Carbon accounting report 2019

XXL ASA

The aim of this report is to get an overview of the organisation's greenhouse gas (GHG) emissions, which is an integrated part of the company's climate strategy. The carbon accounting is a fundamental tool in order to identify concrete measures to reduce the energy consumption and corresponding GHG emissions. The annual 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 information from both internal and external data sources and then converted into tonnes CO2-eq. The analysis is based on the international standard; A Corporate Accounting and Reporting Standard, developed by the Greenhouse Gas Protocol Initiative (GHG protocol). This is the most important standard for measuring greenhouse gas emissions and was the basis for the ISO standard 14064-I.

Energy and GHG emissions

Category	Description	Consumption	Unit	Energy (MWh eqv)	Emissions (tCO2e)	Emissions (distribution)
Transportation				*616.3*	*141.8*	*2.3%*
Diesel		17 950.3	liters	190.8	48.2	0.8%
Petrol		3 510.7	liters	33.7	8.1	0.1%
Diesel (NO)		16 081.8	liters	164.7	38.4	0.6%
Diesel (SE)		21 796.5	liters	227.1	47.0	0.8%
Stationary combustion				*1 029.0*	*59.8*	*1.0%*
Burning oil		189 000.0	kWh	189.0	46.6	0.7%
Wood pellets		840 000.0	kWh	840.0	13.1	0.2%
Scope 1 total				1 645.3	201.5	3.2%
Electricity				*34 820.4*	*1 872.8*	*30.1%*
Electricity Nordic mix		28 184 919.4	kWh	28 184.9	1 099.2	17.7%
Electricity Finland		5 743 509.4	kWh	5 743.5	631.8	10.1%
Electricity Austria		891 996.9	kWh	892.0	141.8	2.3%
DH Nordic locations				*5 383.0*	*385.7*	*6.2%*
District heating SE/Göteborg		322 180.0	kWh	322.2	20.9	0.3%
District heating SE/Stockholm		1 046 027.0	kWh	1 046.0	80.5	1.3%
District heating Sweden mix		1 372 250.0	kWh	1 372.3	86.9	1.4%
District heating SE/Linköping		85 649.0	kWh	85.6	1.1	-
District heating SE/Norrköping		74 450.0	kWh	74.5	1.0	-
District heating SE/Orebro/Kumla		495 737.0	kWh	495.7	43.1	0.7%
District heating SE/Karlstad		107 084.0	kWh	107.1	4.5	0.1%
District heating SE/Vasteras		181 505.0	kWh	181.5	19.4	0.3%
District heating SE/Malmo		27 995.0	kWh	28.0	4.0	0.1%
District heating SE/Sundsvall		142 458.0	kWh	142.5	15.7	0.3%
District heating SE/Uppsala		250 000.0	kWh	250.0	56.2	0.9%
District heating SE/Halmstad		254 082.0	kWh	254.1	25.7	0.4%
District heating SE/Jönköping		196 646.0	kWh	196.6	11.0	0.2%
District heating SE/Östersund		106 823.0	kWh	106.8	3.1	-
District heating SE/Luleå		484 230.0	kWh	484.2	6.3	0.1%
District heating SE/Vaxjo		235 860.0	kWh	235.9	6.1	0.1%
Electric vehicles				*10.2*	*0.4*	*-*
Electric car Nordic		60 000.0	km	10.2	0.4	-
Scope 2 total				40 213.6	2 258.9	36.3%
Air travel				*-*	*835.0*	*13.4%*
Continental/Nordic RF		2 486 649.0	pkm	-	393.6	6.3%
Intercontinental, RF		352 949.0	pkm	-	69.0	1.1%
Domestic, RF		1 460 733.0	pkm	-	372.3	6.0%
Business travel				*-*	*152.8*	*2.5%*
Mileage all. car (NO)		391 082.0	km	-	54.8	0.9%
Mileage all. avg.		553 690.9	km	-	98.1	1.6%
Goods transportation				*-*	*2 308.2*	*37.1%*
Truck 17t+		75.5	tCO2	-	75.5	1.2%
Truck 17t+	Annen Transport	2.8	tCO2	-	2.8	-
Truck 17t+	Pakker Norge	207.9	tCO2	-	207.9	3.3%
Truck 17t+	Retur fra Kunde Østerrike	0.6	tCO2	-	0.6	-
Truck 17t+	Transport til Kunde Finland	203.6	tCO2	-	203.6	3.3%
Truck 17t+	Transport til Kunde Østerrike	0.2	tCO2	-	0.2	-
Truck 17t+	Transport til varehus Norge	98.5	tCO2	-	98.5	1.6%
Truck 17t+	Transport til Varehus Sverige	1 086.3	tCO2	-	1 086.3	17.4%

Truck 17t+	Transport til Varehus Østerrike	632.8	tCO2	-	632.8	10.2%
Waste				-	*470.4*	*7.6%*
Waste mix,incinerated		787 205.5	kg	-	395.2	6.3%
Paper waste,recycled		1 764 202.9	kg	-	37.6	0.6%
Glass waste,recycled		2 152.0	kg	-	-	-
Metal waste,recycled		126 115.7	kg	-	2.7	-
Organic waste,recycled		1 899.5	kg	-	-	-
Plastic waste,recycled		93 684.7	kg	-	2.0	-
WEEE,recycled		23 873.0	kg	-	0.5	-
Wood waste,recycled		237 833.0	kg	-	5.1	0.1%
Hazardous waste, recycled		258.0	kg	-	-	-
Industrial inert waste, landfill		440.0	kg	-	-	-
Waste mix, recycled		3 804.0	kg	-	0.1	-
Cardboard, recycled		1 279 131.3	kg	-	27.2	0.4%
Scope 3 total				-	3 766.5	60.5%
Total				*41 858.9*	*6 227.0*	*100.0%*
Electricity market-based					*7626.1*	
Scope 2 market-based					*8012.2*	
Total market-based					*11980.2*	

Carbon Accounting

In 2019, the total GHG emissions for XXL ASA were calculated to be 6 227.0 tonnes CO2-equivalents (tCO2e). The emissions are allocated to the different scopes accordingly: 201.5 tCO2e, 3.2 %, to Scope 1, 2 258.9 tCO2e, 36.3 % to Scope 2 and 3 766.5 tCO2e, 60.5 % to Scope 3.

Note that XXL in 2019 have expanded their reporting on GHG emissions from previous years to include Scope 1 emissions from consumption of fossil fuels, Scope 2 emissions from energy consumption and district heating, and Scope 3 emissions from business travel, mileage allowance, goods transportation and waste. The reporting of historic emission data is limited to electricity consumption, goods transportation, air travel and waste. As such, an exhaustive year on year comparison is not possible.

It is also important to note 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. Similar estimations have been made to separate energy consumption between office locations and warehouses in Alnabru, Bromma and Tammisto. 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 2019 amount to 141.8 tCO2e.

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

Emissions from stationary combustion constitute 59.8 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 34 820.4 MWh in 2019, compared to 36 266.6 MWh in 2018. This constitutes a reduction of 4 %. Total emissions from electricity consumption in 2019 constitute 1 872.8 tCO2e, which reflects a reduction in emissions of 14 % from 2018. This reduction is in large explained by changes in the local energy mixes and emission factors used in this report.

The emission factor Nordic electricity mix has been reduced by around 13 % yearly over the past two years, suggesting that electricity is being produced from sources with lower GHG emissions in 2019, compared to previous years (e.g. hydropower instead of gas power). Also the emission factor for Electricity Finland has been reduced by approximately 12 % from 2018 to 2019. In Austria, the energy mix has remained stable over the past few years.

The market-based emissions are presented on page 8 of this report. As XXL do not purchase any guarantees of origin, a residual mix emission factor has been used. In 2019 emissions from electricity consumption amount to 7 626.1 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 385.7 tCO2e in 2019.

Electric vehicles: Use of own or rented electric vehicles.

Emissions from the use of electric vehicles amount to 0,4 tCO2e for 2019.

Scope 3

Business travel: Air travel measured in pkm per region.

Emissions from flights, 835 tCO2e, account for 13.4 % of XXLs total emissions in 2019.

Note that reporting prior to 2019 has not split flights by region but placed all flights in the Continental/Nordic category, as the majority of total flights fall under this category. Emissions from air travel have decreased with 9 % from 2018 to 2019.

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

Mileage allowance has been paid for 944 772.9 km, totalling emissions of 152.8 tCO2e.

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 2 308.2 tCO2e, which constitute the largest share of XXL ASAs total emissions, 37.1 %. Yet, emissions from good transportation have decreased with 49 % since 2018.

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

Emissions from waste has decreased by 43 % from 2018 to 2019, equalling 361.8 tCO2e. This is the result of a reduction in total waste, and a lower share of waste to incineration.

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

Yearly report – GHG emissions (tCO2e)

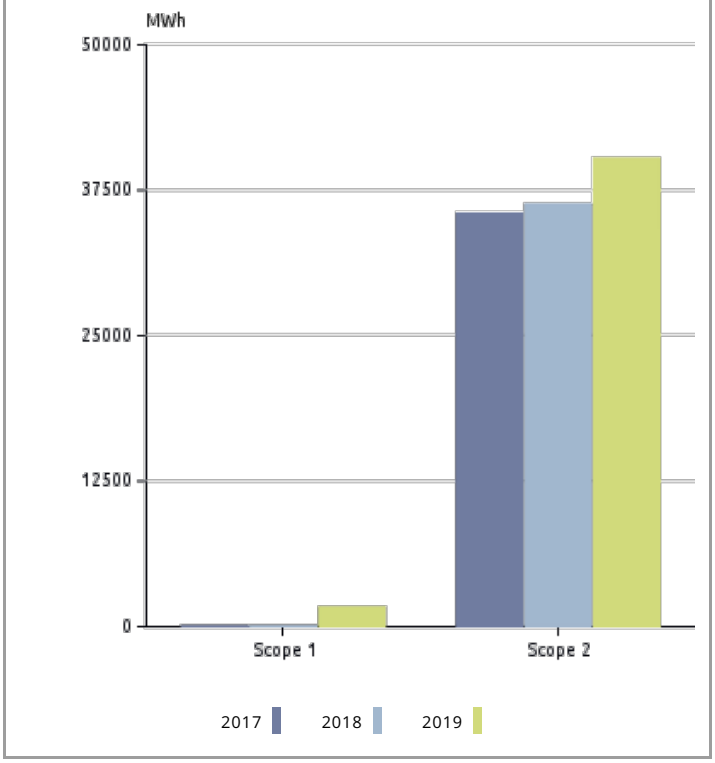
Category	*Description*	*2017*	*2018*	*2019*	*% change from previous year*
Stationary combustion					-
Burning oil				46.6	100.0%
Wood pellets				13.1	100.0%
Transportation					-
Diesel				48.2	100.0%
Diesel (NO)				38.4	100.0%
Diesel (SE)				47.0	100.0%
Petrol				8.1	100.0%
Scope 1 Emissions				201.6	100.0%
DH Nordic locations					-
District heating SE/Göteborg				20.9	100.0%
District heating SE/Halmstad				25.7	100.0%
District heating SE/Jönköping				11.0	100.0%
District heating SE/Karlstad				4.5	100.0%
District heating SE/Linköping				1.1	100.0%
District heating SE/Luleå				6.3	100.0%
District heating SE/Malmo				4.0	100.0%
District heating SE/Norrköping				1.1	100.0%
District heating SE/Orebro/Kumla				43.1	100.0%
District heating SE/Östersund				3.1	100.0%
District heating SE/Stockholm				80.5	100.0%
District heating SE/Sundsvall				15.7	100.0%
District heating SE/Uppsala				56.3	100.0%
District heating SE/Vasteras				19.4	100.0%
District heating SE/Vaxjo				6.1	100.0%
District heating Sweden mix				86.9	100.0%
Electric vehicles					-
Electric car Nordic				0.4	100.0%
Electricity					-
Electricity Austria		19.3	140.3	141.8	1.1%
Electricity Finland		828.8	705.6	631.8	-10.5%
Electricity Nordic mix		1 536.6	1 335.4	1 099.2	-17.7%
Scope 2 Emissions		2 384.7	2 181.4	2 258.9	3.6%
Waste					-
Cardboard, recycled				27.2	100.0%
Glass waste,recycled				-	-
Hazardous waste, recycled				-	-
Industrial inert waste, landfill				-	-
Metal waste,recycled				2.7	100.0%
Organic waste,recycled				-	-
Paper waste,recycled				37.6	100.0%
Plastic waste,recycled				2.0	100.0%
Waste mix, recycled		111.7	84.6	0.1	-99.9%
Waste mix,incinerated		746.5	747.5	395.2	-47.1%
WEEE,recycled				0.5	100.0%
Wood waste,recycled				5.1	100.0%
Air travel					-
Continental/Nordic RF		925.0	913.6	393.6	-56.9%

Domestic, RF				372.3	100.0%
Intercontinental, RF				69.0	100.0%
Business travel					-
Mileage all. avg.				98.1	100.0%
Mileage all. car (NO)				54.8	100.0%
Goods transportation					-
Truck 17t+		3 979.3	4 487.3	75.5	-98.3%
Truck 17t+	Transport til varehus Norge			98.5	100.0%
Truck 17t+	Transport til Kunde Østerrike			0.2	100.0%
Truck 17t+	Annen Transport			2.8	100.0%
Truck 17t+	Transport til Varehus Østerrike			632.8	100.0%
Truck 17t+	Retur fra Kunde Østerrike			0.6	100.0%
Truck 17t+	Transport til Kunde Finland			203.6	100.0%
Truck 17t+	Transport til Varehus Sverige			1 086.3	100.0%
Truck 17t+	Pakker Norge			207.9	100.0%
Scope 3 Emissions		5 762.5	6 233.1	3 766.5	-39.6%
Total		8 147.3	8 414.5	6 227.0	-26%
Percentage change			*3.3%*	*-26.0%*	

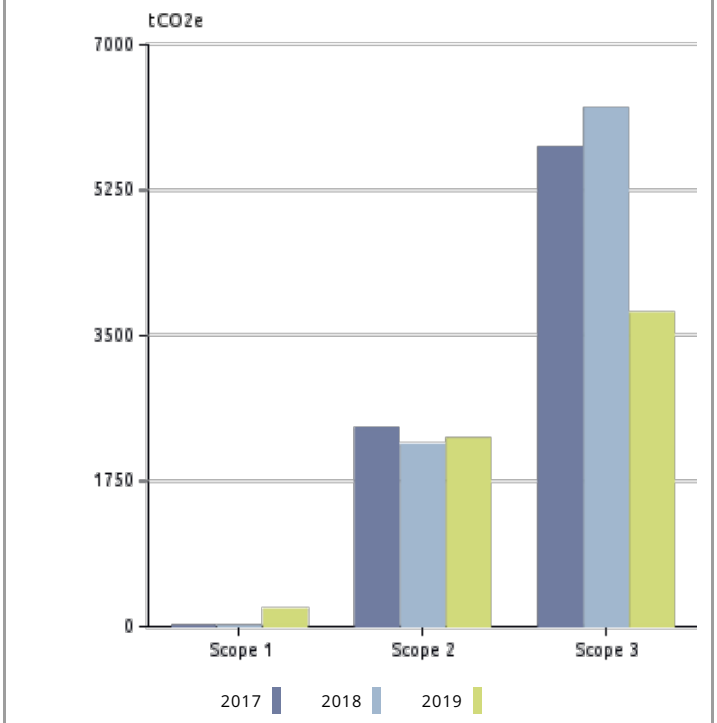
Key energy and climate performance indicators

Name	*Unit*	*2017*	*2018*	*2019*	*% change from previous year*
Total tCO2e / MNOK revenue	MNOK	-	-	0.7	100%
Total tCO2e / FTE		-	-	1.8	100%
Total tCO2e / warehouse	Antall	-	-	72.4	100%

Annual energy consumption (MWh) Scope 1 & 2



Annual GHG emission per scope



Market-based GHG emissions summary

Category	Unit	2017	2018	2019
Electricity market-based	tCO2e	10023.8	10702.9	7626.1
Scope 2 market-based	tCO2e	10023.8	10702.9	8012.2
Total market-based	tCO2e	15786.3	16935.9	11980.2
Percentage change			7.3 %	-29.3 %

Methodology and sources

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

This analysis is based on the operational control aspect that defines what should be included in the carbon inventory, as well as in the different scopes. When using the control approach to consolidate GHG emissions, companies shall choose between either the operational control or financial control criteria. Under the control approach, a company accounts for the GHG emissions from operations over which it has control. It does not account for GHG emissions from operations in which it owns an interest but has no control.

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

Scope 1 Mandatory reporting includes all direct emission sources where the organisation has operational control. This includes all use of fossil fuels for stationary combustion or transportation, in owned, leased or rented assets. It also includes any process emissions, from e.g. chemical processes, industrial gases, direct methane emissions etc.

Scope 2 Mandatory reporting includes indirect emissions related to purchased energy; electricity or heating/cooling where the organisation has operational control. The electricity emissions factors used in CEMAsys is based on national gross electricity production mixes on a 3 years rolling average (IEA Stat). The Nordic electricity mix covers the weighted production in Sweden, Norway, Finland and Denmark, which reflects the common Nord Pool market area. Emission factors per fuel type are based on assumption in the IEA methodological framework. Factors for district heating/cooling are either based on actual (local) production mixes, or average IEA stat.

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* method. The location-based method reflects the average emissions intensity of grids on which energy consumption occurs, while the market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice).

Businesses who report on their GHG emissions will now have to disclose both location-based emissions from the production of electricity and the marked-based emissions related to the potential purchase of Guaranties of Origin (GoO).

The purpose of this amendment in the reporting method is on one hand to show the impact of energy efficiency and saving measures, and on the other hand to display how the acquisition of GoOs 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 factor using this method is determined by whether the business acquires GoOs or not. When selling GoOs, the supplier certify that the electricity is produced by only renewable sources, which has an emission factor of 0 grams of CO2e per kWh. However, for electricity without the guarantee of origin, the emission factor is based on the remaining electricity production after all GoOs 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 to foreign consumers. In a market perspective, this implies that Norwegian hydropower is largely substituted with an electricity mix including fossil fuels.

Scope 3 Voluntary reporting of indirect emissions from purchased products or services in the value chain. The scope 3 emissions are a result of the company's different activities, which are not controlled by the company, i.e. they're indirect. Examples are business travel, goods transportation, waste handling, consumption of products etc. In general, the GHG report

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 that reflects the substance and economic reality of the company's business relationships.

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This list of references may not be complete. Depending on the use of the CEMAsys emission factors database, there are a number of different local and national sources. If necessary, please contact CEMAsys Help Desk for further details.