electronic &amp; Electrical Equipment (502020), Industrial Engineering (502040) or Industrial Transportation (502060).</li> <li>•('100- NG') best climate score (combined Carbone4 &amp; CDP score)</li> </ul> <p>Exclusion :</p> <ul style="list-style-type: none"> <li>•Companies included in the ICB sectors :Tobacco, Defense, Aerospace and Oil Equipment &amp; Services</li> <li>•Companies with ESG controversies and controversial weapons.</li> <li>•Companies with fossil fuel reserves, searching, collecting, treating, refining or transporting coal, oil or gas and utilities that use fossil fuels to produce electricity.</li> <li>• Companies facing critical controversies with regards to the UNGC.</li> </ul> <p>Weighting :</p> <ul style="list-style-type: none"> <li>•The total weight of the "green companies" is set at 5 % by the committee.</li> <li>•The total weight of the "non-green companies" is 95%. The weights of each ICB super-sector are proportional to the related universe. Within each super-sector, the weight of each company is made proportional to the universe.</li> </ul>
b) List of social factors considered:	<p>Exclusion :</p> <p>The 30 companies with the lowest-ranking average Social &amp; Governance score are excluded. In case Of</p>

	equal average score, the company with the best Social score will be preferred.
c) List of governance factors considered:	<p>Exclusion :</p> <p>The 30 companies with the lowest-ranking average Social &amp; Governance score are excluded. In case of equal average score, the company with the best Social score will be preferred.</p>
<b>Item 6. Data and standards used.</b>	
<p>a) Data input.</p> <p><i>(i) Describe whether the data are reported, modelled or, sourced internally or externally.</i></p> <p><i>(ii) Where the data are reported, modelled or sourced externally, please name the third party data provider.</i></p>	<p>Vigeo-Eiris Moody's provides :</p> <ul style="list-style-type: none"> <li>• Social score</li> </ul> <p>The Social pillar gathers all of the Equitics© sustainability criteria that pertain to the company's social impacts providing a comprehensive overview of its managerial approach. The content of this pillar integrates the analysis of Human Resources, Human Rights, Community Involvement and Business Behaviour issues.</p> <ul style="list-style-type: none"> <li>• Corporate Governance score</li> </ul> <p>Within the Corporate Governance domain, there are <b>four underlying criteria</b> that structure the assessment framework and build the Responsible Corporate Governance Score:</p> <ul style="list-style-type: none"> <li>• CGV 1.1: Responsible Board Practice and Organisation.</li> <li>• CGV 2.1: Audit and Internal Controls.</li> <li>• CGV 3.1: Shareholder's Rights.</li> <li>• CGV 4.1: Responsible Executive Remuneration.</li> </ul> <p>In addition to the traditional themes of Corporate Governance that are addressed throughout national codes, Vigeo-Eiris Moody's analyses themes specific to CSR</p> <p><b><u>CDP:</u></b></p> <p>A being excellent and D- poor. The F score (Failure to disclose) is given to a company part of the sample but not responding to disclose CDP methodology is available on: <a href="http://www.cdp.net">www.cdp.net</a>.</p> <p><b><u>Carbone 4:</u></b></p> <p>1 being excellent and 5 being poor. The full Carbon4 Finance methodology is available on: <a href="http://www.carbone4.com">www.carbone4.com</a>.</p>
b) Verification of data and guaranteeing the quality of those data.	Vigeo-Eiris Moody's Carbone 4 and CDP represents and warrants that to the best of its knowledge the

*Describe how data are verified and how the quality of those data is ensured.*

Methodology is robust and reliable, rigorous and capable of validating and verifying including, but not limited to, the following:

- shall promptly correct any errors made in its computations of the Data and inform Euronext thereof, immediately.
- periodically review the Methodology
- has clear written rules identifying how and when discretion may be exercised when deviating from the methodology
- will inform Euronext prior to making any material change to the Methodology and will provide Euronext with the rationale for such change.

c) Reference standards

*Describe the international standards used in the benchmark methodology.*

Vigeo-Eiris Moody's: the methodology behind ESG performance indicators and the assessment of controversies severity is based on the following international standards :

- Global Reporting Initiative (GRI)
- OECD Guidelines for Multinational Enterprises, and sectorial guidance
- G20/OECD recommendations on Corporate governance
- UN Conventions and recommendations,
- UN Global Compact Principles
- UN Sustainable Development Goals
- ILO Conventions , including the core ones, and recommendations
- TFCO recommendations
- Paris Agreement (UNFCCC)

Carbon4 Finance:

Carbon 4 Finance score is based on GHG emissions. These emissions are calculated based on the GHG Protocol standard.

CDP:

CDP do not produce the methodology using an international standard, however do include elements of international standards in what we incentivize, ie all of the verification is based on international standards, the targets and specifically the push for SBT is a de facto standard.

**Information updated on:**

30<sup>th</sup> April 2020