



SPAREBANKEN SØR

Carbon Accounting Report 2020

Sparebanken Sør Konsern (EN)

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 all organisational units.

The input data is based on consumption data from internal and external sources, which are converted into tonnes CO₂-equivalents (tCO₂e). 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 14064-1.

Reporting Year Energy and GHG Emissions

Emission source	Description	Consumption	Unit	Energy (MWh)	Emissions tCO ₂ e	% share
Transportation total				86.5	19.0	7.0 %
Petrol		2,500.0	liters	24.0	5.8	2.1 %
Diesel (NO)		6,000.0	liters	62.5	13.2	4.8 %
Scope 1 total				86.5	19.0	7.0 %
Electricity total				4,173.6	171.1	62.7 %
Electricity Nordic mix		4,173,604.0	kWh	4,173.6	171.1	62.7 %
DH Nordic locations total				718.0	8.8	3.2 %
District heating NO/Arendal		494,029.0	kWh	494.0	8.3	3.1 %
District heating NO/Kristiansand		223,933.0	kWh	223.9	0.4	0.1 %
Electric vehicles total				34.0	1.4	0.5 %
Electric car Nordic		200,000.0	pkm	34.0	1.4	0.5 %
Scope 2 total				4,925.6	181.3	66.4 %
Waste total				-	11.8	4.3 %
Residual waste, incinerated		22,900.0	kg	-	11.5	4.2 %
Paper waste, recycled		7,128.0	kg	-	0.2	0.1 %
Glass waste, recycled		271.0	kg	-	-	-
Metal waste, recycled		2,680.0	kg	-	0.1	-
Organic waste, recycled		3,591.0	kg	-	0.1	-
Plastic waste, recycled		867.0	kg	-	-	-
EE waste, recycled		790.0	kg	-	-	-
Business travel total				-	60.9	22.3 %
Continental/Nordic	Nordic	4,250.0	pkm	-	0.3	0.1 %
Continental/Nordic	Europe	10,514.0	pkm	-	0.9	0.3 %
Intercontinental		16,800.0	pkm	-	1.7	0.6 %
Domestic		19,356.0	pkm	-	2.5	0.9 %
Mileage all. car (NO)		396,390.0	km	-	55.5	20.3 %
Scope 3 total				-	72.7	26.6 %
Total				5,012.1	273.0	100.0 %
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Reporting Year Market-Based GHG Emissions

Category	Unit	2020
Electricity market-based	tCO ₂ e	1,097.7
Scope 2 market-based	tCO ₂ e	1,107.8
Total market-based	tCO ₂ e	1,199.5

In 2020, the total GHG emissions for Sparebanken Sør were calculated to 273 tons of CO₂-eq(tCO₂e). This is a reduction of 273 tCO₂e, corresponding to 34,6%, compared to the previous reporting year (2019).

The allocation of this year's GHG emissions are as follows: 19 tCO₂ (7%) in Scope 1, 181,3 tCO₂ (66,4%) in Scope 2 and 72,7 tCO₂e (26,6%) in Scope 3. The report concludes that there have been emission reductions in all Scopes in 2020. In Scope 1 (-16,7% compared to 2019), there has been a slight increase in purchased Petrol, but a more significant decrease in the use of Diesel. In Scope 2 (-7,3% compared to 2019), the emissions from District Heating have been substantially reduced, which can in part be explained by a positive change in the emission factor. In Scope 3 (-63,5% compared to 2019), the dramatic reduction of emissions is due to less Intercontinental- and Domestic Business Travel.

Scope 1:

Transportation: Actual consumption of fossil fuels in company vehicles (owned, rented, leased). Diesel and petrol consumption account for emissions corresponding to 19,0 tCO₂e. This is a 16,7% reduction from the previous reporting year. In 2019, the emission factor Diesel(B5) was changed to Diesel(NO) to provide a more accurate depiction of diesel consumption in Norway. The emission factor for Diesel (NO) has not changed since 2019, hence the reduction is due to the reporting organization's continuous transition to electric vehicles.

Scope 2:

Electricity: Measured consumption of electricity in self owned or rented premises/buildings. The main body of the table included in this report presents location-based electricity emissions using the emission factor Electricity Nordic Mix. Emissions from electricity consumption have increased by 0,8% in 2020, but it is worth noting that this was reduced by 33,3% from 2018 to 2019. Also note that the emission factor Electricity Nordic Mix has had a 5,1% increase since 2019, which reflects that less electricity is being produced from sources with lower GHG emissions in 2020, compared to the previous year (e.g., hydro power instead of natural gas). The actual electricity consumption in 2020 increased with 4% from the previous reporting year.

District Heating: Use of District Heating in self owned or rented premises/buildings. The only two locations reporting usage of District Heating was Arendal and Kristiansand. Total emissions from District Heating in Kristiansand amount to 0,4 tCO₂e, which is an 85,3% reduction from the previous reporting year. The reduction is due to a significant decrease in the emission factor for Kristiansand, in combination with a 27% reduction of used kWh District Heating.

Total emissions from district heating in Arendal amount to 8,3 tCO₂e, which is a 62,1% decrease from the previous reporting year. The reduction is due to a decline in the emission factor in Arendal (increased share of Bio Energy) and a 69% reduction of used kWh District Heating.

Company Owned Electric Vehicles: Sparebanken Sør owns eight electric vehicles. The use of these vehicles account for a total emission of 1,4 tCO₂e. Usage of electric vehicles has increased by 500pmk, corresponding to 41,4% increase in tCO₂e, due to an increased number of electric vehicles (6 in 2019 vs 8 in 2020). Emissions from electric vehicles account for only 0,5% of the reporting organization's total GHG emissions.

Scope 3:

Air Travel: Measured in pkm per region. Emissions from air travel correspond to 11,6 tCO₂e, accounting for 6,3% of the reporting organization's total emissions in 2020. Emissions from air travel has been reduced by 31,6% from the previous reporting year. The drastic decline is likely due to COVID-19 related travel restrictions.

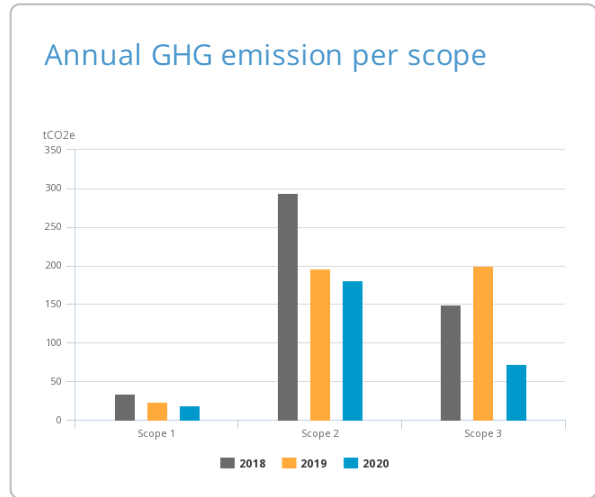
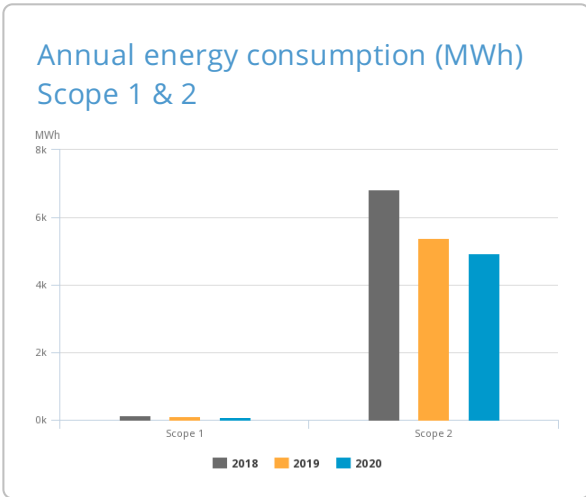
Mileage allowance: In 2020, mileage allowance was paid for 396 390 km which corresponds to an emission of 55,5 tCO₂e, which is a 31,9% decrease from 2019. This is due to 185 901 less km reported.

Waste: Reported waste fractions in kg with consideration of treatment method (recycled, energy recovered, landfill). In 2020 waste accounted for 11,8 tCO₂e, representing 4,3% of total emissions.

Waste fractions with emissions lower than 0,1 tCO₂e, such as waste related to glass, organic waste and paper, glass, plastic and EE waste are only marked with a line (-) in the presented tables.

Annual GHG Emissions

Category	Description	2018	2019	2020	% change from previous year
Transportation total		33.4	22.8	19.0	-16.7 %
Diesel (B5)		30.7	-	-	-
Petrol		2.8	4.9	5.8	19.0 %
Diesel (NO)		-	17.9	13.2	-26.4 %
Scope 1 total		33.4	22.8	19.0	-16.7 %
Electricity total		254.3	169.7	171.1	0.8 %
Electricity Nordic mix		254.3	169.7	171.1	0.8 %
DH Nordic locations total		38.2	24.8	8.8	-64.7 %
District heating NO/Arendal		38.2	22.0	8.3	-62.1 %
District heating NO/Kristiansand		-	2.7	0.4	-85.3 %
Electric vehicles total		1.0	1.0	1.4	41.4 %
Electric car Nordic		1.0	1.0	1.4	41.4 %
Scope 2 total		293.5	195.5	181.3	-7.3 %
Waste total		10.9	14.1	11.8	-16.2 %
Residual waste, incinerated		10.6	13.9	11.5	-17.0 %
Paper waste, recycled		0.2	0.2	0.2	-34.2 %
Glass waste, recycled		-	-	-	-24.3 %
Metal waste, recycled		-	-	0.1	100.0 %
Organic waste, recycled		-	-	0.1	387.9 %
Plastic waste, recycled		-	-	-	542.2 %
EE waste, recycled		-	-	-	100.0 %
Business travel total		138.6	185.1	60.9	-67.1 %
Continental/Nordic		-	38.0	-	-100.0 %
Continental/Nordic		9.1	-	-	-
Continental/Nordic	Nordic	-	-	0.3	100.0 %
Continental/Nordic	Europe	-	-	0.9	100.0 %
Intercontinental		-	48.5	1.7	-96.5 %
Intercontinental		10.2	-	-	-
Domestic		-	17.1	2.5	-85.4 %
Nordic		-	-	-	-100.0 %
Nordic		44.6	-	-	-
Mileage all. car (NO)		74.7	81.5	55.5	-31.9 %
Scope 3 total		149.5	199.2	72.7	-63.5 %
Total		476.4	417.5	273.0	-34.6 %
Percentage change		100.0 %	-12.4 %	-34.6 %	



Annual Market-Based GHG Emissions

Category	Unit	2018	2019	2020
Electricity market-based	tCO ₂ e	-	-	1,097.7
Scope 2 market-based	tCO ₂ e	39.1	25.8	1,107.8
Total market-based	tCO ₂ e	222.0	247.8	1,199.5
Percentage change		100.0 %	11.6 %	384.1 %

Annual Key Energy and Climate Performance Indicators

Name	Unit	2018	2019	2020	% change from previous year
Scope 1 + 2 emissions (tCO ₂ e)		326.9	218.3	200.3	-8.3 %
Total emissions (s1+s2+s3) (tCO ₂ e)		476.4	417.5	273.0	-34.6 %
Total energy scope 1 + 2 (MWh)		6,967.9	5,480.3	5,012.1	-8.5 %
Sum energy per location (MWh)		6,829.6	5,383.4	4,925.6	-8.5 %
Sum square meters (m ²)		-	20,334.0	23,004.0	13.1 %
Sum locations kWh/m ²		-	264.7	214.1	-19.1 %
tCO ₂ e/FTE		0.6	0.5	0.4	-10.7 %
Total tCO ₂ e/FTE		0.9	0.9	0.6	-36.3 %
MWh/FTE		13.6	12.3	10.9	-10.9 %
MWh/m ² (Scope 2)		0.2	0.3	0.2	-19.1 %
Oppvarmet areal (m ²)	m ²	29,239.0	20,334.0	23,004.0	13.1 %
FTE		512.0	446.0	458.0	2.7 %

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 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 organisation has operational control. The electricity emission factors used in Cemsys 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 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 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 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 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.