

ViaCon Emissions Data Report

Emissions data report for ViaCon 2022 – Market-based & Location-based

2023-03-28



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1. Sources & Methodology

The Greenhouse Gas Protocol Initiative (GHG Protocol) was developed by the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). This analysis is done according to *A Corporate Accounting and Reporting Standard Revised edition*, currently one of four GHG Protocol accounting standards for calculating and reporting GHG emissions. The reporting considers the following greenhouse gases converted into CO₂-equivalents: CO₂, CH₄ (methane), N₂O (laughing gas), SF₆, HFCs, PFCs, and NF₃.

For corporate reporting, two distinct approaches can be used to consolidate GHG emissions: the equity share approach and the control approach. The most common consolidation approach is the control approach, which can be defined in either financial or operational terms.

The carbon inventory is divided into three main scopes of direct and indirect emissions.

Scope 1 includes all direct emission sources. This includes all use of fossil fuels for stationary combustion or transportation, in owned and, depending on the consolidation approach selected, leased, or rented assets. It also includes any process emissions, from e.g., chemical processes, industrial gases, direct methane emissions etc.

Scope 2 includes indirect emissions related to purchased energy; electricity and heating/cooling where the organization has operational control. The electricity emission factors used in Cemasis are based on national gross electricity production mixes from the International Energy Agency’s statistics (IEA Stat). Emission factors per fuel type are based on assumptions in the IEA methodological framework. Factors for district heating/cooling are either based on actual (local) production mixes, or average IEA statistics.

Organization	Author	Classification	Revision date	Issue
ESG	Craig Lee	External	28 th March 2023	1 /pc

In January 2015, the GHG Protocol published new guidelines for calculating emissions from electricity consumption. Primarily two methods are used to “allocate” the GHG emissions created by electricity generation to the end consumers of a given grid. These are the location-based and the market-based methods. The location-based method reflects the average emission intensity of the grids on which energy consumption occurs, while the market-based method reflects emissions from electricity that companies have purposefully chosen (or not chosen).

Organizations who report on their GHG emissions will now have to disclose both the location-based emissions from the production of electricity, and the market-based emissions related to the potential purchase of Guarantees of Origin (GoOs) and Renewable Energy Certificates (RECs).

The purpose of this amendment in the reporting methodology is on the one hand to show the impact of energy efficiency measures, and on the other hand to display how the acquisition of GoOs or RECs affect the GHG emissions. Using both methods in the emission reporting highlights the effect of all measures regarding electricity consumption.

The location-based method: The location-based method is based on statistical emissions information and electricity output aggregated and averaged within a defined geographic boundary and during a defined period. Within this boundary, the different energy producers utilize a mix of energy resources, where the use of fossil fuels (coal, oil, and gas) result in direct GHG-emissions. These emissions are reflected in the location-based emission factor.

The market-based method: The choice of emission factors when using this method is determined by whether the business acquires GoOs/RECs or not. When selling GoOs or RECs, the supplier certifies that the electricity is produced exclusively by renewable sources, which has an emission factor of 0 grams CO₂e per kWh. However, for electricity without the GoO or REC, the emission factor is based on the remaining electricity production after all GoOs and RECs for renewable energy are sold. This is called a residual mix, which is normally substantially higher than the location-based factor. As an example, the market-based Norwegian residual mix factor is approximately 7 times higher than the location-based Nordic mix factor. The reason for this high factor is due to Norway’s large export of GoOs/RECs to foreign consumers. In a market perspective, this implies that Norwegian hydropower is substituted with an electricity mix including fossil fuels.

Scope 3 includes indirect emissions resulting from value chain activities. The scope 3 emissions are a result of the company’s upstream and downstream activities, which are not controlled by the company, i.e., they are indirect. Examples are business travel, goods transportation, waste handling, consumption of products etc.

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In general, the carbon accounting should include information that users, both internal and external to the company, need for their decision making. An important aspect of relevance is the selection of an appropriate inventory boundary which reflects the substance and economic reality of the company's business relationships.

2. Market Based Data 2022

Category	Unit	Austria	Belarus	Bulgaria	Czech Rep.	Denmark	Estonia	Finland	France	Germany	Hungary	Latvia	Lithuania	Norway	Poland	Romania	Sweden	Turkey	United Kingdom	Total		
Scope 1																						
Transportation																						
Diesel (NO)	tCO2e			-	-	-	-	-	-	-	-	-	-	-	12.2	-	-	-	-	-	12.2	
Diesel (SE)	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	95.2	-	-	95.2	
Petrol (SE)	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.9	-	-	11.9	
Diesel	tCO2e			-	1.2	16.3	20.7	18.9	17	37.1	88.8	95.8	44.7	166.3	231.9	-	277	120.3	-	139.3	31.8	1307.1
Petrol	tCO2e			-	6.8	2.2	2.1	-	3.6	9.8	-	10.6	29.6	29.3	35.8	-	173.9	17.4	-	11.3	4.9	337.3
Transportation Total	tCO2e			-	8.1	18.5	22.7	18.9	20.6	46.9	88.8	106.5	74.4	195.5	267.6	12.2	450.9	137.7	107.1	150.6	36.7	1763.7
Stationary combustion																						
LPG	tCO2e			-	-	7.3	-	-	-	11.2	-	-	-	2.9	3.5	-	10.6	1.3	-	-	-	36.8
Stationary combustion Total	tCO2e			-	-	7.3	-	-	-	11.2	-	-	-	2.9	3.5	-	10.6	1.3	-	-	-	36.8
Scope 1 Total	tCO2e			-	8.1	25.9	22.7	18.9	20.6	58.2	88.8	106.5	74.4	198.4	271.1	12.2	461.5	138.9	107.1	150.6	36.7	1800.5
Scope 2																						
Electricity market-based																						
Electricity Nordic mix	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Electricity Sweden	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	-	-	29
Electricity Turkey	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155.3	-	-	155.3
Electricity Romania	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	193.8	-	193.8
Electricity Poland	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	1620.1	-	-	-	-	-	1620.1
Electricity Lithuania	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

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Electricity Hungary	tCO2e	-	-	-	-	-	-	-	-	-	16.3	-	-	-	-	-	-	-	16.3	
Electricity France	tCO2e	-	-	-	-	-	-	30.9	-	-	-	-	-	-	-	-	-	-	30.9	
Electricity Finland	tCO2e	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-	-	-	-	2.8	
Electricity Czech Rep.	tCO2e	-	-	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	
Electricity Bulgaria	tCO2e	-	-	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	
Electricity Belarus	tCO2e	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	
Electricity Denmark 125	tCO2e	-	-	-	-	65.8	-	-	-	-	-	-	-	-	-	-	-	-	65.8	
Electricity Germany	tCO2e	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	-	65	
Electricity UK	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38.3	
Electricity market-based Total	tCO2e	-	2.8	3.9	1.6	65.8	-	2.8	30.9	65	16.3	-	-	-	1620	193.8	29	155.3	38.3	2225.5
Scope 2 Total	tCO2e	-	2.8	3.9	1.6	65.8	-	2.8	30.9	65	16.3	-	-	-	1620	193.8	29	155.3	38.3	2225.5
Scope 3																				
Downstream transportation and distribution																				
Transportation diesel	tCO2e	-	-	198.2	23.6	-	16.6	339.5	535.9	-	8.8	-	570.5	492.2	654.4	-	507.2	23.6	190.8	3561.2
Diesel (WTT)	tCO2e	-	-	48.4	5.7	-	4.4	82.8	130.7	-	2.1	-	139.2	120.1	159.6	-	123.7	5.7	46.5	868.7
SCOPE3_DOWNSTREAM_TRANSPORTATION_AND_DISTRIBUTION Total	tCO2e	-	-	246.6	29.3	-	20.6	422.4	666.7	-	10.9	-	709.6	612.3	814	-	631	29.3	237.3	4430
Upstream transportation and distribution																				
Transportation diesel	tCO2e	-	-	6.6	-	-	89.6	354.1	13.4	-	47.1	-	253.8	227.8	7.1	-	324.4	20.9	-	1344.9
Transportation petrol	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Diesel (WTT)	tCO2e	-	-	1.6	-	-	21.9	86.4	3.3	-	11.5	-	61.9	55.6	1.7	-	79.1	5.1	-	328.1

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SCOPE3_UPSTREAM_TRANSPORTATION_AND_DISTRIBUTION Total		tCO2e	-	-	8.2	-	-	111.5	440.5	16.7	-	58.5	-	315.7	283.4	8.8	-	403.6	26	-	1673
Fuel-and-energy-related activities																					
Diesel (WTT)	tCO2e	-	0.3	3.8	4.8	4.4	4	8.6	20.7	22.3	10.4	38.7	54	3.7	64.5	28	10.3	32.4	7.4	318.5	
Petrol (WTT)	tCO2e	-	1.8	0.6	0.5	-	0.9	2.5	-	2.7	7.6	7.5	9.2	-	44.8	4.5	0.6	2.9	1.3	87.4	
LPG (WTT)	tCO2e	-	-	0.9	-	-	-	1.3	-	-	-	0.3	0.4	-	1.3	0.2	-	-	-	4.3	
Electricity Norway (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.2	
Diesel (SE) (WTT)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.8	-	-	16.8	
Electricity Middle East (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	
Electricity France (upstream)	tCO2e	-	-	-	-	-	-	-	10.2	-	-	-	-	-	-	-	-	-	-	10.2	
Electricity Denmark (upstream)	tCO2e	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
Electricity Czech Rep. (upstream)	tCO2e	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	
Petrol (SE) (WTT)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	-	2.6	
Electricity Turkey (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52.9	52.9	
Electricity Lithuania (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	117.1	-	-	-	-	-	-	117.1	
Electricity Hungary (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	3.9	-	-	-	-	-	-	-	-	3.9	
Electricity Bulgaria	tCO2e	-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	
Electricity Belarus	tCO2e	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	
Electricity Germany (upstream)	tCO2e	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	13	

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Electricity UK (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.5	11.5
Electricity Sweden (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	-	1.2
Electricity Romania (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	65
Electricity Poland (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	486.5	-	-	-	-	-	-	486.5
Electricity Finland (upstream)	tCO2e	-	-	-	-	-	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9
SCOPE3_FUELS_AND_ENERGY Total	tCO2e	-	4.9	8.9	5.7	8.4	4.9	17.4	30.9	38	22	46.6	180.7	3.9	597.1	97.7	31.5	88.4	20.2	1207.1	
Employee commuting																					
Mileage all. avg. car	tCO2e	-	-	7.4	2	1.8	6.7	15.6	23.7	28.8	12.9	15.6	50.9	21.5	142	36.5	22.5	42.9	11.7	442.5	
Mileage all. avg. car (WTW)	tCO2e	-	-	9.3	2.6	2.2	8.5	19.7	30	36.5	16.4	19.8	64.3	27.1	179.6	46.2	28.5	54.2	14.8	559.4	
Mileage all. motorcycle	tCO2e	-	-	0.1	-	-	0.1	0.2	0.3	0.3	0.2	0.2	0.6	0.2	1.7	0.4	0.3	0.5	0.1	5.1	
SCOPE3_EMPLOYEE_COMMUTING Total	tCO2e	-	-	16.8	4.6	4	15.3	35.4	54	65.6	29.4	35.6	115.7	48.8	323.3	83.1	51.3	97.6	26.6	1007.1	
Business travel																					
Air travel, continental	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Air transportation	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	450.1	-	-	-	-	-	450.1	
Hotel accommodation	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	131.5	-	-	-	-	-	131.5	
SCOPE3_BUSINESS_TRAVEL Total	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	581.6	-	-	-	-	-	581.6	
Waste																					
Metal waste, recycled	tCO2e	-	-	-	-	-	1.9	1.2	3.5	0.5	-	1.6	-	8.3	0.8	0.5	4	1.7	24		
Metal waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Residual waste, incinerated	tCO2e	-	-	-	-	-	0.7	12.4	-	-	-	-	-	-	1.8	2	0.9	-	17.8		

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Commercial waste, landfill	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	43.2	8	-	-	-	58.4
Concrete waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1
Mixed waste, recycled	tCO2e	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	0.2	0.1	0.1	-	0.5	1.4
Residual waste, landfill	tCO2e	-	-	-	-	-	-	33.3	-	3.9	-	-	-	-	-	-	-	-	-	2.9	40.1
Hazardous waste, incinerated	tCO2e	-	-	-	-	-	1.1	2.9	-	-	-	-	2.4	-	9.7	0.4	2.4	2.4	2.4	2.4	23.7
Industrial waste, recycled	tCO2e	-	-	-	-	-	-	0.1	-	-	-	-	0.2	-	-	0.1	-	-	-	0.1	0.5
Industrial inert waste, landfill	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Hazardous waste, landfill	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
SCOPE3_WASTE_GENERATED_IN_OPERATION Total	tCO2e	-	-	-	-	-	4.1	50	3.5	4.4	-	11.4	-	61.3	11.1	5	7.3	-	7.7	166	
End-of-life treatment of sold products																					
Metal waste, recycled	tCO2e	-	-	-	-	-	23	80.7	10.1	8.1	-	29.1	-	242.4	21.6	21	69.6	-	42.2	547.9	
Plastic waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	95.7	-	50.3	24.8	-	-	-	-	-	170.9
Concrete waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-	2.3
SCOPE3_END_OF_LIFE_TREATMENT_OF_SOLD_PRODUCTS Total	tCO2e	-	-	-	-	-	23	80.7	10.1	8.1	-	124.9	-	295.1	46.4	21	69.6	-	42.2	721.1	
Purchased goods and services																					
Plastic (HDPE)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Plastic (HDPE)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Plastic (PP)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

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Steel, hot rolled (Europe)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Plastic HDPE, recycled (OL)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
SCOPE3_PURCHASED_GOODS_AND_SERVICES																					
Total	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Scope 3 Total	tCO2e	-	4.9	280.5	39.6	12.4	152.3	942.9	899	117.2	133.4	82.2	1458.1	1530	2099.6	238.3	1143.3	318.2	334	9785.8	
Total (Scope 1 + 2)	tCO2e	-	10.9	29.8	24.3	84.7	20.6	61	119.7	171.5	90.6	198.4	271.1	12.2	2081.6	332.7	136	305.9	75	4026	
Total (Scope 1 + 2 + 3)	tCO2e	-	15.7	310.3	63.9	97.1	172.9	1003.8	1018.7	288.7	224	280.5	1729.2	2	4181.2	571	1279.4	624.2	409	13811.8	

Annual Market-Based GHG Emissions

Electricity Total (Scope 2) with Market-based calculations	tCO2e	-	2.8	3.9	1.6	65.8	-	2.8	30.9	65	16.3	-	-	-	1620.1	193.8	29	155.3	38.3	2225.5
Scope 2 Total with Market-based electricity calculations	tCO2e	-	2.8	3.9	1.6	65.8	-	2.8	30.9	65	16.3	-	-	-	1620.1	193.8	29	155.3	38.3	2225.5
Scope 1+2+3 Total with Market-based electricity calculations	tCO2e	-	15.7	310.3	63.9	97.1	172.9	1003.8	1018.7	288.7	224	280.5	1729.2	2	4181.2	571	1279.4	624.2	409	13811.8

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3 Location Based 2022

Category	Unit	Austria	Belarus	Bulgaria	Czech Rep.	Denmark	Estonia	Finland	France	Germany	Hungary	Latvia	Lithuania	Norway	Poland	Romania	Sweden	Turkey	United Kingdom	Total		
Scope 1																						
Transportation																						
Diesel (NO)	tCO2e			-	-	-	-	-	-	-	-	-	-	-	12.2	-	-	-	-	12.2		
Diesel (SE)	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	95.2	-	-	95.2		
Petrol (SE)	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	11.9	-	-	11.9		
Diesel	tCO2e			-	1.2	16.3	20.7	18.9	17	37.1	88.8	95.8	44.7	166.3	231.9	-	277	120.3	-	139.3	31.8	1307.1
Petrol	tCO2e			-	6.8	2.2	2.1	-	3.6	9.8	-	10.6	29.6	29.3	35.8	-	173.9	17.4	-	11.3	4.9	337.3
Transportation Total	tCO2e			-	8.1	18.5	22.7	18.9	20.6	46.9	88.8	106.5	74.4	195.5	267.6	12.2	450.9	137.7	107.1	150.6	36.7	1763.7
Stationary combustion																						
LPG	tCO2e			-	-	7.3	-	-	-	11.2	-	-	-	2.9	3.5	-	10.6	1.3	-	-	-	36.8
Stationary combustion Total	tCO2e			-	-	7.3	-	-	-	11.2	-	-	-	2.9	3.5	-	10.6	1.3	-	-	-	36.8
Scope 1 Total	tCO2e			-	8.1	25.9	22.7	18.9	20.6	58.2	88.8	106.5	74.4	198.4	271.1	12.2	461.5	138.9	107.1	150.6	36.7	1800.5
Scope 2																						
Electricity location-based																						
Electricity Nordic mix	tCO2e			-	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	-	-	-	2.5
Electricity Sweden	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4
Electricity Turkey	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155.3	-	-	155.3
Electricity Romania	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	-	188.3	-	-	-	-	188.3
Electricity Poland	tCO2e			-	-	-	-	-	-	-	-	-	-	-	-	1612.3	-	-	-	-	-	1612.3
Electricity Lithuania	tCO2e			-	-	-	-	-	-	-	-	-	-	392	-	-	-	-	-	-	-	392
Electricity Hungary	tCO2e			-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	13
Electricity France	tCO2e			-	-	-	-	-	-	32.9	-	-	-	-	-	-	-	-	-	-	-	32.9
Electricity Finland	tCO2e			-	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	18
Electricity Czech Rep.	tCO2e			-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
Electricity Bulgaria	tCO2e			-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6
Electricity Belarus	tCO2e			-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8

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Electricity Denmark 125	tCO2e	-	-	-	-	22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	22.7	
Electricity Germany	tCO2e	-	-	-	-	-	-	-	-	45.1	-	-	-	-	-	-	-	-	-	-	45.1
Electricity UK	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35.5
Electricity location-based Total	tCO2e	-	2.8	3.6	1.2	22.7	-	18	32.9	45.1	13	-	392	2.5	1612.3	188.3	4	155.3	35.5	2529.2	
Scope 2 Total	tCO2e	-	2.8	3.6	1.2	22.7	-	18	32.9	45.1	13	-	392	2.5	1612.3	188.3	4	155.3	35.5	2529.2	
Scope 3																					
Downstream transportation and distribution																					
Transportation diesel	tCO2e	-	-	198.2	23.6	-	16.6	339.5	535.9	-	8.8	-	570.5	492.2	654.4	-	507.2	23.6	190.8	3561.2	
Diesel (WTT)	tCO2e	-	-	48.4	5.7	-	4	82.8	130.7	-	2.1	-	139.2	120.1	159.6	-	123.7	5.7	46.5	868.7	
SCOPE3_DOWNSTREAM_TRANSPORTATION_AND_DISTRIBUTION Total	tCO2e	-	-	246.6	29.3	-	20.6	422.4	666.7	-	10.9	-	709.6	612.3	814	-	631	29.3	237.3	4430	
Upstream transportation and distribution																					
Transportation diesel	tCO2e	-	-	6.6	-	-	89.6	354.1	13.4	-	47.1	-	253.8	227.8	7.1	-	324.4	20.9	-	1344.9	
Transportation petrol	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Diesel (WTT)	tCO2e	-	-	1.6	-	-	21.9	86.4	3.3	-	11.5	-	61.9	55.6	1.7	-	79.1	5.1	-	328.1	
SCOPE3_UPSTREAM_TRANSPORTATION_AND_DISTRIBUTION Total	tCO2e	-	-	8.2	-	-	111.5	440.5	16.7	-	58.5	-	315.7	283.4	8.8	-	403.6	26	-	1673	
Fuel-and-energy-related activities																					
Diesel (WTT)	tCO2e	-	0.3	3.8	4.8	4.4	4	8.6	20.7	22.3	10.4	38.7	54	3.7	64.5	28	10.3	32.4	7.4	318.5	
Petrol (WTT)	tCO2e	-	1.8	0.6	0.5	-	0.9	2.5	-	2.7	7.6	7.5	9.2	-	44.8	4.5	0.6	2.9	1.3	87.4	
LPG (WTT)	tCO2e	-	-	0.9	-	-	-	1.3	-	-	-	0.3	0.4	-	1.3	0.2	-	-	-	4.3	
Electricity Norway (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.2	
Diesel (SE) (WTT)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.8	-	-	16.8	
Electricity Middle East (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	
Electricity France (upstream)	tCO2e	-	-	-	-	-	-	-	10.2	-	-	-	-	-	-	-	-	-	-	10.2	
Electricity Denmark (upstream)	tCO2e	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
Electricity Czech Rep. (upstream)	tCO2e	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	
Petrol (SE) (WTT)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	2.6	
Electricity Turkey (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52.9	52.9	
Electricity Lithuania (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	117.1	-	-	-	-	-	-	117.1	
Electricity Hungary (upstream)	tCO2e	-	-	-	-	-	-	-	-	3.9	-	-	-	-	-	-	-	-	-	3.9	

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Electricity Bulgaria	tCO2e	-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	
Electricity Belarus	tCO2e	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8
Electricity Germany (upstream)	tCO2e	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	13
Electricity UK (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.5	-	11.5
Electricity Sweden (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	-	1.2
Electricity Romania (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	-	65
Electricity Poland (upstream)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	486.5	-	-	-	-	-	-	486.5
Electricity Finland (upstream)	tCO2e	-	-	-	-	-	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9
SCOPE3_FUELS_AND_ENERGY Total	tCO2e	-	4.9	8.9	5.7	8.4	4.9	17.4	30.9	38	22	46.6	180.7	3.9	597.1	97.7	31.5	88.4	20.2	1207.1	
Employee commuting																					
Mileage all. avg. car	tCO2e	-	-	7.4	2	1.8	6.7	15.6	23.7	28.8	12.9	15.6	50.9	21.5	142	36.5	22.5	42.9	11.7	442.5	
Mileage all. avg. car (WTW)	tCO2e	-	-	9.3	2.6	2.2	8.5	19.7	30	36.5	16.4	19.8	64.3	27.1	179.6	46.2	28.5	54.2	14.8	559.4	
Mileage all. motorcycle	tCO2e	-	-	0.1	-	-	0.1	0.2	0.3	0.3	0.2	0.2	0.6	0.2	1.7	0.4	0.3	0.5	0.1	5.1	
SCOPE3_EMPLOYEE_COMMUTING Total	tCO2e	-	-	16.8	4.6	4	15.3	35.4	54	65.6	29.4	35.6	115.7	48.8	323.3	83.1	51.3	97.6	26.6	1007.1	
Business travel																					
Air travel, continental	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Air transportation	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	450.1	-	-	-	-	-	-	450.1
Hotel accommodation	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	131.5	-	-	-	-	-	-	131.5
SCOPE3_BUSINESS_TRAVEL Total	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	581.6	-	-	-	-	-	-	581.6
Waste																					
Metal waste, recycled	tCO2e	-	-	-	-	-	-	1.9	1.2	3.5	0.5	-	1.6	-	8.3	0.8	0.5	4	1.7	24	
Metal waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Residual waste, incinerated	tCO2e	-	-	-	-	-	-	0.7	12.4	-	-	-	-	-	1.8	2	0.9	-	-	17.8	
Commercial waste, landfill	tCO2e	-	-	-	-	-	-	-	-	-	-	-	7.3	-	43.2	8	-	-	-	58.4	
Concrete waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	
Mixed waste, recycled	tCO2e	-	-	-	-	-	-	0.5	-	-	-	-	-	-	0.2	0.1	0.1	-	0.5	1.4	
Residual waste, landfill	tCO2e	-	-	-	-	-	-	-	33.3	-	3.9	-	-	-	-	-	-	-	2.9	40.1	
Hazardous waste, incinerated	tCO2e	-	-	-	-	-	-	1.1	2.9	-	-	-	2.4	-	9.7	0.4	2.4	2.4	2.4	23.7	
Industrial waste, recycled	tCO2e	-	-	-	-	-	-	-	0.1	-	-	-	0.2	-	-	0.1	-	-	0.1	0.5	
Industrial inert waste, landfill	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	

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Hazardous waste, landfill	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
SCOPE3_WASTE_GENERATED_IN_OPERATION Total	tCO2e	-	-	-	-	-	4.1	50	3.5	4.4	-	11.4	-	61.3	11.1	5	7.3	7.7	166	
End-of-life treatment of sold products																				
Metal waste, recycled	tCO2e	-	-	-	-	-	23	80.7	10.1	8.1	-	29.1	-	242.4	21.6	21	69.6	42.2	547.9	
Plastic waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	95.7	-	50.3	24.8	-	-	-	170.9	
Concrete waste, recycled	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	-	-	2.3	
SCOPE3_END_OF_LIFE_TREATMENT_OF_SOLD_PRODUCTS Total	tCO2e	-	-	-	-	-	23	80.7	10.1	8.1	-	124.9	-	295.1	46.4	21	69.6	42.2	721.1	
Purchased goods and services																				
Plastic (HDPE)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Plastic (HDPE)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Plastic (PP)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Steel, hot rolled (Europe)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Plastic HDPE, recycled (OL)	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
SCOPE3_PURCHASED_GOODS_AND_SERVICES Total	tCO2e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Scope 3 Total	tCO2e	-	4.9	280.5	39.6	12.4	152.3	942.9	899	117.2	133.4	82.2	1458.1	1530	2099.6	238.3	1143.3	318.2	334	9785.8
Total (Scope 1 + 2)	tCO2e	-	10.9	29.5	23.9	41.6	20.6	76.1	121.6	151.6	87.4	198.4	663.1	14.7	2073.9	327.2	111.1	305.9	72.2	4329.7
Total (Scope 1 + 2 + 3)	tCO2e	-	15.7	310	63.5	54	172.9	1019	1020.6	268.8	220.8	280.5	2121.2	1544.7	4173.4	565.5	1254.5	624.2	406.1	14115.5

Annual Market-Based GHG Emissions

Electricity Total (Scope 2) with Market-based calculations	tCO2e	-	2.8	3.9	1.6	65.8	-	2.8	30.9	65	16.3	-	-	-	1620.1	193.8	29	155.3	38.3	2225.5
Scope 2 Total with Market-based electricity calculations	tCO2e	-	2.8	3.9	1.6	65.8	-	2.8	30.9	65	16.3	-	-	-	1620.1	193.8	29	155.3	38.3	2225.5
Scope 1+2+3 Total with Market-based electricity calculations	tCO2e	-	15.7	310.3	63.9	97.1	172.9	1003.8	1018.7	288.7	224	280.5	1729.2	1542.2	4181.2	571	1279.4	624.2	409	13811.8

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Key Figures Energy																				
Category	Unit	Austria	Belarus	Bulgaria	Czech Rep.	Denmark	Estonia	Finland	France	Germany	Hungary	Latvia	Lithuania	Norway	Poland	Romania	Sweden	Turkey	United Kingdom	Total
Scope 1																				
Transportation																				
Diesel (NO)	MWh	-	-	-	-	-	-	-	-	-	-	-	-	61	-	-	-	-	-	61
Diesel (SE)	MWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	482.2	-	-	482.2
Petrol (SE)	MWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51.5	-	-	51.5
Diesel	MWh	-	4.9	64.5	81.6	74.6	67.3	146.6	350.6	378.6	176.6	656.7	915.9	-	1094.1	475.1	-	550.2	125.7	5162.8
Petrol	MWh	-	28.3	9.2	8.5	-	14.7	40.7	-	44	122.8	121.2	148.1	-	720.2	72	-	46.9	20.2	1396.9
Transportation Total	MWh	-	33.2	73.7	90.2	74.6	82	187.3	350.6	422.6	299.4	777.9	1063.9	61	1814.3	547	533.7	597.1	145.9	7154.3
Stationary combustion																				
LPG	MWh	-	-	34.3	-	-	-	52.3	-	-	-	13.3	16.1	-	49.5	6	-	-	-	171.6
Stationary combustion Total	MWh	-	-	34.3	-	-	-	52.3	-	-	-	13.3	16.1	-	49.5	6	-	-	-	171.6
Scope 1 Total	MWh	-	33.2	107.9	90.2	74.6	82	239.6	350.6	422.6	299.4	791.2	1080	61	1863.8	553	533.7	597.1	145.9	7325.9
Scope 2																				
Electricity																				
Electricity Nordic mix	MWh	-	-	-	-	-	-	-	-	-	-	-	-	96.3	-	-	-	-	-	96.3
Electricity Sweden	MWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	403.3	-	-	403.3
Electricity Turkey	MWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	375.1	-	375.1
Electricity Romania	MWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	687.2	-	-	-	687.2
Electricity Poland	MWh	-	-	-	-	-	-	-	-	-	-	-	-	-	2575.6	-	-	-	-	2575.6
Electricity Lithuania	MWh	-	-	-	-	-	-	-	-	-	-	-	2613.4	-	-	-	-	-	-	2613.4
Electricity Hungary	MWh	-	-	-	-	-	-	-	-	58.9	-	-	-	-	-	-	-	-	-	58.9
Electricity France	MWh	-	-	-	-	-	-	-	644.6	-	-	-	-	-	-	-	-	-	-	644.6
Electricity Finland	MWh	-	-	-	-	-	-	245.9	-	-	-	-	-	-	-	-	-	-	-	245.9
Electricity Czech Rep.	MWh	-	-	-	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9
Electricity Bulgaria	MWh	-	-	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7
Electricity Belarus	MWh	-	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.7
Electricity Denmark 125	MWh	-	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	-	-	160
Electricity Germany	MWh	-	-	-	-	-	-	-	144.1	-	-	-	-	-	-	-	-	-	-	144.1
Electricity UK	MWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181.9	181.9

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Electricity Total	MWh	-	7.7	9.7	2.9	160	-	245.9	644.6	144.1	58.9	-	2613.4	96.3	2575.6	687.2	403.3	375.1	181.9	8206.6
Scope 2 Total	MWh	-	7.7	9.7	2.9	160	-	245.9	644.6	144.1	58.9	-	2613.4	96.3	2575.6	687.2	403.3	375.1	181.9	8206.6
Total (Scope 1 + 2 + 3)	MWh	-	40.9	117.6	93.1	234.6	82	485.5	995.2	566.7	358.4	2	3693.4	157.3	4439.4	1240.2	936.9	972.2	327.8	15532.5
	GJ	-	147.2	423.3	335.1	844.6	295.2	1747.8	3582.6	2040.1	1290.2	2848.5	13296.4	566.2	15982	4464.8	3373	3499.9	1180.2	55917
Scope 1 renewable energy	MWh	-	-	-	-	-	-	-	-	-	-	-	-	14.9	-	-	126.9	-	-	141.8
Scope 1 renewable energy share	%	-	-	-	-	-	-	-	-	-	-	-	-	24.5%	-	-	23.8%	-	-	1.9
Scope 2 renewable energy	MWh	-	0.7	1.7	0.4	116	-	120	162.4	57.3	9.2	-	1497.5	73.2	370.9	245.3	269.8	150.8	75.3	3150.5
Scope 2 renewable energy share	%	-	8.8%	17.9%	12.1%	72.5%	-	48.8%	25.2%	39.8%	15.6%	-	57.3%	76%	14.4%	35.7%	66.9%	40.2%	41.4%	38.4%
Total renewable energy	MWh	-	0.7	1.7	0.4	116	-	120	162.4	57.3	9.2	-	1497.5	88.1	370.9	245.3	396.6	150.8	75.3	3292.3
Total renewable energy share	%	-	1.7%	1.5%	0.4%	49.4%	-	24.7%	16.3%	10.1%	2.6%	-	40.5%	56%	8.4%	19.8%	42.3%	15.5%	23%	21.2%

Key Figures Energy Consumption

Category	Unit	Austria	Belarus	Bulgaria	Czech Rep.	Denmark	Estonia	Finland	France	Germany	Hungary	Latvia	Lithuania	Norway	Poland	Romania	Sweden	Turkey	United Kingdom	Total	
Scope 1																					
Transportation																					
Diesel (NO)	litres	-	-	-	-	-	-	-	-	-	-	-	-	5869	-	-	-	-	-	5869	
Diesel (SE)	litres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46455	-	-	46455	
Petrol (SE)	litres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5412	-	-	5412	
Diesel	litres	-	460	6046	7657	7000	6311	13748	32890	35515	16571	6160	5	85916	-	4	44564	-	51609	11790	484316
Petrol	litres	-	2919	950	880	-	1520	4201	-	4542	12671	1250	6	15282	-	74325	7429	-	4845	2088	144158
Stationary combustion																					
LPG_	litres	-	-	4720	-	-	-	7208	-	-	-	1838	2218	-	6820	826	-	-	-	23630	
Scope 2																					
Electricity																					
Electricity Nordic mix	kWh	-	-	-	-	-	-	-	-	-	-	-	-	96305	-	-	-	-	-	96305	
Electricity Sweden	kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40327	2	-	40327	
Electricity Turkey	kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37508	7	37508	

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Petrol (SE) (WTT)	litres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4319	-	-	4319
Electricity Turkey (upstream)	kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37440	7	-	374407
Electricity Lithuania (upstream)	kWh	-	-	-	-	-	-	-	-	-	-	261338	8	-	-	-	-	-	-	-	-	2613388
Electricity Hungary (upstream)	kWh	-	-	-	-	-	-	-	-	58949	-	-	-	-	-	-	-	-	-	-	-	58949
Electricity Bulgaria	kWh	-	-	9654	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9654
Electricity Belarus	kWh	-	7714	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7714
Electricity Germany (upstream)	kWh	-	-	-	-	-	-	-	144114	-	-	-	-	-	-	-	-	-	-	-	-	144114
Electricity UK (upstream)	kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181924	181924
Electricity Sweden (upstream)	kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40327	2	-	403272
Electricity Romania (upstream)	kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68717	3	-	-	-	-	687173
Electricity Poland (upstream)	kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	25756	30	-	-	-	-	-	2575630
Electricity Finland (upstream)	kWh	-	-	-	-	-	-	24591	8	-	-	-	-	-	-	-	-	-	-	-	-	245918
Employee commuting																						
Mileage all. avg. car	km	-	-	43312	11948	10304	3925	6	91134	0	168976	75795	9	297939	4	2	2	5	9	68408	2592443	
Mileage all. avg. car (WTW)	km	-	-	43312	11948	10304	3925	6	91134	0	168976	75795	9	297939	4	2	2	5	9	68408	2592443	
Mileage all. motorcycle	km	-	-	756	208	180	688	1592	2428	2950	1323	1600	5206	2197	14541	3738	2307	4392	1195	45301		
Business travel																						
Air travel, continental	flight trip	-	-	-	-	-	-	-	-	-	-	-	-	-	40917	-	-	-	-	-	0	
Air transportation	SEK	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	4091720	
Hotel accommodation	SEK	-	-	-	-	-	-	-	-	-	-	-	-	57165	59	-	-	-	-	-	5716559	
Waste																						
Metal waste, recycled	kg	-	-	-	-	-	88100	58400	162980	25200	-	73600	-	38920	0	37667	23000	0	80600	1126547		
Metal waste, recycled	kg	-	-	-	-	-	-	168	-	-	-	-	-	-	-	-	-	-	-	168		
Residual waste, incinerated	kg	-	-	-	-	-	1332	24748	-	-	-	-	-	-	-	3600	3960	1824	-	35464		
Commercial waste, landfill	kg	-	-	-	-	-	-	-	-	-	-	15600	-	92400	17040	-	-	-	-	125040		
Concrete waste, recycled	kg	-	-	-	-	-	-	-	-	-	-	-	-	76900	-	-	-	-	-	76900		
Mixed waste, recycled	kg	-	-	-	-	-	23680	-	-	-	-	-	-	7628	5840	6000	-	24000	-	67148		
Residual waste, landfill	kg	-	-	-	-	-	-	74608	-	8640	-	-	-	-	-	-	-	-	6600	89848		
Hazardous waste, incinerated	kg	-	-	-	-	-	450	1200	-	-	-	1000	-	4000	152	1000	1000	1000	1000	9802		
Industrial waste, recycled	kg	-	-	-	-	-	-	6000	-	-	-	8400	-	-	3360	-	-	-	6600	24360		

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Industrial inert waste, landfill	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7776	-	7776
Hazardous waste, landfill	kg	-	-	-	-	-	-	550	-	-	1000	-	-	-	-	-	-	-	-	-	1550
End-of-life treatment of sold products																					
Metal waste, recycled	kg	-	-	-	-	-	-	10810	37890	473690	37820	0	136710	0	1.1E+0	10152	98600	32679	0	1982191	2.6E+07
Plastic waste, recycled	kg	-	-	-	-	-	-	-	-	-	-	-	449500	0	23630	11650	0	0	-	-	8023000
Concrete waste, recycled	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	23100	00	-	-	-	-	2310000
Purchased goods and services																					
Plastic (HDPE)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Plastic (HDPE)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Plastic (PP)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Steel, hot rolled (Europe)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Plastic HDPE, recycled (OL)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

4 Data Exclusions

Exclusions within this emissions report include.

- Scope 1 Natural Gas
- Scope 2 Latvia – Begin reporting in 2023
- Scope 3 purchased goods and services
- Scope 3 Investments
- Scope 3 mains supply water

5 Data Sources

Sources:

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The reference list above is incomplete but contains the essential references used in CEMAsys. In addition, several local/national sources may be relevant, depending on which emission factors are used.

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