Carbon Accounting Report 2020

XXL ASA

This report provides an overview of the organisation's greenhouse gas (GHG) emissions, which is an integrated part of the organisation's climate strategy. Carbon accounting is a fundamental tool in identifying tangible measures to reduce GHG emissions. The annual carbon accounting report enables the organisation to benchmark performance indicators and evaluate progress over time.

This report comprises XXL ASA and its operations in Norway, Sweden, Finland, Austria and Denmark. It includes all locations and facilities, meaning all stores, two central warehouses, headquarter and office facilities.

The input data is based on consumption data from internal and external sources, which are converted into tonnes CO_2-equivalents (tCO_2e). The carbon footprint analysis is based on the international standard; *A Corporate Accounting and Reporting Standard*, developed by the Greenhouse Gas Protocol Initiative (GHG Protocol). The GHG Protocol is the most widely used and recognised international standard for measuring greenhouse gas emissions and is the basis for the ISO standard 14064-I.

Reporting Year Energy and GHG Emissions

Emission source	Description	Consumption	Unit	Energy (MWh)	Emissions tCO_2e	% share
Transportation total				**423.6**	**96.4**	**1.4 %**
Diesel		14,132.4	liters	150.2	38.0	0.6 %
Petrol		4,253.7	liters	40.8	9.8	0.1 %
Diesel (NO)		17,175.0	liters	179.0	37.8	0.6 %
Diesel (SE)		5,157.0	liters	53.5	10.8	0.2 %
Stationary combustion total				**856.0**	**48.4**	**0.7 %**
Burning oil		152,000.0	kWh	152.0	37.5	0.6 %
Wood pellets		703,960.0	kWh	704.0	10.9	0.2 %
Scope 1 total				**1,279.5**	**144.9**	**2.1 %**
Electricity total				**34,529.1**	**2,002.0**	**29.5 %**
Electricity Nordic mix		27,479,685.0	kWh	27,479.7	1,126.7	16.6 %
Electricity Finland		5,645,339.0	kWh	5,645.3	666.2	9.8 %
Electricity Austria		1,385,411.0	kWh	1,385.4	206.4	3.0 %
Electricity Austria	Electric vehicles	18,707.0	kWh	18.7	2.8	-
DH Nordic locations total				**4,579.1**	**339.3**	**5.0 %**
District heating SE/Goteborg		290,990.0	kWh	291.0	19.2	0.3 %
District heating SE/Stockholm		777,806.0	kWh	777.8	47.4	0.7 %
District heating Sweden mix		313,613.0	kWh	313.6	16.7	0.2 %
District heating SE/Tannefors		71,431.0	kWh	71.4	7.1	0.1 %
District heating SE/Norrkoping		87,957.0	kWh	88.0	11.7	0.2 %
District heating SE/Orebro/Kumla		782,346.0	kWh	782.3	55.5	0.8 %
District heating SE/Karlstad		101,667.0	kWh	101.7	4.1	0.1 %
District heating SE/Vasteras		235,586.0	kWh	235.6	19.8	0.3 %
District heating SE/Malmo		168,768.0	kWh	168.8	18.3	0.3 %
District heating SE/Sundsvall		130,970.0	kWh	131.0	13.1	0.2 %
District heating SE/Uppsala		415,360.0	kWh	415.4	75.2	1.1 %
District heating SE/Halmstad		225,203.0	kWh	225.2	24.1	0.4 %
District heating SE/Jonkoping		201,417.0	kWh	201.4	11.5	0.2 %
District heating SE/Ostersund		117,000.0	kWh	117.0	1.9	-
District heating SE/Lulea		366,170.0	kWh	366.2	7.3	0.1 %
District heating SE/Vaxjo		292,833.0	kWh	292.8	6.4	0.1 %
Electric vehicles total				**-**	**-**	**-**
Electric car Nordic		-	km	-	-	-
Scope 2 total				**39,108.3**	**2,341.3**	**34.4 %**
Downstream transportation and distribution total				**-**	**3,495.1**	**51.4 %**
Truck 17t+	Transport til varehus Norge	103.9	tCO_2e	-	103.9	1.5 %
Truck 17t+	Transport til Kunde Østerrike	47.8	tCO_2e	-	47.8	0.7 %
Truck 17t+	Annen Transport	-	tCO_2e	-	-	-
Truck 17t+	Transport til Varehus Østerrike	424.6	tCO_2e	-	424.6	6.2 %
Truck 17t+	Retur fra Kunde Østerrike	10.3	tCO_2e	-	10.3	0.2 %
Truck 17t+		846.3	tCO_2e	-	846.3	12.5 %
Truck 17t+	Transport til Kunde Finland	255.1	tCO_2e	-	255.1	3.8 %

Truck 17t+	Returfrakt	4.9	tCO_2e	-	4.9	0.1 %
Truck 17t+	Transport til kunde fra butikk	51.7	tCO_2e	-	51.7	0.8 %
Truck 17t+	Annen transport	377.7	tCO_2e	-	377.7	5.6 %
Truck 17t+	Transport til Varehus Sverige	0.7	tCO_2e	-	0.7	-
Truck 17t+	Transport til kunde fra Varehus Sverige	51.1	tCO_2e	-	51.1	0.8 %
Truck 17t+	Pakker Norge	1,321.0	tCO_2e	-	1,321.0	19.4 %
Waste total				**-**	**469.1**	**6.9 %**
Residual waste, incinerated		775,569.9	kg	-	389.3	5.7 %
Paper waste, recycled		1,534,128.0	kg	-	32.7	0.5 %
Glass waste, recycled		1,814.0	kg	-	-	-
Metal waste, recycled		128,427.0	kg	-	2.7	-
Organic waste, recycled		2,617.5	kg	-	0.1	-
Plastic waste, recycled		100,210.0	kg	-	2.1	-
EE waste, recycled		22,864.0	kg	-	0.5	-
Wood waste, recycled		219,645.0	kg	-	4.7	0.1 %
Silicon waste, landfill		-	kg	-	-	-
Refinery sludge waste, incinerated		3.0	kg	-	-	-
Hazardous waste, recycled		2,328.0	kg	-	-	-
Industrial inert waste, landfill		-	kg	-	-	-
Residual waste, recycled		18,656.0	kg	-	0.4	-
Concrete waste, recycled		54,699.8	kg	-	0.1	-
Sorted waste, recycled		1,039.0	kg	-	-	-
Wood waste, incinerated		37,325.0	kg	-	0.8	-
Cardboard waste, recycled		1,531,480.6	kg	-	32.6	0.5 %
Industrial waste, landfill		1.0	kg	-	-	-
Plastic waste, incinerated		1,255.0	kg	-	3.0	-
Business travel total				**-**	**346.1**	**5.1 %**
Mileage all. car (NO)		223,300.1	km	-	31.3	0.5 %
Continental/Nordic, RF		298.1	tCO_2e	-	298.1	4.4 %
Mileage all. avg. car		97,770.9	km	-	16.8	0.2 %
Scope 3 total				**-**	**4,310.3**	**63.4 %**
Total				**40,387.8**	**6,796.5**	**100.0 %**
KJ				**145,395,990,331.2**		

Reporting Year Market-Based GHG Emissions

Category	Unit	2020
Electricity market-based	tCO_2e	8,977.2
Scope 2 market-based	tCO_2e	9,316.5
Total market-based	tCO_2e	13,771.6

This report comprises XXL ASA and its operations in Norway, Sweden, Finland, Austria and Denmark. It includes all locations and facilities, meaning all stores, two central warehouses, headquarter and office facilities.

Carbon Accounting

In 2020, the total GHG emissions for XXL ASA were calculated to be 6 796.5 tonnes CO2-equivalents (tCO2e). The emissions are allocated to the different scopes accordingly: 144.9 tCO2e, 2.1 %, to Scope 1, 2 341.3 tCO2e, 34.4 % to Scope 2 and 4 310.3 tCO2e, 63.4 % to Scope 3.

2020 is the second year that XXL are reporting on emissions from Scope 1, Scope 2 and the following categories in Scope 3: business travel, mileage allowance, goods transportation and waste. The reporting of historic emissions data from before 2019 is limited to electricity consumption, goods transportation, air travel and waste.

It should be noted that estimations have been made for all stores that are not part of the centralized electricity agreement with Hafslund. In these cases, calculations have been made based on area (m2) and estimates from similar stores. Some estimations have also been made to calculate waste fractions in stores located in centre solutions.

Scope 1

Transportation: Consumption of fossil fuels used in company vehicles (owned, rented, leased).

Total consumption of fossil fuels in 2020 amount to 96.4 tCO2e.

Stationary combustion: Consumption of burning oil and wood pellets at the central warehouse in Norway.

Emissions from stationary combustion constitute 48.4 tCO2e.

Scope 2

Electricity: Electricity consumption in own or rented premises (buildings).

The main body of both tables included in this report presents location-based emissions using the emission factor Nordic electricity mix for all electricity consumption in Norway and Sweden, and location specific energy mixes for locations in Finland and Austria.

XXL had an electricity consumption of 34 529.1 MWh in 2020, compared to 38 820.4 MWh in 2019. This constitutes a reduction of 0.8 %. Total emissions from electricity consumption in 2020 constitute 2 002 tCO2e, which reflects an increase in emissions of 6.9 % from 2019.

This increase is in large explained by a change in the local energy mixes and emission factors used in this report. Particularly the emission factor for Nordic electricity mix has increased by 5.1 % from 2019 to 2020, suggesting that electricity is being produced from sources with higher GHG emissions in 2020, compared to previous years (e.g. coal instead of hydropower or other renewable sources). Also the emission factor for Electricity Finland has increased by 7.3 % from 2019 to 2020, whereas the energy mix in Austria is decreased by 6.3 %.

The market-based emissions are presented on page 4 of this report. As XXL do not purchase any guarantees of origin, a residual mix emission factor has been used. In 2020 emissions from electricity consumption amount to 8 977.2 tCO2e when calculated with a market-based emission factor. The practice of presenting electricity emissions with two different emission factors is further explained under Scope 2 in Methodology and Sources.

District heating: District heating consumption in own or rented premises (buildings).

Emissions from district heating contributed to 339.3 tCO2e in 2020.

Electric vehicles: Use of own or rented electric vehicles.

Emissions from the use of electric vehicles amount to 2.8 tCO2e for 2020.

Scope 3

Business travel: Emissions from air travel reported per region.

Emissions from flights have been drastically reduced from 2019 to 2020 because of the Covid-19 pandemic. Emissions from air travel amounted to 835 tCO2e in 2019, whereas they in 2020 make up 298 tCO2e. This constitutes a reduction of 69 %.

Mileage allowance: Reported amount of km driven by employees and paid by the company.

Mileage allowance has been paid for 321 071 km, totalling emissions of 48.1 tCO2e. This is a 64 % reduction from 2019.

Goods transportation: Reported tCO2e from the transportation of goods between central warehouses and stores, and transportation of goods ordered online.

Emissions from goods transportation account for 3 495.1 tCO2e and constitutes the largest share of XXL ASAs total emissions (50.1 %). Emissions from the transportation of goods has increased by 50 % from 2019 to 2020. This is likely a consequence of the Covid-19 pandemic, where there has been a large increase in online orders in 2020 compared to 2019.

Waste: Reported waste fractions in kg with consideration of treatment method.

Emissions from waste amount to 469.1 tCO2e in 2020. This is a slight reduction compared to 2019 (-0.3 %).

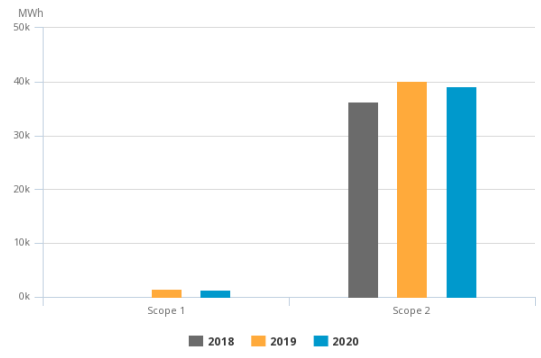
Note that waste fractions with emissions lower 0,1 tCO2e are marked with a line (-) in the presented tables.

Annual GHG Emissions

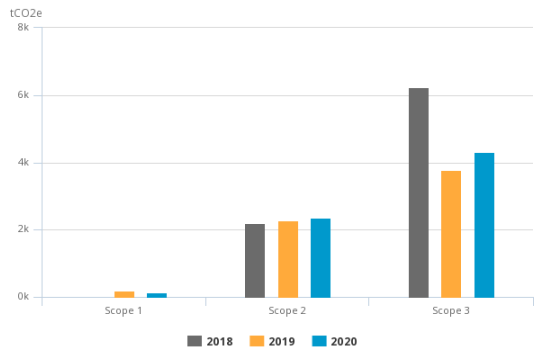
Category	Description	2018	2019	2020	% change from previous year
Transportation total		**-**	**125.0**	**96.4**	**-22.9 %**
Diesel		-	31.5	38.0	20.7 %
Petrol		-	8.1	9.8	21.2 %
Diesel (NO)		-	38.4	37.8	-1.7 %
Diesel (SE)		-	47.0	10.8	-77.0 %
Stationary combustion total		**-**	**59.8**	**48.4**	**-19.0 %**
Burning oil		-	46.6	37.5	-19.6 %
Wood pellets		-	13.1	10.9	-16.9 %
Scope 1 total		**-**	**184.8**	**144.9**	**-21.6 %**
Electricity total		**2,181.4**	**1,872.8**	**2,002.0**	**6.9 %**
Electricity Nordic mix		1,335.4	1,099.2	1,126.7	2.5 %
Electricity Finland		705.6	631.8	666.2	5.4 %
Electricity Austria		140.3	141.8	206.4	45.5 %
Electricity Austria	Electric vehicles	-	-	2.8	100.0 %
DH Nordic locations total		**-**	**395.9**	**339.3**	**-14.3 %**
District heating SE/Goteborg		-	20.9	19.2	-8.3 %
District heating SE/Stockholm		-	80.5	47.4	-41.1 %
District heating Sweden mix		-	86.9	16.7	-80.8 %
District heating SE/Tannefors		-	11.3	7.1	-36.8 %
District heating SE/Norrkoping		-	1.0	11.7	1,012.7 %
District heating SE/Orebro/Kumla		-	43.1	55.5	28.6 %
District heating SE/Karlstad		-	4.5	4.1	-9.6 %
District heating SE/Vasteras		-	19.4	19.8	1.9 %
District heating SE/Malmo		-	4.0	18.3	356.6 %
District heating SE/Sundsvall		-	15.7	13.1	-16.4 %
District heating SE/Uppsala		-	56.2	75.2	33.7 %
District heating SE/Halmstad		-	25.7	24.1	-6.1 %
District heating SE/Jonkoping		-	11.0	11.5	4.3 %
District heating SE/Ostersund		-	3.1	1.9	-39.6 %
District heating SE/Lulea		-	6.3	7.3	16.3 %
District heating SE/Vaxjo		-	6.1	6.4	5.1 %
Electric vehicles total		**-**	**0.4**	**-**	**-100.0 %**
Electric car Nordic		-	0.4	-	-100.0 %
Scope 2 total		**2,181.4**	**2,269.1**	**2,341.3**	**3.2 %**
Downstream transportation and distribution total		**4,487.3**	**2,308.2**	**3,495.1**	**51.4 %**
Truck 17t+		4,487.3	75.5	846.3	1,020.9 %
Truck 17t+	Transport til varehus Norge	-	98.5	103.9	5.5 %
Truck 17t+	Transport til Kunde Østerrike	-	0.2	47.8	23,776.0 %
Truck 17t+	Annen Transport	-	0.1	-	-100.0 %
Truck 17t+	Transport til Varehus Østerrike	-	632.8	424.6	-32.9 %
Truck 17t+	Retur fra Kunde Østerrike	-	0.6	10.3	1,617.3 %
Truck 17t+	Transport til Kunde Finland	-	203.6	255.1	25.3 %
Truck 17t+	Annen transport	-	2.7	377.7	13,888.9 %
Truck 17t+	Transport til Varehus Sverige	-	1,086.3	0.7	-99.9 %

Truck 17t+	Pakker Norge	-	207.9	1,321.0	535.3 %
Truck 17t+	Returfrakt	-	-	4.9	100.0 %
Truck 17t+	Transport til kunde fra butikk	-	-	51.7	100.0 %
Truck 17t+	Transport til kunde fra Varehus Sverige	-	-	51.1	100.0 %
Waste total		**832.1**	**470.4**	**469.1**	**-0.3 %**
Residual waste, incinerated		747.5	395.2	389.3	-1.5 %
Paper waste, recycled		-	37.6	32.7	-13.0 %
Glass waste, recycled		-	-	-	-15.7 %
Metal waste, recycled		-	2.7	2.7	1.8 %
Organic waste, recycled		-	-	0.1	37.8 %
Plastic waste, recycled		-	2.0	2.1	7.0 %
EE waste, recycled		-	0.5	0.5	-4.2 %
Wood waste, recycled		-	5.1	4.7	-7.6 %
Silicon waste, landfill		-	-	-	100.0 %
Refinery sludge waste, incinerated		-	-	-	100.0 %
Hazardous waste, recycled		-	-	-	802.3 %
Industrial inert waste, landfill		-	-	-	-100.0 %
Residual waste, recycled		84.6	0.1	0.4	388.1 %
Concrete waste, recycled		-	-	0.1	100.0 %
Sorted waste, recycled		-	-	-	100.0 %
Wood waste, incinerated		-	-	0.8	100.0 %
Cardboard waste, recycled		-	27.2	32.6	19.7 %
Industrial waste, landfill		-	-	-	100.0 %
Plastic waste, incinerated		-	-	3.0	100.0 %
Business travel total		**913.6**	**987.8**	**346.1**	**-65.0 %**
Mileage all. car (NO)		-	54.8	31.3	-42.9 %
Continental/Nordic, RF		913.6	393.6	298.1	-24.3 %
Intercontinental, RF		-	69.0	-	-100.0 %
Domestic, RF		-	372.3	-	-100.0 %
Mileage all. avg. car		-	98.1	16.8	-82.9 %
Scope 3 total		**6,233.1**	**3,766.5**	**4,310.3**	**14.4 %**
Total		**8,414.5**	**6,220.4**	**6,796.5**	**9.3 %**
Percentage change		**100.0 %**	**-26.1 %**	**9.3 %**	

Annual energy consumption (MWh) Scope 1 & 2



Annual GHG emission per scope



Annual Market-Based GHG Emissions

Category	Unit	2018	2019	2020
Electricity market-based	tCO_2e	10,702.9	7,626.1	8,977.2
Scope 2 market-based	tCO_2e	10,702.9	8,022.4	9,316.5
Total market-based	tCO_2e	16,935.9	11,973.7	13,771.6
Percentage change		**100.0 %**	**-29.3 %**	**15.0 %**

Annual Key Energy and Climate Performance Indicators

Name	Unit	2018	2019	2020	% change from previous year
Total tCO2e / MNOK revenue		-	0.7	0.7	-5.7 %
Total tCO2e / FTE		-	1.8	2.2	19.1 %
Total tCO2e / warehouse		-	72.3	75.5	4.4 %

Methodology and sources

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 on calculating and reporting GHG emissions. The reporting considers the following greenhouse gases, all converted into CO_2-equivalents: CO_2, CH_4 (methane), N_2O (laughing gas), SF_6, 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 organisation has operational control. The electricity emission factors used in Cemasys 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.

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).

Organisations who report on their GHG emissions will now have to disclose both the location-based emissions from the production of electricity, and the marked-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 time 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 CO_2e 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 largely 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.

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.