International Carbon Footprint Report 2017 Financial Year

Our actions do the talking.

Kaufland

List of Abbreviations

CO_2	*Carbon dioxide*
CO_2eq	*Carbon dioxide equivalents*
FY	*Financial year*
K BG	*Kaufland Bulgaria*
K CZ	*Kaufland Czech Republic*
K DE	*Kaufland Germany*
K HR	*Kaufland Croatia*
K INT	*Kaufland International*
KKV	*Kälte-Klima-Verbund (combined refrigeration and air conditioning)*
K PL	*Kaufland Poland*
K RO	*Kaufland Romania*
K SK	*Kaufland Slovakia*
OCI	*Omnichannel/delivery service*
PV	*Photovoltaics*
SF	*Shipping*
GHG	*Greenhouse gases*
SAA	*Sales and ancillary area*

Contents

Summary

We are Taking Stock - Constant Reduction in CO_2 Emissions

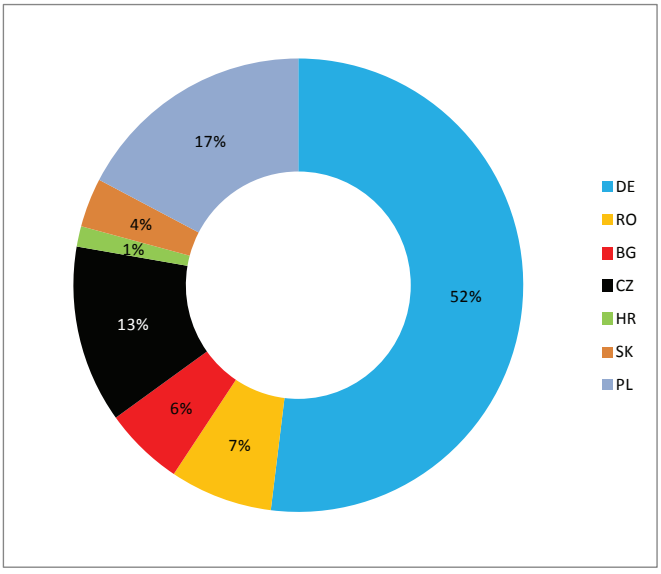
Climate change is progressing. CO_2 Emissions are still a major factor contributing to the deterioration in climate. A further, permanent reduction in CO_2 emissions is therefore essential.

We are aware of our responsibility to people, the environment and nature, and are therefore always advancing various measures to reduce greenhouse gases (GHG) associated with our business activities. Since 2015 we have been documenting a gradual reduction in CO_2 emissions in our Carbon footprint Report.
In spite of constant expansion, the Kaufland International Group's absolute GHG emissions in the 2017 financial year (2017 FY) fell to 1,590,314 t CO_2-eq[1]. That is 263 kg CO_2-eq per square metre our sales and ancillary areas (SAA).

GHG Emissions	absolute	specific
	t CO_2eq	kg CO_2eq/m² SAA*
Refrigerants	317.906	53
Natural gas	102.465	17
Heating oil	9.703	2
Transport	607	0
Scope 1	**430.681**	**71**
District heating	24.969	4
Electricity	796.375	132
Scope 2	**821.344**	**136**
Paper	188.755	31
Transport	149.534	25
Scope 3	**338.289**	**56**
Total balance	**1.590.314**	**263**

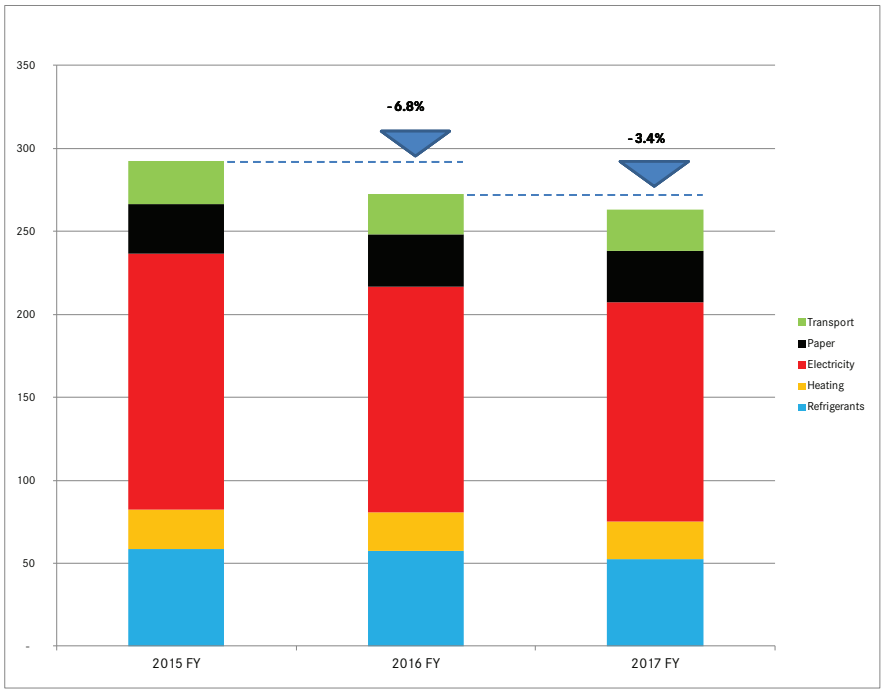
** Electricity INT (location approach): 1,026,615 t CO_2-eq*

Proportion of GHG emissions per country in %



[1] The results of the Carbon footprint Report were checked and confirmed by the Institute for Energy and Environment Research Heidelberg (ifeu) in accordance with the relevant standards of the GHG Protocol Initiative and ISO 14064-1.
[2] SAA including ancillary areas

Specific GHG emissions K INT in t CO_2-eq/m²



Since 2015, we have already achieved a specific CO_2 reduction of around 10%. This has been done by several methods. They include the successive conversion of the stores to LED lighting, the introduction of an energy management system, the use of climate-neutral refrigerants, ongoing optimisation of transport routes and capacity utilisation in transport logistics as well as the use of combined refrigeration and air conditioning. This is where the stores' heating and ventilation technology is connected to the refrigeration unit that generates the cold for the refrigerators. The waste heat from the central refrigeration unit can thus be used to heat the store via an industrial underfloor heating system. When the outdoor temperatures are high, the system can be used to cool the store. As a result, stores manage without a conventional heating system and are thus independent of fuels such as oil, gas or wood.

To be able to achieve even more CO_2 savings in future, we want to focus even more on the areas of energy and refrigeration. For example, by the end of 2021, at least 5% of the stores in Germany are to be fitted with photovoltaic systems.

The Carbon footprint Report is drawn up once a year following the standards of the GHG Protocol Initiative and ISO 14064-1. Its declared goal is to reduce emissions.

The Carbon footprint Report broadly describes the emissions harmful to the climate that are caused directly or indirectly by a company's business activities. Emissions that have an impact on the environment, include in particular greenhouse gases, which, alongside carbon dioxide (CO_2), include other gases, such as methane or nitrous oxide. Conversion of the various greenhouse gases into CO_2-equivalents (CO_2-eq) indicate how much the gas concerned contributes to the greenhouse effect. As part of the Carbon footprint Report at Kaufland, these are emissions from the consumption of electricity, the burning of fossil fuels to heat our locations and escaped refrigerants, as well as other indirect emissions from transport logistics and the use of paper in advertising materials or in the office.

Introduction

What is a Carbon footprint Report?
The Carbon footprint Report broadly describes the emissions harmful to the climate that are caused by a company's business activities. Emissions that have an impact on the environment, include in particular greenhouse gases, which, alongside carbon dioxide, include other gases, such as methane or nitrous oxide. These are converted into carbon dioxide and represented as CO_2 equivalents (CO_2-eq). The CO_2-equivalents indicate how much the gas concerned contributes to the greenhouse effect. This results in a uniform reference value. The first international Carbon footprint Report for K INT was drawn up for the 2015 FY, which thus acts as the base year.

Why does Kaufland Draw up a Carbon footprint Report?
With the introduction of the new EU directive on the requirement to submit a sustainability report and its incorporation into national law, Kaufland Slovakia is required to report publicly on major CSR activities from the 2017 FY onwards. Selected key climate data is part of a general CSR report. The Carbon footprint Report should support the countries required to report, and those reporting voluntarily, with the key data obtained. The goal is to reduce emissions. Moreover, there are voluntary undertakings specific to individual countries (e.g. "Lean and Green"), on the basis of which selected key date relevant to climate protection has to be collected and published.

How Significant is a Carbon footprint Report?
The significance of the greenhouse gas emissions expressed in absolute figures is very limited. These figures only become significant when they are placed in a time or content context. In respect to time, the figures can be compared with the previous year 2016 and the base year 2015. However, a rise in greenhouse gas emissions can always be due to company growth. To discount these effects, the absolute emissions were placed in relation to the sales/ancillary area (m^2 VKF) (specific emissions).

How is the Carbon footprint Report Quality Assured?
In terms of content, the key data was quality assured and approved by the relevant divisions and controlling. As far as the methodology is concerned, the Carbon footprint Report for the 2017 FY was also verified by the Institute for Energy and Environment Research (ifeu). Verification comprises reviewing and ensuring the transparency of the procedure and plausibility of the Carbon footprint Reports identified and reported in accordance with the standards of the GHG Protocol Initiative and ISO 14064-1.

Why are there Recalculations?
The values from the 2015 FY and 2016 FY were recalculated. The reasons for the recalculations include:

- Changed scientific findings lead to updated emission factors
- Data was transmitted with errors
- Balance sheet items are omitted because of their insignificance, ensuring comparability across the years

External Audit of the Carbon footprint Report
The results of the INT 2017 Carbon footprint Report were reviewed and confirmed by ifeu Heidelberg in accordance with the standards of the GHG Protocol Initiative and ISO 14064-1.

1. Overview of Results Kaufland International

GHG Emissions K INT in accordance with Scopes

	Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
	2017 FY	2016* FY	2015* FY	2017 FY	2016* FY	2015* FY	2016 FY	2015 FY
	t CO_2eq	t CO_2eq	t CO_2eq	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	%	%
Scope1	**430.681**	**460.003**	**459.742**	**71**	**77**	**78**	**-7,1%**	**-8,3%**
Natural gas	102.465	105.550	102.621	17	18	17	-3,6%	-2,3%
Heating oil	9.703	10.590	11.055	2	2	2	-9,1%	-14,1%
Refrigerants	317.906	343.863	346.066	53	57	58	-8,2%	-10,1%
Transport own logistics	607			0				
Scope2	**821.344**	**840.041**	**938.164**	**136**	**140**	**159**	**-3,0%**	**-14,3%**
Electricity	796.375	817.272	909.277	132	136	154	-3,3%	-14,3%
District heating	24.969	22.769	28.887	4	4	5	+8,8%	-15,4%
Scope3	**338.289**	**333.320**	**330.270**	**56**	**56**	**56**	**+0,7%**	**+0,2%**
Paper	188.755	189.374	179.451	31	32	30	-1,1%	+2,9%
Transport third party	149.534	143.946	150.819	25	24	26	+3,5%	-2,7%
Total GHG Emissions	**1.590.314**	**1.633.364**	**1.728.176**	**263**	**272**	**292**	**-3,4%**	**-9,9%**

In the 2017 financial year[1], the absolute greenhouse gas emissions of the Kaufland International Group reduced to 1,590,314 tonnes CO_2-equivalents (-2.6% in comparison to the previous year). With respect to a total of 6,045,000m² sales area, this equivalent to a reduction of -3.4% to 263kg CO_2-eq/m² (specific GHG emissions). The sales area[2] has increased by +0.7% since 2016.

The biggest emissions saving per m² SAA was recorded for electricity, at -3.3%. For heating consumption (natural gas, heating oil, district heating), a total of -2.0% specific GHG emissions were saved. The biggest rise in specific GHG emissions were recorded in transport, at +3.5%.

GHG Emissions per Country

	Absolute Greenhouse Gas Emissions			Intensity of Greenhouse Gas Emissions			Deviation 2017 FY from	
	2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
	t CO_2eq	t CO_2eq	t CO_2eq	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	%	%
K BG	91.084	76.895	89.497	388	330	399	+17,5%	-2,7%
K PL	274.907	263.009	245.516	383	369	342	+3,9%	+11,8%
K CZ	201.888	203.740	217.629	379	385	420	-1,5%	-9,9%
K RO	117.184	182.459	157.358	227	358	320	-36,6%	-29,1%
K DE	826.136	832.993	940.105	227	230	262	-1,4%	-13,3%
K SK	55.883	50.066	52.182	220	201	220	+9,6%	+0,1%
K HR	23.232	24.202	25.889	158	170	191	-7,0%	-17,2%
K INT	**1.590.314**	**1.633.364**	**1.728.176**	**263**	**272**	**292**	**-3,4%**	**-9,9%**

The specific GHG emissions of the countries were between 158kg CO_2-eq/m²SAA (K HR) and 388kg CO_2-eq/m²SAA (K BG). K BG therefore recorded the biggest rise in specific GHG emissions. K RO achieved the biggest reduction in specific emissions, with -37% to 227 kg CO_2-eq/m²SAA.

[1] Financial Year: March to February
[2] Definition SAA Carbon footprint Report: SAA stores + other ancillary areas, see Chapter 3.

2. Detailed results according to Emission sources and countries

2.1 Electricity

GHG Emissions Electricity in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	%	%
Electricity	**INT**	**796.375**	**817.272**	**909.277**	**132**	**136**	**154**	-3,3%	-14,3%
	BG	49.179	34.897	55.824	209	150	249	+39,8%	-15,8%
	CZ	100.238	116.659	130.202	188	220	251	-14,6%	-25,2%
	DE	423.644	393.700	488.622	116	109	136	+7,0%	-14,5%
	HR	10.580	11.525	12.898	72	81	95	-11,1%	-24,3%
	PL	190.276	165.831	168.445	265	232	235	+14,0%	+12,8%
	RO	471	75.990	33.959	1	149	69	-99,4%	-98,7%
	SK	21.987	18.670	19.327	87	75	81	+15,6%	+6,4%

Kaufland uses the market-orientated approach[3] to calculate electricity emissions, i.e. the emissions factors (EF) of each energy supplier are used to calculate the emissions. The following weighted emissions factors result due to electricity being procured from several energy suppliers:

Weighted emissions factors from the electricity mix per country in kg CO_2/kWh

	K INT	KL RO	KL HR	KL SK	KL DE	KL CZ	KL BG	KL PL
2017	**0,358**	**0,002**	**0,199**	**0,224**	**0,328**	**0,448**	**0,515**	**0,775**
2016	0,382	0,364	0,223	0,193	0,327	0,504	0,356	0,668
2015	0,421	0,169	0,261	0,204	0,393	0,562	0,587	0,695

Energy consumption

		Absolute Energy Consumption			Specific Energy Consumption			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		thousand Unit	thousand Unit	thousand Unit	Unit/m² SAA	Unit/m² SAA	Unit/m² SAA	Unit/m² SAA	Unit/m² SAA
Electricity total (Unit in kWh)	**INT**	**2.223.147**	**2.139.493**	**2.159.022**	**368**	**357**	**365**	+3,1%	+0,8%
	BG	95.494	98.264	95.100	406	421	423	-3,6%	-4,0%
	CZ	223.778	231.467	231.845	420	437	448	-3,9%	-6,2%
	DE	1.292.139	1.203.979	1.243.852	355	332	346	+6,7%	+2,5%
	HR	53.168	51.682	49.418	362	363	364	-0,4%	-0,7%
	PL	245.517	248.302	242.371	342	348	338	-1,7%	+1,2%
	RO	214.897	208.962	201.490	416	410	410	+1,5%	+1,5%
	SK	98.155	96.837	94.946	386	388	400	-0,5%	-3,3%
Electricity from photovoltaics (Unit in kWh)	**INT**	**573**			**0**			-	-
	BG	-			-			-	-
	CZ	31			0			-	-
	DE	541			0			-	-
	HR	-			-			-	-
	PL	-			-			-	-
	RO	-			-			-	-
	SK	-			-			-	-

[3] *Electricity INT (location approach): 1,026,615 t CO_2-eq*

Specific GHG Emissions from Electricity K INT: -3.3%

Comments:

K RO (-99.4%): 99% of the purchased electricity was switched to 100% renewable energies. The electricity consumption at K RO rose by 1.5% per m²SAA.

K BG (+39.8%): In the previous year, electricity was procured from 100% renewable energies in one quarter, which was not the case in 2017. The specific electricity consumption fell by -3.6%.

K SK (+15.6%)/K PL (+14%): As a result of the increased emissions factors (different electricity mix), the specific GHG emissions rose in spite of a reduction in the specific electricity consumption. The specific electricity consumption fell -0.5% at K SK, and by -2.3% at K PL.

Comments:

- Development LED Stores:

Number of LED Stores

	15.06.2018	02/2017
K BG	18	13
K CZ	48	27
K DE	165	120
K HR	15	7
K PL	92	70
K SK	38	25
K RO	69	44

- Stores with photovoltaic systems (PV) as at 10/1018: 5 in DE and 1 each in CZ and HR
- The energy management in DE, CZ, RO and HR is certified in accordance with ISO standard 50001. By the end of 2018 the energy management systems in all country companies will be certified.

2.2 Heating

GHG Emissions Heating in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	%	%
Heating	**INT**	**137.137**	**138.909**	**142.563**	**23**	**23**	**24**	-2,0%	-5,9%
	BG	2.548	2.941	2.575	11	13	11	-14,0%	-5,5%
	CZ	13.165	13.115	12.843	25	25	25	-0,2%	-0,4%
	DE	92.735	95.143	98.870	25	26	28	-3,1%	-7,5%
	HR	1.228	1.420	1.167	8	10	9	-16,2%	-2,9%
	PL	11.764	11.813	13.432	16	17	19	-1,0%	-12,5%
	RO	9.933	9.873	9.737	19	19	20	-0,7%	-2,9%
	SK	5.764	4.604	3.939	23	18	17	+22,9%	+36,8%
District heating	**INT**	**24.969**	**22.769**	**28.887**	**4**	**4**	**5**	+8,8%	-15,4%
	BG	292	296	280	1	1	1	-2,1%	-0,6%
	CZ	6.265	5.986	5.774	12	11	11	+4,0%	+5,4%
	DE	13.065	11.216	17.992	4	3	5	+15,9%	-28,4%
	HR	0	0	16	0	0	0		-100,0%
	PL	4.030	4.138	3.916	6	6	5	-3,2%	+2,8%
	RO	0	0	0	0	0	0		
	SK	1.317	1.133	909	5	5	4	+14,1%	+35,5%
Natural gas	**INT**	**102.465**	**105.550**	**102.621**	**17**	**18**	**17**	-3,6%	-2,3%
	BG	2.119	2.504	2.151	9	11	10	-16,0%	-5,9%
	CZ	6.820	7.014	6.990	13	13	14	-3,3%	-5,2%
	DE	70.352	73.724	70.192	19	20	20	-5,1%	-1,1%
	HR	1.128	1.345	1.071	8	9	8	-18,8%	-2,8%
	PL	7.666	7.619	9.450	11	11	13	+0,0%	-19,0%
	RO	9.933	9.873	9.737	19	19	20	-0,7%	-2,9%
	SK	4.447	3.471	3.030	18	14	13	+25,8%	+37,2%
Heating oil	**INT**	**9.703**	**10.590**	**11.055**	**2**	**2**	**2**	-9,1%	-14,1%
	BG	137	141	144	1	1	1	-3,6%	-9,3%
	CZ	80	115	79	0	0	0	-30,9%	-1,6%
	DE	9.318	10.203	10.686	3	3	3	-9,2%	-14,0%
	HR	100	75	80	1	1	1	+29,2%	+15,7%
	PL	68	56	66	0	0	0	+20,7%	+2,1%
	RO	0	0	0	0	0	0		
	SK	0	0	0	0	0	0		

Energy consumption

		Absolute Energy Consumption			Specific Energy Consumption			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		thousand Unit	thousand Unit	thousand Unit	Unit/m² SAA	Unit/m² SAA	Unit/m² SAA	Unit/m² SAA	Unit/m² SAA
District heating (Unit in kWh)	**INT**	**101.497**	**92.554**	**117.428**	**17**	**15**	**20**	+8,8%	-15,4%
	BG	1.188	1.206	1.141	5	5	5	-2,2%	-0,5%
	CZ	25.466	24.332	23.471	48	46	45	+4,0%	+5,4%
	DE	53.109	45.591	73.137	15	13	20	+15,9%	-28,4%
	HR	-	-	66	-	0	0		
	PL	16.381	16.822	15.918	23	24	22	-3,2%	+2,8%
	RO	-	-	-	-	0	-		
	SK	5.352	4.604	3.695	21	18	16	+14,1%	+35,4%
Natural gas (Unit in kWh)	**INT**	**562.057**	**578.971**	**562.918**	**93**	**96**	**95**	-3,6%	-2,3%
	BG	11.623	13.737	11.798	49	59	53	-16,0%	-5,9%
	CZ	37.410	38.474	38.341	70	73	74	-3,3%	-5,2%
	DE	385.908	404.400	385.029	106	112	107	-5,1%	-1,1%
	HR	6.188	7.375	5.879	42	52	43	-18,7%	-2,9%
	PL	42.054	41.792	51.836	59	59	72	+0,0%	-19,0%
	RO	54.482	54.157	53.411	106	106	109	-0,7%	-2,9%
	SK	24.392	19.035	16.624	96	76	70	+25,8%	+37,2%
Heating oil in (Unit in L)	**INT**	**3.648**	**3.982**	**4.157**	**1**	**1**	**1**	-9,1%	-14,1%
	BG	51	53	54	0	0	0	-3,7%	
	CZ	30	43	30	0	0	0	-31,1%	
	DE	3.504	3.836	4.018	1	1	1	-9,2%	-14,0%
	HR	37	28	30	0	0	0	+29,3%	
	PL	26	21	25	0	0	0	+20,3%	
	RO	-	-	-	-	0	-		
	SK	-	-	-	-	0	-		

Specific GHG Emissions from Heating K INT: -2%

Comments:

- Development of the number of stores with combined refrigeration and air conditioning (KKV):

Number of KKV stores

	FY 2017	FY 2016
K BG	18	17
K CZ	20	18
K DE	43	35
K HR	10	8
K PL	49	46
K RO	37	30
K SK	15	12

No further measures to reduce heating consumption were reported. The change in heating consumption can be explained by different winter temperatures.

2.3 Refrigerants

GHG Emissions Refrigerant Leakage in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	%	%
Refrigerants	**INT**	**317.906**	**343.863**	**346.066**	**53**	**57**	**58**	-8,2%	-10,1%
	BG	22.374	21.357	13.151	95	92	59	+4,0%	+62,6%
	CZ	58.589	44.633	44.404	110	84	86	+30,5%	+28,2%
	DE	125.261	166.590	184.865	34	46	51	-25,2%	-33,2%
	HR	4.767	5.284	4.767	32	37	35	-12,6%	-7,7%
	PL	38.045	43.413	24.855	53	61	35	-12,9%	+52,9%
	RO	56.852	51.661	62.473	110	101	127	+8,7%	-13,4%
	SK	12.018	10.925	11.551	47	44	49	+8,0%	-2,7%

Specific GHG Emissions from Refrigeration Leakage K INT: -8.2%

Comments:

K DE (-25.2%): There were more incidents of refrigerant leakage. There were fewer incidents of leakages that were harmful to the climate.
In 2017, there were many conversions to climate-neutral refrigerants. Since the end of 2016, only refrigeration units with the climate-neutral refrigerant CO_2 have been installed in new buildings.

GHG Emissions Refrigerant Leakage in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	kg CO_2eq/m² SAA	%	%
NF R404a	**INT**	**274.984**	**302.457**	**318.584**	**45**	**50**	**54**	-9,8%	-15,5%
(EF 3,943)	BG	18.828	18.402	12.207	80	79	54	+1,5%	+47,4%
	CZ	55.640	43.334	43.556	104	82	84	+27,6%	+24,1%
	DE	109.402	146.510	170.458	30	40	47	-25,7%	-36,7%
	HR	2.973	3.860	4.003	20	27	30	-25,4%	-31,5%
	PL	33.898	38.279	22.589	47	54	32	-12,0%	+49,9%
	RO	44.575	43.287	55.156	86	85	112	+1,7%	-23,1%
	SK	9.668	8.785	10.615	38	35	45	+8,1%	-14,8%
NF R410a	**INT**	**169**	**19**	**7**	**0**	**0**	**0**	+771,9%	+2262,9%
(EF 1,924)	BG	0	0	0	0	0	0		
	CZ	0	0	7	0	0	0		-100,0%
	DE	115	19	0	0	0	0	+494,5%	
	HR	0	0	0	0	0	0		
	PL	0	0	0	0	0	0		
	RO	54	0	0	0	0	0		
	SK	0	0	0	0	0	0		
NF R407f	**INT**	**405**		**8**	**0**		**0**		+4854,8%
(EF 1,674)	BG	0		0	0		0		
	CZ	0		0	0		0		
	DE	405		8	0		0		+4893,9%
	HR	0		0	0		0		
	PL	0		0	0		0		
	RO	0		0	0		0		
	SK	0		0	0		0		
NF R407c	**INT**	**1.206**	**489**	**238**	**0**	**0**	**0**	+144,9%	+395,9%
(EF 1,624)	BG	237	81	32	1	0	0	+189,6%	+607,7%
	CZ	58	0	188	0	0	0		-70,0%
	DE	169	190	18	0	0	0	-11,5%	+826,2%
	HR	0	0	0	0	0	0		
	PL	325	218	0	0	0	0	+48,4%	
	RO	417	0	0	1	0	0		
	SK	0	0	0	0	0	0		
NF R134a	**INT**	**40.371**	**40.885**	**26.507**	**7**	**7**	**4**	-2,0%	+49,1%
(EF 1,300)	BG	3.309	2.873	911	14	12	4	+14,3%	+247,1%
	CZ	2.249	1.299	653	4	2	1	+72,1%	+234,6%
	DE	15.050	19.863	13.663	4	5	4	-24,6%	+8,7%
	HR	1.794	1.424	764	12	10	6	+22,0%	+116,7%
	PL	3.821	4.915	2.265	5	7	3	-22,7%	+68,5%
	RO	11.799	8.371	7.315	23	16	15	+39,2%	+53,6%
	SK	2.349	2.140	936	9	9	4	+7,8%	+134,7%
NF R449	**INT**	**740**			**0**				
(EF 1,282)	BG	0			0				
	CZ	641			1				
	DE	99			0				
	HR	0			0				
	PL	0			0				
	RO	0			0				
	SK	0			0				
NF R744 (CO2)	**INT**	**31**	**13**	**13**	**0**	**0**	**0**	+121,0%	+133,4%
(EF 1)	BG	0	1	1	0	0	0	-100,0%	-100,0%
	CZ	1	0	0	0	0	0		
	DE	21	8	9	0	0	0	+153,1%	+130,2%
	HR	0	0	0	0	0	0	-100,0%	
	PL	1	1	1	0	0	0	-20,8%	-0,1%
	RO	7	3	2	0	0	0	+125,9%	+233,2%
	SK	1	0	0	0	0	0	+155,7%	
NF R717	**INT**	**0**			**0**				
(EF 0)	BG	0			0				
	CZ	0			0				
	DE	0			0				
	HR	0			0				
	PL	0			0				
	RO	0			0				
	SK	0			0				

Refrigerant Leakages

		Absolute Refrigerant Leakages			Specific Refrigerant Leakages			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		kg	kg	kg	g/m² SAA	g/m² SAA	g/m² SAA	%	%
NF R404a	**INT**	**69.740**	**76.707**	**80.797**	**12**	**13**	**14**	-9,8%	-15,5%
	BG	4.775	4.667	3.096	20	20	14	+1,5%	+47,4%
	CZ	14.111	10.990	11.046	26	21	21	+27,6%	+24,1%
	DE	27.746	37.157	43.230	8	10	12	-25,7%	-36,7%
	HR	754	979	1.015	5	7	7	-25,4%	-31,5%
	PL	8.597	9.708	5.729	12	14	8	-12,0%	+49,9%
	RO	11.305	10.978	13.988	22	22	28	+1,7%	-23,1%
	SK	2.452	2.228	2.692	10	9	11	+8,1%	-14,8%
NF R410a	**INT**	**88**	**10**	**4**	**0**	**0**	**0**	+773,5%	+2166,5%
	BG	0	0	0	0	0	0		
	CZ	0	0	4	0	0	0		-100,0%
	DE	60	10	0	0	0	0	+496,7%	
	HR	0	0	0	0	0	0		
	PL	0	0	0	0	0	0		
	RO	28	0	0	0	0	0		
	SK	0	0	0	0	0	0		
NF R407f	**INT**	**242**		**5**	**0**		**0**		+4637,0%
	BG	0		0	0		0		
	CZ	0		0	0		0		
	DE	242		5	0		0		+4674,4%
	HR	0		0	0		0		
	PL	0		0	0		0		
	RO	0		0	0		0		
	SK	0		0	0		0		
NF R407c	**INT**	**743**	**301**	**147**	**0**	**0**	**0**	+145,0%	+396,4%
	BG	146	50	20	1	0	0	+189,7%	+597,6%
	CZ	36	0	116	0	0	0		-69,7%
	DE	104	117	11	0	0	0	-11,6%	+832,6%
	HR	0	0	0	0	0	0		
	PL	200	134	0	0	0	0	+48,4%	
	RO	257	0	0	0	0	0		
	SK	0	0	0	0	0	0		
NF R134a	**INT**	**31.054**	**31.449**	**20.390**	**5**	**5**	**3**	-0,9%	+49,1%
	BG	2.545	2.210	701	11	9	3	+14,3%	+246,9%
	CZ	1.730	999	502	3	1	1	+165,0%	+234,8%
	DE	11.577	15.279	10.510	3	4	3	-24,6%	+8,7%
	HR	1.380	1.095	588	9	8	4	+22,1%	+116,6%
	PL	2.939	3.781	1.742	4	5	2	-22,7%	+68,5%
	RO	9.076	6.439	5.627	18	13	11	+39,2%	+53,5%
	SK	1.807	1.646	720	7	7	3	+7,8%	+134,7%
NF R449	**INT**	**577**			**0**				
	BG	0			0				
	CZ	500			1				
	DE	77			0				
	HR	0			0				
	PL	0			0				
	RO	0			0				
	SK	0			0				
NF R744 (CO2)	**INT**	**32.436**	**13.924**	**13.512**	**5**	**2**	**2**	+131,2%	+134,9%
	BG	390	724	1.315	2	3	6	-46,5%	-71,7%
	CZ	1.356	0	90	3	0	0		+1363,6%
	DE	20.754	8.252	8.738	6	2	2	+150,1%	+134,3%
	HR	315	250	210	2	2	2	+22,0%	+38,4%
	PL	1.335	1.255	953	2	2	1	+5,7%	+40,0%
	RO	7.136	3.059	2.207	14	6	4	+130,3%	+207,9%
	SK	1.150	384	0	5	2	0	+194,1%	
NF R717	**INT**	**660**			**0**				
	BG	0			0				
	CZ	0			0				
	DE	660			0				
	HR	0			0				
	PL	0			0				
	RO	0			0				
	SK	0			0				

2.4 Transport

GHG Emissions Transport in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
∑ Transport	**INT**	**150.141**	**143.946**	**150.819**	**24,8**	**24,0**	**25,5**	+3,5%	-2,7%
	BG	9.409	8.471	8.118	40,0	36,3	36,1	+10,2%	+10,8%
	CZ	14.778	15.439	15.751	27,7	29,1	30,4	-4,9%	-8,9%
	DE	71.192	70.127	68.989	19,5	19,4	19,2	+1,0%	+1,8%
	HR	2.921	3.020	2.704	19,9	21,2	19,9	-6,3%	-0,3%
	PL	19.331	19.859	18.846	26,9	27,8	26,3	-3,2%	+2,4%
	RO	23.668	18.948	26.714	45,9	37,2	54,4	+23,3%	-15,7%
	SK	8.842	8.082	9.697	34,8	32,4	41,8	+7,4%	-16,7%

The emissions from transport are divided as follows in percentage terms: store logistics 82.5%, procurement logistics 15.1%, distribution customer newspaper 2%, OCI 0.4%

Specific GHG Emissions from Transport K INT: +3.5%

The rise in emissions was mainly cause by transport for procurement logistics (+37%).

2.4.1 Transport Store Logistics

GHG Emissions Store Logistics in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
Transport HGV (Branch Logistics)	**INT**	**123.884**	**121.814**	**129.554**	**20**	**20**	**22**	+0,9%	-6,4%
	BG	8.375	7.776	7.449	36	33	33	+6,9%	+7,4%
	CZ	12.041	13.273	13.844	23	25	27	-9,8%	-15,5%
	DE	54.847	55.598	54.283	15	15	15	-1,9%	-0,3%
	HR	2.545	2.716	2.523	17	19	19	-9,2%	-6,9%
	PL	17.422	18.145	17.330	24	25	24	-4,6%	+0,4%
	RO	20.867	17.138	25.229	40	34	51	+20,2%	-21,3%
	SK	7.787	7.168	8.896	31	29	37	+6,7%	-18,1%

Fuel Consumption Store Logistics

		Absolute Fuel Consumption			Specific Fuel Consumption			Deviation 2017 FY from	
		2017	2016	2015	2017	2016	2015	2016	2015
		Unit	Unit	Unit	Øunit/m² SAA	Øunit/m² SAA	Øunit/m² SAA	%	%
Transport HGV (Branch Logistics) (Unit in L)	**INT**	**45.582.926**	**44.821.482**	**47.668.915**	**8**	**7**	**8**	+0,9%	-6,4%
	BG	3.081.681	2.861.240	2.740.759	13	12	12	+6,9%	+7,4%
	CZ	4.430.555	4.883.795	5.094.012	8	9	10	-9,8%	-15,5%
	DE	20.180.893	20.457.290	19.973.203	6	6	6	-1,9%	-0,3%
	HR	936.326	999.498	928.172	6	7	7	-9,3%	-6,9%
	PL	6.410.444	6.676.470	6.376.633	9	9	9	-4,6%	+0,4%
	RO	7.677.846	6.305.886	9.282.834	15	12	19	+20,2%	-21,3%
	SK	2.865.181	2.637.303	3.273.301	11	11	14	+6,7%	-18,1%

Specific GHG Emissions from Transport for Store Logistics: +0.9%

Comments:

K RO (+20.2%): The rise results from the 20% increase in kilometres driven. (Expanding markets with long transport distances).

2.4.2 Transport Procurement Logistics

GHG Emissions Procurement Logistics in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
∑ Transport Procurement Logistics	**INT**	**22.721**	**16.425,0**	**15.092**	**3,8**	**2,7**	**2,6**	+37,3%	+47,3%
	BG	633	359,0	305	2,7	1,5	1,4	+75,0%	+98,3%
	CZ	1.955	1.153,0	977	3,7	2,2	1,9	+68,6%	+94,4%
	DE	15.715	12.016,0	11.726	4,3	3,3	3,3	+30,1%	+32,2%
	HR	376	304,0	181	2,6	2,1	1,3	+19,7%	+91,7%
	PL	1.304	950,0	769	1,8	1,3	1,1	+36,5%	+69,3%
	RO	1.989	1.051,0	663	3,9	2,1	1,3	+86,8%	+185,6%
	SK	749	592,0	471	2,9	2,4	2,0	+24,1%	+48,7%
Transport Sea Freight (SF[4]) (Procurement Logistics)	**INT**	**7.401**	**5.142**	**4.841**	**1,2**	**0,9**	**0,8**	+42,9%	+49,6%
	BG	309	234	242	1,3	1,0	1,1	+31,0%	+22,0%
	CZ	956	588	532	1,8	1,1	1,0	+61,6%	+74,6%
	DE	3.786	2.522	2.563	1,0	0,7	0,7	+49,3%	+45,7%
	HR	217	202	139	1,5	1,4	1,0	+4,1%	+44,1%
	PL	778	647	494	1,1	0,9	0,7	+19,5%	+57,3%
	RO	880	490	477	1,7	1,0	1,0	+77,3%	+75,6%
	SK	475	459	394	1,9	1,8	1,7	+1,6%	+12,7%
Transport SF – Rail[5] (Procurement Logistics)	**INT**	**314**	**242**	**214**	**0,1**	**0,0**	**0,0**	+28,8%	+43,6%
	BG	0	0	0	0,0	0,0	0,0		
	CZ	62	37	34	0,1	0,1	0,1	+66,6%	+77,1%
	DE	205	136	141	0,1	0,0	0,0	+49,9%	+43,4%
	HR	0	0	0	0,0	0,0	0,0		
	PL	0	24	0	0,0	0,0	0,0	-100,0%	
	RO	0	0	0	0,0	0,0	0,0		
	SK	47	45	39	0,2	0,2	0,2	+2,6%	+12,7%
Transport SF - Rail - HGV[6] (Procurement Logistics)	**INT**	**224**	**174**	**144**	**0,0**	**0,0**	**0,0**	+27,8%	+52,2%
	BG	0	0	0	0,0	0,0	0,0		
	CZ	110	66	60	0,2	0,1	0,1	+65,7%	+78,1%
	DE	77	51	53	0,0	0,0	0,0	+50,2%	+43,3%
	HR	0	0	0	0,0	0,0	0,0		
	PL	0	21	0	0,0	0,0	0,0	-100,0%	
	RO	0	0	0	0,0	0,0	0,0		
	SK	37	36	31	0,1	0,1	0,1	+0,9%	+11,6%
Transport SF - HGV[7] (Procurement Logistics)	**INT**	**631**	**338**	**385**	**0,1**	**0,1**	**0,1**	+85,3%	+60,4%
	BG	77	59	60	0,3	0,3	0,3	+29,5%	+22,6%
	CZ	0	0	0	0,0	0,0	0,0		
	DE	21	20	5	0,0	0,0	0,0	+4,4%	+314,3%
	HR	20	19	14	0,1	0,1	0,1	+2,0%	+31,8%
	PL	332	139	208	0,5	0,2	0,3	+137,4%	+59,4%
	RO	181	101	98	0,4	0,2	0,2	+76,9%	+75,8%
	SK	0	0	0	0,0	0,0	0,0		

[4] SF=Shipping indicates the CO2eq/shipping distance covered by sea freight (tkm)
[5] SF - Rail indicates the CO2eq/rail distance covered (after transport by ship) by sea freight (tkm)
[6] SF - Rail - HGV indicates the CO2eq/HGV distance covered (after transport by ship and rail) by sea freight (tkm)
[7] SF - HGV indicates the CO2eq/HGV distance covered (after transport by ship) by sea freight (tkm)

Fuel Consumption Procurement Logistics

		Absolute Fuel Consumption			Specific Fuel Consumption			Deviation 2017 FY from	
		2017	2016	2015	2017	2016	2015	2016	2015
		Unit	Unit	Unit	Øunit/m² SAA	Øunit/m² SAA	Øunit/m² SAA	%	%
Transport SF (Procurement Logistics) (Unit in thousand km)	**INT**	**1.156.532.640**	**803.353.445**	**756.317.879**	**191**	**134**	**128**	+42,9%	+49,7%
	BG	48.333.000	36.574.544	37.743.053	206	157	168	+31,1%	+22,4%
	CZ	149.407.074	91.803.457	83.195.583	280	173	161	+61,8%	+74,5%
	DE	591.513.779	394.138.291	400.477.031	162	109	111	+49,3%	+45,7%
	HR	33.885.573	31.559.023	21.660.748	231	222	160	+4,0%	+44,4%
	PL	121.583.688	101.034.237	77.234.499	169	142	108	+19,6%	+57,2%
	RO	137.545.693	76.492.794	74.472.945	267	150	152	+77,5%	+75,8%
	SK	74.263.833	71.751.099	61.534.022	292	288	259	+1,6%	+12,9%
Transport SF-Rail (Procurement Logistics) (Unit in thousand km)	**INT**	**25.933.836**	**20.048.834**	**17.671.649**	**4,3**	**3,3**	**3,0**	+28,4%	+43,6%
	BG	0	0	0	0,0	0,0	0,0		
	CZ	5.147.721	3.078.752	2.776.879	9,7	5,8	5,4	+66,2%	+80,1%
	DE	16.931.305	11.238.373	11.687.814	4,6	3,1	3,3	+49,8%	+42,9%
	HR	0	0	0	0,0	0,0	0,0		
	PL	0	2.006.572	0	0,0	2,8	0,0	-100,0%	
	RO	0	0	0	0,0	0,0	0,0		
	SK	3.854.810	3.725.137	3.206.956	15,2	14,9	13,5	+1,6%	+12,4%
Transport SF-Rail-HGV (Procurement Logistics) (Unit in thousand km)	**INT**	**3.555.904**	**2.748.957**	**2.274.548**	**0,6**	**0,5**	**0,4**	+28,4%	+53,0%
	BG	0	0	0	0,0	0,0	0,0		
	CZ	1.746.584	1.044.598	942.175	3,3	2,0	1,8	+66,2%	+80,1%
	DE	1.220.556	810.160	842.560	0,3	0,2	0,2	+49,8%	+42,9%
	HR	0	0	0	0,0	0,0	0,0		
	PL	0	325.241	0	0,0	0,5	0,0	-100,0%	
	RO	0	0	0	0,0	0,0	0,0		
	SK	588.764	568.958	489.814	2,3	2,3	2,1	+1,6%	+12,4%
Transport SF-HGV (Procurement Logistics) (Unit in thousand km)	**INT**	**9.976.323**	**5.360.599**	**6.100.073**	**1,7**	**0,9**	**1,0**	+84,7%	+60,1%
	BG	1.210.900	929.287	954.834	5,2	4,0	4,3	+29,3%	+21,2%
	CZ	0	4.058	0	0,0	0,0	0,0	-100,0%	
	DE	324.546	313.444	81.849	0,1	0,1	0,0	+3,0%	+291,1%
	HR	320.199	307.695	214.055	2,2	2,2	1,6	+0,8%	+38,0%
	PL	5.250.335	2.202.267	3.296.680	7,3	3,1	4,6	+137,0%	+59,0%
	RO	2.870.343	1.603.848	1.552.656	5,6	3,1	3,2	+76,7%	+76,0%
	SK	0	0	0	0,0	0,0	0,0		
Transport HGV (Procurement Logistics) (Unit in L)	**INT**	**5.206.327**	**3.873.843**	**3.498.826**	**0,9**	**0,6**	**0,6**	+33,4%	+45,6%
	BG	90.760	24.298	1.263	0,4	0,1	0,0	+270,6%	+6767,5%
	CZ	304.196	169.839	129.202	0,6	0,3	0,2	+78,0%	+128,7%
	DE	4.277.659	3.417.032	3.298.319	1,2	0,9	0,9	+24,5%	+27,9%
	HR	51.037	30.442	10.368	0,3	0,2	0,1	+62,4%	+354,3%
	PL	71.232	43.704	24.535	0,1	0,1	0,0	+62,0%	+189,9%
	RO	341.363	169.323	32.465	0,7	0,3	0,1	+99,0%	+901,0%
	SK	70.080	19.206	2.675	0,3	0,1	0,0	+258,3%	+2350,2%

Specific GHG Emissions from Transport for Procurement Logistics: +37.3%

Comments:
The rise in fuel consumption and GHG emissions is due to the increase in volume between 2016 and 2017. This applies both to sea freight transport and HGV transport in procurement logistics.

2.4.3 Transport Distribution Customer Newspaper

GHG Emissions Distribution Customer Newspaper in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
∑ Transport Distribution Customer Newspaper	**INT**	**2.906**	**5.707,0**	**6.173**	**0,5**	**1,0**	**1,0**	-49,5%	-53,9%
	BG	401	336,0	364	1,7	1,4	1,6	+18,4%	+5,3%
	CZ	782	1.013,0	930	1,5	1,9	1,8	-23,3%	-18,3%
	DE	0	2.513,0	2.980	0,0	0,7	0,8	-100,0%	-100,0%
	HR	0	0,0	0	0,0	0,0	0,0		
	PL	605	764,0	747	0,8	1,1	1,0	-21,3%	-19,1%
	RO	812	759,0	822	1,6	1,5	1,7	+5,6%	-6,0%
	SK	306	322,0	330	1,2	1,3	1,4	-6,7%	-13,3%
Distribution Customer Newspaper Transport	**INT**	**801**	**3.540**	**4.114**	**0,1**	**0,6**	**0,7**	-77,5%	-80,9%
	BG	218	185	203	0,9	0,8	0,9	+16,9%	+2,6%
	CZ	196	293	341	0,4	0,6	0,7	-33,5%	-44,2%
	DE	0	2.513	2.980	0,0	0,7	0,8	-100,0%	-100,0%
	HR	0	0	0	0,0	0,0	0,0		
	PL	136	246	225	0,2	0,3	0,3	-45,0%	-39,6%
	RO	210	241	275	0,4	0,5	0,6	-14,0%	-27,3%
	SK	41	62	90	0,2	0,2	0,4	-35,1%	-57,4%
Distribution Customer Newspaper Delivery	**INT**	**2.105**	**2.167**	**2.059**	**0,3**	**0,4**	**0,3**	-3,6%	+0,1%
	BG	183	151	161	0,8	0,6	0,7	+20,3%	+8,6%
	CZ	586	720	589	1,1	1,4	1,1	-19,1%	-3,4%
	DE	0	0	0	0,0	0,0	0,0		
	HR	0	0	0	0,0	0,0	0,0		
	PL	469	518	522	0,7	0,7	0,7	-10,0%	-10,3%
	RO	602	518	547	1,2	1,0	1,1	+14,7%	+4,8%
	SK	265	260	240	1,0	1,0	1,0	+0,1%	+3,3%

Fuel Consumption Distribution Customer Newspaper

		Absolute Fuel Consumption			Specific Fuel Consumption			Deviation 2017 FY from	
		2017	2016	2015	2017	2016	2015	2016	2015
		Unit	Unit	Unit	Øunit/m² SAA	Øunit/m² SAA	Øunit/m² SAA	%	%
Distribution Customer Newspaper Transport (Unit in L)	**INT**	**295.243**	**1.302.475**	**1.513.168**	**0,0**	**0,2**	**0,3**	-77,5%	-80,9%
	BG	80.371	68.243	74.534	0,3	0,3	0,3	+16,9%	+3,0%
	CZ	72.134	107.761	125.344	0,1	0,2	0,2	-33,5%	-44,1%
	DE	0	924.531	1.096.346	0,0	0,3	0,3	-100,0%	-100,0%
	HR	0	0	0	0,0	0,0	0,0		
	PL	50.202	90.476	82.795	0,1	0,1	0,1	-44,8%	-39,5%
	RO	77.447	88.722	101.153	0,2	0,2	0,2	-13,8%	-27,1%
	SK	15.089	22.742	32.995	0,1	0,1	0,1	-34,9%	-57,2%
Distribution Customer Newspaper Delivery (Unit in L)	**INT**	**774.841**	**797.148**	**757.529**	**0,1**	**0,1**	**0,1**	-3,5%	+0,1%
	BG	67.351	55.379	59.157	0,3	0,2	0,3	+20,7%	+8,8%
	CZ	215.752	265.014	216.832	0,4	0,5	0,4	-19,1%	-3,3%
	DE	0	0	0	0,0	0,0	0,0		
	HR	0	0	0	0,0	0,0	0,0		
	PL	172.495	190.577	191.952	0,2	0,3	0,3	-10,0%	-10,3%
	RO	221.599	190.605	201.407	0,4	0,4	0,4	+14,8%	+4,7%
	SK	97.644	95.573	88.181	0,4	0,4	0,4	+0,3%	+3,5%

Specific GHG Emissions from Distribution Customer Newspaper K INT: -49.5%

Comments:

K DE (-100%): No more transport of customer newspaper because this is arranged by the printer.

2.4.4 Transport OCI

GHG Emissions OCI in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
Transport Own Vehicle Fleet (OCI)	**INT**	**607**			**0,1**				
	BG	0			0,0				
	CZ	0			0,0				
	DE	607			0,2				
	HR	0			0,0				
	PL	0			0,0				
	RO	0			0,0				
	SK	0			0,0				
Transport Third Party Vehicle Fleet (OCI)	**INT**	**23**			**0,0**				
	BG	0			0,0				
	CZ	0			0,0				
	DE	23			0,0				
	HR	0			0,0				
	PL	0			0,0				
	RO	0			0,0				
	SK	0			0,0				

Fuel Consumption OCI

		Absolute Fuel Consumption			Specific Fuel Consumption			Deviation 2017 FY from	
		2017	2016	2015	2017	2016	2015	2016	2015
		Unit	Unit	Unit	Øunit/m² SAA	Øunit/m² SAA	Øunit/m² SAA	%	%
Transport Own Vehicle Fleet (OCI) (Unit in L)	**INT**	**223.174**			**36,9**				
	BG	0			0,0				
	CZ	0			0,0				
	DE	223.174			61,3				
	HR	0			0,0				
	PL	0			0,0				
	RO	0			0,0				
	SK	0			0,0				
Transport Third Party Vehicle Fleet (OCI) (Unit in L)	**INT**	**8.388**			**1,4**				
	BG	0			0,0				
	CZ	0			0,0				
	DE	8.388			2,3				
	HR	0			0,0				
	PL	0			0,0				
	RO	0			0,0				
	SK	0			0,0				

Comments:
For the 2017 FY online business (OCI) brought about fuel savings. The online business ended as of 31 December 2017. This was 1% of the GHG emissions of the entire K DE transport business.

2.5 Paper

GHG Emissions Paper in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
Paper	**INT**	**188.755**	**189.374**	**179.451**	**31,2**	**31,6**	**30,3**	-1,1%	+2,9%
	BG	7.574	9.229	9.829	32,2	39,6	43,8	-18,6%	-26,4%
	CZ	15.118	13.894	14.429	28,4	26,2	27,9	+8,2%	+1,8%
	DE	113.304	107.433	98.759	31,1	29,7	27,5	+4,9%	+13,2%
	HR	3.736	2.953	4.353	25,4	20,7	32,1	+22,5%	-20,8%
	PL	15.491	22.093	19.938	21,6	31,0	27,8	-30,3%	-22,4%
	RO	26.260	25.987	24.475	50,9	51,0	49,8	-0,2%	+2,1%
	SK	7.272	7.785	7.668	28,6	31,2	32,3	-8,3%	-11,3%

The emissions from paper consumption are divided as follows in percentage terms: customer newspaper 99%, office paper 1%.

Specific GHG Emissions from Paper Consumption K INT: -1.1%

2.5.1 Paper Customer Newspaper

GHG Emissions Paper Customer Newspaper in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
Customer Newspaper	**INT**	**187.693**	**188.138**	**178.066**	**31,0**	**31,4**	**30,1**	-1,0%	+3,2%
	BG	7.504	9.144	9.725	31,9	39,2	43,3	-18,6%	-26,3%
	CZ	14.985	13.748	14.242	28,1	25,9	27,5	+8,3%	+2,2%
	DE	112.843	106.961	98.177	31,0	29,5	27,3	+4,9%	+13,4%
	HR	3.698	2.901	4.291	25,2	20,4	31,6	+23,5%	-20,5%
	PL	15.344	21.875	19.741	21,4	30,7	27,5	-30,3%	-22,4%
	RO	26.110	25.815	24.304	50,6	50,7	49,5	-0,1%	+2,3%
	SK	7.209	7.694	7.586	28,4	30,9	31,9	-8,0%	-11,1%
Customer Newspaper fresh fibre	**INT**	**40.218**	**7.660**	**6.275**	**6,7**	**1,1**	**1,0**	+527,3%	+565,3%
	BG	4.032	119	200	17,2	0,9	0,8	+1826,4%	+2044,7%
	CZ	0	127	481	0,0	0,9	0,8	-100,0%	-100,0%
	DE	0	4.399	4.042	0,0	1,1	1,0	-100,0%	-100,0%
	HR	3.698	73	173	25,2	1,3	1,2	+1872,6%	+1996,4%
	PL	14.340	1.934	528	20,0	0,7	0,7	+2612,1%	+2753,2%
	RO	18.148	922	610	35,2	1,2	1,1	+2732,2%	+3097,3%
	SK	0	86	241	0,0	1,0	0,9	-100,0%	-100,0%
Customer Newspaper recycling	**INT**	**147.475**	**180.478**	**171.791**	**24,4**	**29,0**	**17,8**	-16,0%	+37,1%
	BG	3.472	9.025	9.525	14,8	42,4	26,0	-65,2%	-43,2%
	CZ	14.985	13.621	13.761	28,1	26,6	16,3	+5,8%	+72,5%
	DE	112.843	102.562	94.135	31,0	26,2	16,1	+18,2%	+92,4%
	HR	0	2.828	4.118	0,0	30,4	18,6	-100,0%	-100,0%
	PL	1.004	19.941	19.213	1,4	26,8	16,4	-94,8%	-91,5%
	RO	7.962	24.893	23.694	15,4	48,2	29,6	-68,0%	-47,9%
	SK	7.209	7.608	7.345	28,4	30,9	19,0	-8,2%	+49,4%

Paper Consumption Customer Newspaper

		Absolute Paper Consumption			Specific Paper Consumption			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t	t	t	Ø g/m² SAA	Ø g/m² SAA	Ø g/m² SAA	%	%
Customer Newspaper	**INT**	**160.687**	**164.281**	**155.580**	**26.582**	**27.380**	**26.297**	-2,9%	+1,1%
	BG	6.186	8.010	8.510	26.323	34.351	37.898	-23,4%	-30,5%
	CZ	13.145	12.047	12.446	24.662	22.739	24.037	+8,5%	+2,6%
	DE	98.985	93.393	85.723	27.179	25.783	23.861	+5,4%	+13,9%
	HR	2.880	2.538	3.747	19.592	17.824	27.618	+9,9%	-29,1%
	PL	12.049	18.998	17.264	16.781	26.620	24.079	-37,0%	-30,3%
	RO	21.118	22.554	21.259	40.926	44.270	43.279	-7,6%	-5,4%
	SK	6.324	6.741	6.631	24.898	27.029	27.916	-7,9%	-10,8%
Customer Newspaper fresh fibre	**INT**	**31.322**	**5.966**	**4.888**	**5.181**	**994**	**826**	+421,1%	+527,2%
	BG	3.140	93	156	13.362	399	693	+3250,2%	+1828,8%
	CZ	0	99	375	0	187	724	-100,0%	-100,0%
	DE	0	3.426	3.148	0	946	876	-100,0%	-100,0%
	HR	2.880	57	135	19.592	400	993	+4794,2%	+1873,7%
	PL	11.168	1.506	411	15.554	2.110	574	+637,1%	+2611,9%
	RO	14.134	718	475	27.391	1.409	968	+1843,6%	+2730,3%
	SK	0	67	188	0	269	790	-100,0%	-100,0%
Customer Newspaper recycling	**INT**	**129.365**	**158.315**	**150.692**	**21.400**	**26.385**	**25.470**	-18,9%	-16,0%
	BG	3.046	7.917	8.355	12.962	33.952	37.206	-61,8%	-65,2%
	CZ	13.145	11.948	12.071	24.662	22.552	23.313	+9,4%	+5,8%
	DE	98.985	89.967	82.575	27.179	24.838	22.984	+9,4%	+18,2%
	HR	0	2.481	3.612	0	17.424	26.625	-100,0%	-100,0%
	PL	881	17.492	16.853	1.227	24.510	23.506	-95,0%	-94,8%
	RO	6.984	21.836	20.784	13.535	42.861	42.311	-68,4%	-68,0%
	SK	6.324	6.674	6.443	24.898	26.760	27.126	-7,0%	-8,2%

Specific GHG Emissions from Paper Consumption Customer Newspaper K INT: -1%

Comments:

K BG (-18.6%): Switch in customer newspaper format from A3 to A4, but move to more FF paper.

K HR (+23.5%): 100% switch to FF

2.5.2 Office Paper

GHG Emissions Office Paper in CO_2-eq

		Absolute Greenhouse Gas Emissions			Specific Greenhouse Gas Emissions			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t CO_2eq	t CO_2eq	t CO_2eq	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	Økg CO_2eq/m² SAA	%	%
Office Paper	**INT**	**1.062**	**1.236**	**1.385**	**0,2**	**0,2**	**0,2**	-14,7%	-25,0%
	BG	70	85	104	0,3	0,4	0,5	-18,3%	-35,7%
	CZ	133	146	187	0,2	0,3	0,4	-9,5%	-30,9%
	DE	461	472	582	0,1	0,1	0,2	-2,9%	-21,9%
	HR	38	52	62	0,3	0,4	0,5	-29,2%	-43,4%
	PL	147	218	197	0,2	0,3	0,3	-33,0%	-25,5%
	RO	150	172	171	0,3	0,3	0,3	-13,9%	-16,5%
	SK	63	91	82	0,2	0,4	0,3	-32,0%	-28,2%
Office Paper fresh fibre	**INT**	**58**	**51**	**63**	**0,0**	**0,0**	**0,0**	+12,9%	-9,9%
	BG	11	16	23	0,0	0,1	0,1	-31,8%	-54,3%
	CZ	23	19	12	0,0	0,0	0,0	+20,3%	+86,2%
	DE	5	1	2	0,0	0,0	0,0	+397,3%	+146,6%
	HR	15	1	20	0,1	0,0	0,1	+1353,0%	-30,8%
	PL	1	14	2	0,0	0,0	0,0	-92,9%	-50,1%
	RO	0	0	0	0,0	0,0	0,0		
	SK	3	0	4	0,0	0,0	0,0		-29,9%
Office Paper recycling	**INT**	**1.004**	**1.185**	**1.322**	**0,2**	**0,2**	**0,2**	-15,9%	-25,7%
	BG	59	69	81	0,3	0,3	0,4	-15,2%	-30,4%
	CZ	110	127	175	0,2	0,2	0,3	-13,9%	-38,9%
	DE	456	471	580	0,1	0,1	0,2	-3,7%	-22,4%
	HR	23	51	42	0,2	0,4	0,3	-56,3%	-49,5%
	PL	146	204	195	0,2	0,3	0,3	-28,9%	-25,2%
	RO	150	172	171	0,3	0,3	0,3	-13,9%	-16,5%
	SK	60	91	78	0,2	0,4	0,3	-35,3%	-28,1%

Office Paper Consumption

		Absolute Paper Consumption			Specific Paper Consumption			Deviation 2017 FY from	
		2017 FY	2016 FY	2015 FY	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
		t	t	t	Ø g/m² SAA	Ø g/m² SAA	Ø g/m² SAA	%	%
Office Paper	**INT**	**1.147**	**1.336**	**1.494**	**190**	**223**	**253**	-14,8%	-24,9%
	BG	74	89	109	315	382	486	-17,5%	-35,2%
	CZ	142	157	201	266	296	388	-10,1%	-31,3%
	DE	501	513	633	138	142	176	-2,9%	-21,9%
	HR	39	56	63	265	393	463	-32,5%	-42,7%
	PL	160	234	215	223	328	300	-32,0%	-25,7%
	RO	163	187	185	316	367	376	-13,9%	-15,9%
	SK	68	100	89	268	401	374	-33,2%	-28,5%
Office Paper fresh fibre	**INT**	**55**	**48**	**59**	**9**	**8**	**10**	+13,7%	-8,9%
	BG	10	15	22	43	64	96	-33,8%	-55,8%
	CZ	22	18	11	41	34	22	+21,5%	+89,7%
	DE	5	1	2	1	0	0	+1711,1%	+192,9%
	HR	14	1	18	95	7	134	+1256,1%	-28,9%
	PL	1	13	2	1	18	3	-92,4%	-58,7%
	RO	0	0	0	0	0	0		-100,0%
	SK	3	0	4	12	0	17		-28,8%
Office Paper recycling	**INT**	**1.092**	**1.288**	**1.435**	**181**	**215**	**243**	-15,8%	-25,5%
	BG	64	74	87	272	317	390	-14,2%	-30,1%
	CZ	120	139	190	225	262	366	-14,2%	-38,5%
	DE	496	512	631	136	141	176	-3,7%	-22,5%
	HR	25	55	45	170	386	329	-56,0%	-48,4%
	PL	159	221	213	221	310	297	-28,5%	-25,3%
	RO	163	187	184	316	367	376	-13,9%	-15,9%
	SK	65	100	85	256	401	358	-36,2%	-28,5%

Specific GHG Emissions from Paper Consumption Customer Newspaper K INT: -14.7%

3. Reference Values

	Sales Area + NF			Deviation 2017 FY from	
	2017 FY	2016 FY	2015 FY	2016 FY	2015 FY
	Thousand m²	Thousand m²	Thousand m²	%	%
INT	**6.045**	**6.000**	**5.916**	**0,7%**	**2,2%**
BG	235	233	225	0,8%	4,6%
CZ	533	530	518	0,6%	2,9%
DE	3.642	3.622	3.593	0,5%	1,4%
HR	147	142	136	3,2%	8,4%
PL	718	714	717	0,6%	0,1%
RO	516	509	491	1,3%	5,0%
SK	254	249	238	1,8%	6,9%

4. Emission Factors

Name		Unit	2017 FY		2016 FY		2015 FY	
			Emission Factor	Data Source	Emission Factor	Data Source	Emission Factor	Data Source
Energy								
K INT	Natural gas	kg CO2/kWh	0,182	IPCC 2006/ -10% (upper calorific value)	0,182	IPCC 2006/ -10% (upper calorific value)	0,182	IPCC 2006/ -10% (upper calorific value)
K INT	Heating oil	kg CO2/l	2,659	IPCC 2006/characterisation factors from IPCC 2013	2,659	IPCC 2006/characterisation factors from IPCC 2013	2,659	DEHSt
K INT	District heating	kg CO2/kWh	0,246	IFEU	0,246	IFEU	0,246	IFEU
K INT	Electricity	kg CO2/kWh	0,358	Weighted value/electricity mix supplier	0,382	Weighted value/electricity mix supplier	0,421	Weighted value/electricity mix supplier
K DE	Electricity	kg CO2/kWh	0,328	Weighted value/electricity mix supplier	0,327	Weighted value/electricity mix supplier	0,393	Weighted value/electricity mix supplier
K RO	Electricity	kg CO2/kWh	0,002	Weighted value/electricity mix supplier	0,365	Weighted value/electricity mix supplier	0,169	Weighted value/electricity mix supplier
K BG	Electricity	kg CO2/kWh	0,515	Weighted value/electricity mix supplier	0,505	Weighted value/electricity mix supplier	0,587	Weighted value/electricity mix supplier
K CZ	Electricity	kg CO2/kWh	0,448	Weighted value/electricity mix supplier	0,504	Weighted value/electricity mix supplier	0,562	Weighted value/electricity mix supplier
K HR	Electricity	kg CO2/kWh	0,199	Weighted value/electricity mix supplier	0,223	Weighted value/electricity mix supplier	0,261	Weighted value/electricity mix supplier
K SK	Electricity	kg CO2/kWh	0,224	Weighted value/electricity mix supplier	0,193	Weighted value/electricity mix supplier	0,204	Weighted value/electricity mix supplier
K PL	Electricity	kg CO2/kWh	0,775	Weighted value/electricity mix supplier	0,668	Weighted value/electricity mix supplier	0,695	Weighted value/electricity mix supplier
Refrigerants								
K INT	R 507	kg CO2/kg	3985	IPCC 2013	3985	GHG	3985	GHG
K INT	R 404A	kg CO2/kg	3943	IPCC 2013	3943	GHG	3943	GHG
K INT	R 422D	kg CO2/kg	2473	IPCC 2013	2473	GHG	2473	GHG
K INT	R 410A	kg CO2/kg	1924	IPCC 2013	1924	GHG	1924	GHG
K INT	R 402A	kg CO2/kg	1902	IPCC 2013	1902	GHG		
K INT	R 407 F	kg CO2/kg	1674	IPCC 2013	1674	GHG	1674	GHG
K INT	R 22	kg CO2/kg	1760	IPCC 2013	1760	GHG	1760	GHG
K INT	R 407C	kg CO2/kg	1624	IPCC 2013	1624	GHG	1624	GHG
K INT	R 134a	kg CO2/kg	1300	IPCC 2013	1300	GHG	1300	GHG
K INT	R 744	kg CO2/kg	1	IPCC 2013	1	GHG	1	GHG
K INT	R 717	kg CO2/kg	0	IPCC 2013				
Transport								
K INT	HGV Diesel	kg CO2/l	2,718	IPCC	2,718	IPCC	2,718	IPCC
K INT	Shipping	kg CO2/thousa	0,006	Calculation IFEU 2016	0,006	ECO TransIT World	0,006	ECO TransIT World
K INT	Rail	kg CO2/thousa	0,012	Calculation IFEU 2016	0,012	ECO TransIT World/IEA2015/UIC2015	0,012	ECO TransIT World/IEA2015/UIC2015
K INT	HGV	kg CO2/thousa	0,063	Calculation IFEU 2016	0,063	HBEFA/IPCC/IFEU	0,063	HBEFA/IPCC/IFEU
Paper								
K INT	Advertising Material fresh fibre	kg CO2/t	1.284	UBA 2008	1.284	UBA 2008	1.284	UBA 2008
K INT	Advertising Material recycling	kg CO2/t	1,140	UBA 2008	1,140	UBA 2008	1,140	UBA 2008
K INT	Office Paper fresh fibre	kg CO2/t	1.284	UBA 2008	1.284	UBA 2008	1.284	UBA 2008
K INT	Office Paper fresh fibre	kg CO2/t	1,140	UBA 2008	1,140	UBA 2008	1,140	UBA 2008

5. Recalculations

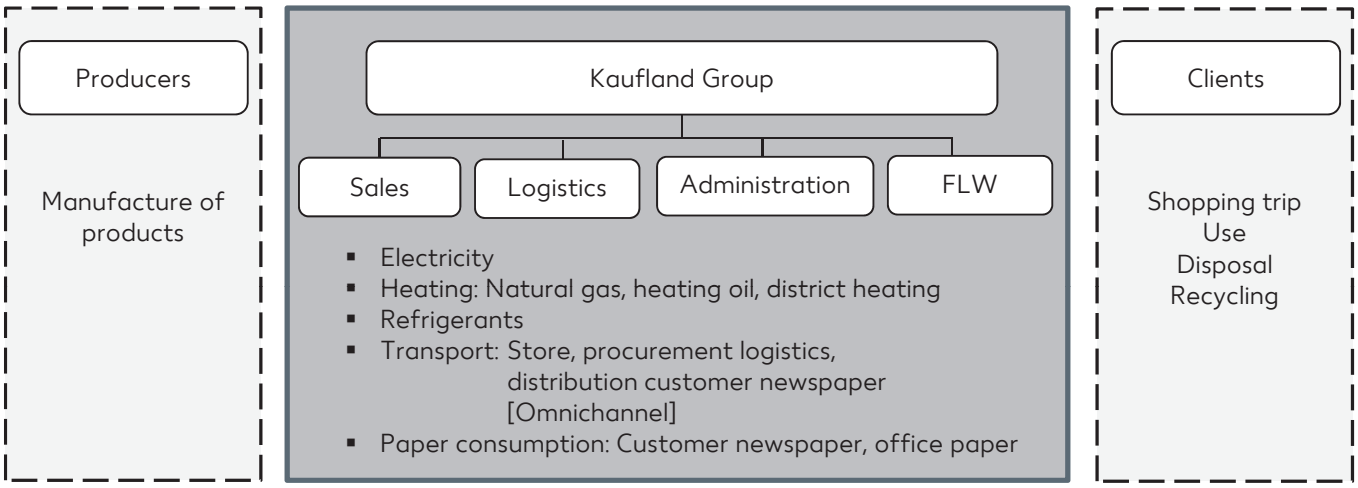
ID	FY	Balance sheet	Country	Description	Date of amendment
3	2015	Paper	INT	Amendment EF: New source since 2016	06.09.2018
4	2015	Natural gas	INT	Amendment EF: Adaptation of the EF to the upper calorific value, reduction of the EF by -10%	06.09.2018
1	2016	Natural gas	RO	Correction of consumption data: the consumption was wrongly stated for 14 months, January 2016 to February 2017 -> correction to FY	
2	2016	Refrigerants	CZ	Correction of consumption data: no transfer of refrigerant leakages	
4	2016	Natural gas	INT	Amendment EF: Adaptation of the EF to the upper calorific value, reduction of the EF by -10%	07.09.2018
4	2017	Natural gas	INT	Amendment EF: Adaptation of the EF to the upper calorific value, reduction of the EF by -10%	08.09.2018

6. Scopes and Limits of the Carbon footprint Report

Scopes of the Carbon footprint Report

- Direct emissions (Scope 1):
  Burning of fossil fuels and using refrigerants in the company
- Indirect emissions (Scope 2):
  Bought-in quantities of electricity and district heating
- Other indirect emissions (Scope 3):
  Commissioned logistics (transport for store logistics, transport for procurement logistics, distribution customer newspaper , OCI) and paper consumption (customer newspaper, office paper)

Limits of the Carbon footprint Report:



An exact allocation of the emissions/consumption to the relevant divisions (administration, sales, logistics and FLW) in individual countries is not possible for some items due to combinations of locations (store/administration location, FLW/logistics). In these cases, the emissions/consumption was/were allocated on a percentage basis where possible.

Publication Details

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