Carbon Accounting
Report 2020

alstria

Disclaimer:

This report is based on the RECAP (Real Estate Carbon Accounting Principle) that has been defined by alstria to help it assess the impact of carbon pricing change on its business and better integrate climate change consideration in its decision-making processes.*

RECAP is not a general accepted accounting practice. Moreover, the information contained in this report has neither been audited nor reviewed. This document is being presented solely for informational purposes. It should not be treated as giving investment advice, nor is it intended to provide the basis for any evaluation or any securities and should not be considered as a recommendation that any person should purchase, hold, or dispose of any shares or other securities.

Audited financial information about alstria in accordance with IFRS and German GAAP are available on alstria's website www.alstria.de.

The information compiled in the report is based upon what management believes are reasonable assumptions. Therefore, this report may also contain forward-looking statements based on these assumptions and forecasts made by the alstria management and other information currently available to alstria. However, there can be no assurance the assumption and forecasts will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. The Company undertakes no obligation to the assumptions and forecasts if circumstances or management's estimates or opinions should change. Moreover, the Company does not intend, and does not assume any liability, to update the forward-looking statements or to conform them to future events or developments.

Certain numerical data in this presentation have been rounded according to established commercial standards.

This document was updated on 12/03/2021 to correct the initial consolidation of the LIABILITY LINKED TO FUTURE OPERATIONAL CARBON which was wrongly booked with its Market Based value (now location based). As a result, the LIABILITY LINKED TO FUTURE OPERATIONAL CARBON increased on the balance sheet from EUR 19.2 m to EUR 27.98 m.

* The RECAP framework is available at www.recap.wiki

CARBON PROFIT AND LOSS STATEMENT
- FY2020 -

EUR K (UNAUDITED)

	Note	FY2020
Carbon Revenues	D I.	
Transaction	D I.1	
Gain/Loss as a result of acquisition/sale of operational carbon		729
Gain/Loss as a result of acquisition/sale of Embedded carbon		446
Transaction result		**1,175**
Carbon Efficiency	D I.2	
Gain/Loss as a result of change in construction technology		-
Gain/Loss as a result of change in operational carbon efficiency		3,637
Gain/Loss as a result of change in reusability of Embedded Carbon		-
Efficiency result		**3,637**
Carbon Market Price	D I.3	
Gain/Loss as a result of change in carbon price		**1,879**
Carbon Revenues		**6,691**
P&L - Expenses	D II.	
Carbon Expenses as a result of operations of the assets	D II.1	-540
Carbon Expenses as a result of write off construction carbon	D II.2	-1,738
Carbon Expenses		**-2,278**
Carbon Net Income		**4,413**

CARBON BALANCE SHEET
- CARBON ASSETS -

EUR K (UNAUDITED)

	Note	FY2020	FY2019	YoY change
Carbon Assets	E I.			
Embedded Carbon asset at fair value		46,640	36,900	9,740
Embedded Carbon deduction for lack of reusability		-11,660	-9,225	-2,435
Total Carbon Assets		**34,980**	**27,675**	**7,305**

CARBON BALANCE SHEET
- CARBON EQUITY AND CARBON LIABILITIES -

EUR K (UNAUDITED)

	Note	FY2020	FY2019	YoY change
Carbon Equity and Carbon Liabilites	E II.			
Carbon Equity	E II.1			
Carbon Retained Earning		-30,394	-34,807	4,413
Green Dividend		-	-	-
Total Carbon Equity		**-30,394**	**-34,807**	**4,413**
Carbon Liability	E II.2			
Unpaid Carbon acquired by the company		35,117	36,900	-1,783
Unpaid Carbon used by the company		2,278	-	2,278
Liability linked to future operational carbon		27,980	25,582	2,398
Total Carbon Liability		**65,375**	**62,482**	**2,892**
Total Carbon Equity and Liability		**34,980**	**27,675**	**7,305**

CONTENT

Notes to the carbon P&L and balance sheet of alstria office REIT-AG for FY2020 (unaudited)

A. BASIS OF PRESENTATION

alstria office REIT-AG (the Company) is a listed real estate property corporation under the scope of the G-REIT Act. The main objectives of the Company and its subsidiaries (the Group or alstria) are the acquisition, management, operation, and sale of owned real estate property and the holding of participations in enterprises that acquire, manage, operate, and sell owned property. alstria prepared its 2020 carbon accounts in accordance with the Real Estate Carbon Accounting Principle (RECAP, which can be found at www.recap.wiki).

These principles are not accepted accounting principles and have been developed by the Company to better illustrate the potential financial impact of carbon on its underlying business.

In particular, this report's use of "Asset", "Liability" and "Equity" do not meet the respective definitions of these terms under IFRS or under German GAAP.

B. BASIS FOR CONSOLIDATION

This carbon account considers all the assets on the Company's balance sheet during the FY2020 and all the activities carried by the company during the reporting year. For a full list of the assets in alstria's balance sheet, please see www.alstria.de.

C. KEY JUDGEMENTS AND ESTIMATES

Estimates, assessments, and assumptions have been made in the course of preparing theses carbon accounts. These can materially affect the reported amounts and recognition of carbon assets and carbon liabilities at the balance sheet date and the amounts of carbon income and carbon expenses reported for the overall period. The major items that such estimates, assessments, and assumptions affect are described hereafter. Actual amounts may differ from the estimates. Changes in the estimates, assessments, and assumptions can have a material impact on the carbon accounts.

I. CARBON PRICE

The fair market value of carbon that we used is equal to the daily closing price of the ECX EUA Futures, Continuous Contract, trading on ICE. *

*https://www.quandl.com/data/CHRIS/ICE_C1-ECX-EUA-Futures-Continuous-Contract-1-C1-Front-Month

The EUA Futures Contract is a deliverable contract where each clearing member with a position open at cessation of trading for a contract month is obliged to make or take delivery of carbon emission allowances to or from the Union Registry in accordance with the ICE Futures Europe Regulations.

For carbon balance sheet items, we used the spot price on balance sheet day. However, for carbon profit and loss statement items, we used the mathematical average closing price for the year. The table below summarises the data.

Carbon price (EUR/ton CO2Eq)	
Dec. 31, 2019	**24.52**
Dec. 31, 2020	**32.59**
Mathematical average price in 2020	**24.76**

II. FAIR VALUE OF EMBEDDED CARBON

The fair value of embedded carbon is defined as the cost of the amount of carbon that would need to be spent to build an equivalent building using the average construction methodology currently available.

$$\text{Fair Value} = a \times c \times p$$

Where

a is the total lettable area of the asset;

c is the average amount of carbon emitted to build one m^2 of office; and

p is the market price of one ton of carbon at the reporting date.

In this report, we assumed that c = 1 ton/m^2*.

III. LACK OF ASSET REUSABILITY

The lack of asset reusability is based on an estimate of the amount of construction that cannot or will not be reused at a later stage of the asset's life cycle. Therefore, it results in a deduction of the fair value of embedded carbon. For example, this is linked to the inner fit-out of the asset that will be torn down on regular basis as the occupation of the assets evolve (partition walls, carpets, etc.)

We have assumed in the report that 25%** of the asset cannot be reused.

* Based on the estimate of LETI Embodied Carbon Primer, January 2020 (www.leti.london).

** alstria's own estimate

IV. FUTURE OPERATIONAL CARBON LIABILITY

Future operational carbon liability represents the capitalised cost of future carbon emission that is committed by the company as it operates the asset. This amount is calculated based on the latest know operational emission of the building, which is assumed to continue unabated in the future.

$$\text{Future operational carbon liability} = Ce \times Cc / EqY$$

Where

Ce = the latest annual carbon emissions;

Cc = the cost of carbon; and

EqY = the equivalent yield used in the valuation of the asset at the reporting date for the IFRS FY financial statement.

V. LACK OF EMISSION DATA FOR STANDING OR ACQUIRED ASSETS

In a limited number of cases (and in particular for newly acquired assets), alstria does not have data related to the asset's latest annual carbon emission. In these cases, the following assumption was made

$$Ce = Ae/m^2 \times Aa$$

Where

Ce = the latest annual carbon emissions;

Ae/m^2 is the average latest annual carbon emission per m^2 calculated as the sum of the total latest annual carbon emission of each individual asset, where the information is known, divided by the sum of m^2 of the same portfolio; and

Aa is the lettable area in m^2 of the asset considered.

VI. ESTIMATED EMISSION FROM AN IDENTIFIED REFURBISHMENT

Emission per m^2 of an asset's refurbishment is estimated as follows:

$$Re = Pb \times c$$

Where

Re is the carbon emission per m^2 for a given refurbishment;

Pb is the proportion of the building construction that is preserved by the planned refurbishment (expressed as a percentage); and

c is the average amount of carbon emitted to build one m^2 of office (as defined in II above).

To estimate the actual emission from its refurbishment project during the year, we estimated the degree of progress of the construction site and assumed that the emission during the year is equal to the total emission anticipated multiplied by the amount of progression of the construction site.

VII. ESTIMATED EMISSION FROM A NON-SPECIFIC REFURBISHMENT

During the year, alstria invests in standing assets (for example, to realise tenants fit outs, to renew a roof or an elevator, etc.), without identifying the investment as a specific refurbishment.

To estimate the emissions of these works, the following is applied:

$$EnsR = ER/IR \times InsR$$

Where

EnsR is the emission in nonspecific refurbishments;

ER is the emission from known refurbishments (as defined in VI);

IR is the total investment related to the known refurbishment (in EUR); and

InsR is the total investment in the nonspecific refurbishment (in EUR).

D. NOTES TO THE PROFIT AND LOSS STATEMENT

I. CARBON REVENUES

1. TRANSACTION

alstria disposed over the reporting period a total of eight assets representing EUR 1,414 k of net embedded carbon assets, and a liability for future operational carbon of EUR 785 k.

The asset sales led to a gain of EUR 1,256 k as summarized in the table below:

Assets sold (EUR k)	
Carrying Value of Embedded Carbon Asset Sold	−1,414
Fair Value of Embedded Carbon Asset Sold	1,886
Total Gain from Embedded Carbon Sold	**471**
Gain linked to the decrease of the liability linked to future operational carbon	785
Total Carbon gain from sales	**1,256**

One asset was acquired during the period.

The asset acquisition led to a loss of EUR 81 k, as summarized in the table below:

Asset Acquisition (EUR k)	
Loss due to deduction for lack of reusability	−26
Loss due to increase of liability linked to future operational carbon	−55
Carbon loss from Asset Acquisition	**−81**

In total, the transaction activities resulted in an overall gain of EUR 1,175 k for the period.

2. CARBON EFFICIENCY

Improved carbon efficiency resulted in a gain of EUR 3,637 k over the reporting period, which reflects the lower future carbon liability because of the reduction of overall location-based emission in the portfolio. Out of this amount, EUR 270 k is the result of alstria's refurbishment efforts, and the remainder is the result of lower consumption in standing assets, as well as the reduction of CO2 in the average German energy mix.

3. CHANGE IN CARBON PRICE

The increase of the carbon price during the year from EUR 24.52/ton of CO2Eq to EUR 32.59/ton of CO2Eq led to a total revenue of EUR 1,879 k.

This revenue is the net effect of the increase of the embedded carbon-based assets of EUR 8,643 k (note E I.), while the future carbon operational liability increased by EUR 6,764 k.

II. CARBON EXPENSES

The price of carbon used for the calculation of the carbon expenses corresponded to the average carbon price over the year or EUR 24.76/ton of CO2Eq.

1. OPERATION OF THE ASSETS

The total carbon expense for the reporting period for the assets' operation was EUR 540 k.

The location-based expense was EUR 1,120 k, which was partially reduced by market-based activities (offsetting of CO2 emission from gas, procurement of non-fossil fuel electricity, etc.) and which went through alstria IFRS P&L. Because of these market-based activities, the total operational carbon expense was reduced by EUR 579 k.

EUR k	
Location-based operational costs	1,119
Reduction as a result of market-based activities	−579
Market based operational costs	**540**

2. CONSTRUCTION ACTIVITES

The total carbon expense because of the construction activities undertaken by the Company in the reporting period is equal to EUR 453 k for the identified refurbishments and EUR 1,283 k for nonspecific refurbishments, leading to a total of EUR 1,738 k.

E. NOTES TO THE CARBON BALANCE SHEET

I. EMBEDDED CARBON ASSETS

Total carbon assets were equal to EUR 34,980 k.

The table below illustrate the changes in the Total Carbon assets over the reporting period.

Embedded carbon asset changes (EUR k)	
Carbon Assets BoP	**27,675**
Net transaction impact	−1,338
Change in carbon price	8,643
Carbon Assets EoP	**34,980**

II. EMBEDDED CARBON LIABILITY

1. GREEN DIVIDEND

The Company paid out no Green Dividend.

2. UNPAID CARBON ACQUIRED BY THE COMPANY

As a result of the transaction activities during the year, the liability for unpaid carbon acquired by the Company reduced by EUR 1,783 k to EUR 35,117 k.

The EUR 35,117 k represents the acquisition price of the embedded carbon assets that the company acquired over its lifetime.

3. UNPAID CARBON USED BY THE COMPANY

The total unpaid carbon used by the company increased from EUR 0 (as this is the first reporting year) to EUR 2,278 k.

Unpaid Carbon used by the company (EUR k)	
Construction related carbon	1,738
Operation related carbon	540
Total Unpaid Carbon	**2,278**

4. LIABILITY LINKED TO FUTURE OPERATIONAL CARBON

The liability linked to future operational carbon increased during the year by EUR 2,398 k to a total of EUR 27,980 k.

Liability linked to future operational carbon (EUR k)	
Liability linked to future operational carbon (BoP)	**25,582**
Refurbishment of existing assets	−270
Transactions	−729
Change in operational efficiency	−3,367
Change in carbon price	6,764
Liability linked to future operational carbon (EoP)	**27,980**

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The most sustainable building is the one that was not built.

Contact us
Julius Stinauer *MRICS*
Investor Relations / Public Relations
+49 (0) 40 22 63 41-344
jstinauer@alstria.de

alstria office REIT-AG
Steinstrasse 7
20095 Hamburg, Germany
www.alstria.com

alstria