



SPAREBANKEN SØR

## Energi & klimaregnskap 2022

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### Sparebanken Sør Konsern

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 the following organisational units: Sparebanken Sør- Group Level

The input data is based on consumption data from internal and external sources, which are converted into tonnes CO<sub>2</sub>-equivalents (tCO<sub>2</sub>e). 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.

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## Reporting Year Energy and GHG Emissions

Emission source	Consumption	Unit	Energy (MWh)	Emissions tCO <sub>2</sub> e	% share	
Transportation total			53.3	11.3	4.9 %	
Petrol	1,548.0	liters	15.0	3.6	1.6 %	
DIESEL (NO)	3,683.0	liters	38.3	7.7	3.3 %	
<b>Scope 1 total</b>			<b>53.3</b>	<b>11.3</b>	<b>4.9 %</b>	
<b>Electric vehicles total</b>			<b>68.0</b>	<b>1.8</b>	<b>0.8 %</b>	
Electric car Nordic	357,851.0	km	68.0	1.8	0.8 %	
<b>Electricity total</b>			<b>4,447.9</b>	<b>115.6</b>	<b>49.8 %</b>	
Elektricity Nordic mix	4,447,870.0	kWh	4,447.9	115.6	49.8 %	
<b>District Heating total</b>			<b>868.6</b>	<b>14.3</b>	<b>6.2 %</b>	
District Heating Kristiansand	240,244.0	kWh	240.2	9.3	4.0 %	
District Heating Arendal	551,590.0	kWh	551.6	3.9	1.7 %	
District Heating Norwegian mix	76,731.0	kWh	76.7	1.1	0.5 %	
<b>Scope 2 total</b>			<b>5,384.4</b>	<b>131.8</b>	<b>56.8 %</b>	
<b>Waste total</b>			-	<b>13.4</b>	<b>5.8 %</b>	
Residual waste, incinerated	23,491.0	kg	-	11.8	5.1 %	
Paper waste, recycled	9,829.0	kg	-	0.2	0.1 %	
Organic waste, treated	5,395.0	kg	-	0.1	-	
EE waste, recycled	3,149.0	kg	-	0.1	-	
Wood waste, recycled	45,707.0	kg	-	1.0	0.4 %	
Metal waste, recycled	10,183.0	kg	-	0.2	0.1 %	
Glass waste, recycled	1,595.0	kg	-	-	-	
Plastic waste, recycled	829.0	kg	-	-	-	
<b>Business Travel total</b>			-	<b>75.7</b>	<b>32.6 %</b>	
Air travel, domestic	67,860.0	pkm	-	8.8	3.8 %	
Air travel, continental	Norden	108,173.0	pkm	-	8.8	3.8 %
Mileage all. Car (NO)	774,097.0	km	-	58.1	25.0 %	
<b>Scope 3 total</b>			-	<b>89.1</b>	<b>38.4 %</b>	
<b>Total</b>			<b>5,437.7</b>	<b>232.1</b>	<b>100.0 %</b>	
<b>KJ</b>			<b>19,575,695,448.0</b>			

Kategori	Enhet	2022
Elektrisitet Sum (Scope 2) market-based calculations	tCO <sub>2</sub> e	126.9
Scope 2 total market-based calculations	tCO <sub>2</sub> e	142.7
Scope 1+2+3 Total Market-based calculations	tCO <sub>2</sub> e	243.1

### Group level:

In 2022, the total GHG emissions for Sparebanken Sør were calculated to a total of 232.1 tons of CO<sub>2</sub>-equivalents (tCO<sub>2</sub>e). This is a reduction of 8.7%, compared to the previous reporting year, when it was reported a total of 254.4 tCO<sub>2</sub>e.

The allocation of this year's GHG emissions are as follows:

**Scope 1:** 11,3 tCO<sub>2</sub>e (4,9%)

**Scope 2:** 131,8 tCO<sub>2</sub>e (56,8%)

**Scope 3:** 89,1 tCO<sub>2</sub>e (38,4%)

There is a reduction in Scope 1 and 2, compared with 2021, whilst there is an increase in emissions in Scope 3. In Scope 1, both the usage of diesel and petrol reduce compared to 2021, to a change of 16.8%. Scope 2 reduced by 24.6%, by reducing the usage of electricity. In Scope 3, the emissions have increased by 35% since 2021. This is due to an increase in both business travels and waste. Sparebanken Sør included two daughter companies: Sørmeglere and Sørlandets Forsikringscenter AS.

### Scope 1:

Transportation: Fossil fuel consumption in company cars is based on an estimate of the number of kilometres per year and average fuel consumption based on the distances driven over the car's life to date. In 2022, the use of diesel and petrol accounts for emissions equivalent to 11.3 tCO<sub>2</sub>e. This is a reduction from the previous year of 16.8%. The consumption of electric cars has increased since 2021 and is one reason why the consumption of fossil fuels has decreased at Sparebanken Sør. Since 2017, emissions in Scope 1 have been reduced by 65.9%.

### Scope 2:

Electricity: measured consumption of electricity in self-owned or rented premises/ buildings. The main table shows emissions calculated with the location-based emission factor Nordic Mix. The actual consumption of electricity has been reduced from 5 158 473 kWh in 2021 to 4 447 870 kWh in 2022. The total emissions for electricity calculated with Nordic Mix therefore ends up at 115.6 tCO<sub>2</sub>e. In addition to this, due to change in the emission factor Nordic Mix, the total emissions is reduced compared to 2021. Emissions for the actual consumption of electricity has been reducing at a stable rate since 2017, adding up to a reduction of 60,7%.

Emissions related to electricity calculated with a market-based factor is presented under the tables in this report.

Sparebanken Sør has purchased Guarantees of origin for 89,3% of their electricity consumption in 2022. Meaning that the emissions for the part not covered by the Guarantees of Origin is at 126.9 tCO<sub>2</sub>e. The practice of presenting emissions from electricity consumption using two different approaches is further explained under method.

District Heating: Use of District Heating in self-owned or rented premises/buildings. Locations in Arendal, Kristiansand and the smaller offices located throughout Norway, were the ones reporting on their use of District Heating. Total emissions from district heating added up to a total of 9.3 tCO<sub>2</sub>e in Kristiansand. The emissions have increased noticeably since 2021, where it was reported a total of 0,3 tCO<sub>2</sub>e.

The consumption of district heating in Arendal is reduced by 63.2% from 2021, and by 89.8% since 2017, when it was reported a total amount of 38.2 tCO<sub>2</sub>e. The amount reported in 2022 totaled at 3.9 tCO<sub>2</sub>e.

The emissions reported from the other offices has been reduced by 31% since 2021. The emission factor District heating Norway Mix has been chosen for the offices, as the locations of the offices varies over a broad geographical area in Norway. The other offices are located in Bryne, Bygland, Byremo, Bø, Evje, Flekkefjord, Froland, Fyresdal, Hovden, Hægebostad, Kvinesdal, Kviteseid, Lillesand, Lindesnes, Sandefjord, Sogndal, Søgne, Treungen, Vanse, Vågsbygd, Øyslebø, Åmli og Åseral. The offices for Sørmeqleren are also included. The total emissions end up at 1.1 tCO<sub>2</sub>e in 2022.

### Scope 3

Business travel: Number of trips per region. Emissions from business travel by air corresponds to 17.6 tCO<sub>2</sub>e in 2022. Emissions from air travel has increased for domestic flights in Norway since 2021, as well as for within the Nordics to 8.8 tCO<sub>2</sub>e. The reason for this increase could be due to fewer travels in 2020 and 2021 because of the travel restrictions during the pandemic.

Mileage allowance: In 2022, compensation has been given for 774 097 km. This corresponds to an emission of 58.1 tCO<sub>2</sub>e and is an increase of 14.1% since 2021. Since 2017, emissions from mileage allowances been reduced by 24.4% from 76.9 tCO<sub>2</sub>e in 2017 to 58.1 tCO<sub>2</sub>e in 2022.

Waste: Reported waste in kg divided into different waste fractions, as well as treatment method (recycled, energy recovered, landfill). Waste accounts for 13.4 tCO<sub>2</sub>e emissions in 2022. As the emissions linked to glass and plastic waste are less than 0.1 tCO<sub>2</sub>e, it is marked with a dash in the table above. Emissions from waste and treatment methods have remained relatively stable since 2017 with a slight increase from 11 tCO<sub>2</sub>e to 13.4 tCO<sub>2</sub>e in 2022.

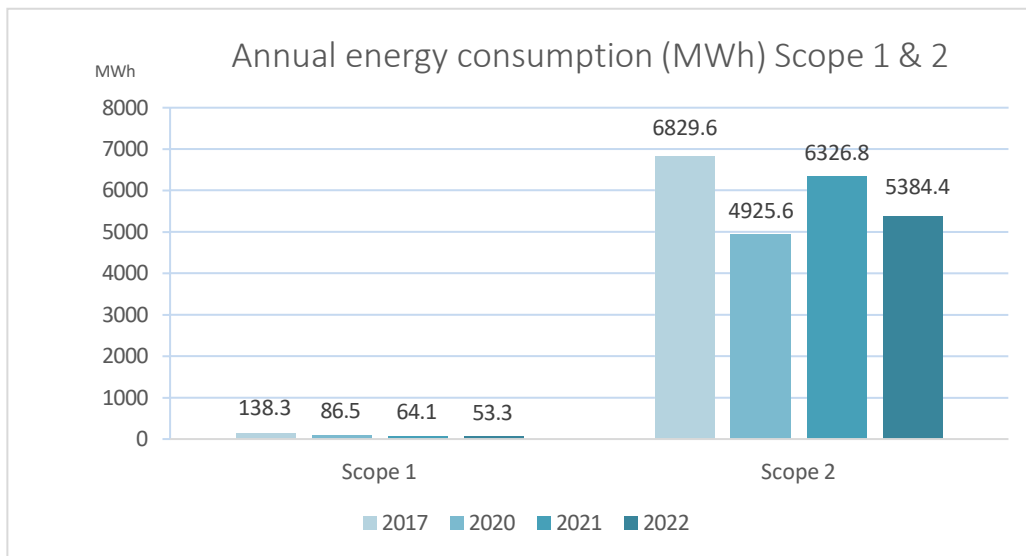
### Summary:

Biogenic emissions are CO<sub>2</sub> emissions dependent on the natural carbon cycle. That is, emissions from burning, harvesting, fermentation or processing of biological materials are therefore categorised as biogenic CO<sub>2</sub> emissions. This is not included in the report as Sparebanken Sør has no relevant emissions in any of the scopes.

In general, there has been a stable reduction for the group's emissions since 2017, in all three scopes, down 54.7% from a total of 512.7 tCO<sub>2</sub>e in 2017 to 232.1 tCO<sub>2</sub>e in 2022. This can be due to both reductions in diesel consumption, as well as reductions in the use of district heating in Arendal. The number of flights has also been reduced, with a large decrease in 2020 and 2021 due to the pandemic and travel restrictions.

## Annual GHG Emissions

Category	2017	2020	2021	2022	% change from previous year
<b>Transportation total</b>	<b>33.2</b>	<b>19.0</b>	<b>13.6</b>	<b>11.3</b>	<b>-16.8 %</b>
Petrol	2.8	5.8	4.4	3.6	-18.0 %
Diesel (B5)	30.5	-	-	-	-
Diesel (NO)	-	13.2	9.2	7.7	-16.2 %
<b>Scope 1 total</b>	<b>33.2</b>	<b>19.0</b>	<b>13.6</b>	<b>11.3</b>	<b>-16.8 %</b>
<b>Electricity total</b>	<b>293.9</b>	<b>171.1</b>	<b>159.9</b>	<b>115.6</b>	<b>-27.7 %</b>
Electricity Nordic mix	293.9	171.1	159.9	115.6	-27.7 %
<b>District heating location total</b>	<b>38.2</b>	<b>8.8</b>	<b>12.5</b>	<b>14.3</b>	<b>14.8 %</b>
District heating NO/ Kristiansand	38.2	0.4	0.3	9.3	3,006.0 %
District heating NO/ Arendal	-	8.3	10.6	3.9	-63.2 %
District heating Norway mix	-	-	1.5	1.1	-31.0 %
<b>Electrical vehicles total</b>	<b>1.1</b>	<b>1.4</b>	<b>2.4</b>	<b>1.8</b>	<b>-25.7%</b>
Electric car Nordic	1.1	1.4	2.4	1.8	-25.7%
<b>Scope 2 total</b>	<b>333.2</b>	<b>181.3</b>	<b>174.8</b>	<b>131.8</b>	<b>-24.6%</b>
<b>Waste total</b>	<b>11.0</b>	<b>11.8</b>	<b>10.1</b>	<b>13.4</b>	<b>33.3 %</b>
Residual waste, incinerated	10.6	11.5	9.7	11.8	22.2 %
Paper waste, recycled	0.4	0.2	0.2	0.2	26.2 %
Glass waste, recycled	-	-	-	-	217.7 %
Plastic waste, recycled	-	-	-	-	-40.3 %
EE waste, recycled	-	-	-	0.1	906.1 %
Organic waste, treated	-	0.1	0.1	0.1	28.0 %
Metal waste, recycled	-	0.1	0.1	0.2	205.7 %
Wood waste, recycled	-	-	-	1.0	1,918.9 %
<b>Business travel total</b>	<b>135.3</b>	<b>60.9</b>	<b>55.9</b>	<b>75.7</b>	<b>35.3 %</b>
Air travel, domestic	-	2.5	4.7	8.8	85.9 %
Air travel, continental	9.1	0.3	0.1	8.8	8,914.4 %
Air travel, continental	-	0.9	0.2	-	-100.0 %
Air travel, intercontinental	9.5	1.7	-	-	-
Mileage all. car (NO)	76.9	55.5	50.9	58.1	14.1 %
Flights Nordic	39.9	-	-	-	-
<b>Scope 3 total</b>	<b>146.3</b>	<b>72.7</b>	<b>66.0</b>	<b>89.1</b>	<b>35.0 %</b>
<b>Total</b>	<b>512.7</b>	<b>273.0</b>	<b>254.4</b>	<b>232.1</b>	<b>-8.7 %</b>
Percentage change		-46.7 %	-6.8 %	-8.7 %	



### Annual Market-Based GHG Emissions

Kategori	Enhet	2017	2020	2021	2022
Elektrisitet total (Scope 2) with Market-based calculations	tCO <sub>2</sub> e	-	1,097.7	72.1	126.9
Scope 2 total with Market-based electricity calculations	tCO <sub>2</sub> e	39.3	1,107.8	87.0	142.7
Scope 1+2+3 total with market-based electricity calculations	tCO <sub>2</sub> e	218.8	1,199.5	166.6	243.1

## Annual Key Energy and Climate Performance Indicators

Navn	2017	2020	2021	2022	% endring fra forrige år
Scope 1 + 2 emissions (tCO <sub>2</sub> e)	366.4	200.3	188.4	143.1	-24.1 %
Total emissions (S1+S2+S3) (tCO <sub>2</sub> e)	512.7	273.0	254.4	232.1	-8.7 %
Total energy Scope 1+2 (MWh)	6,967.9	5,012.1	6,390.8	5,437.7	-14.9 %
Sum energy per location (MWh)	6,829.6	4,925.6	6,326.8	5,384.4	-14.9 %
Sum square (m <sup>2</sup> )	-	23,006.0	26,769.0	26,458.0	-1.2 %
Sum locations kWh/m <sup>2</sup>	-	214.1	236.3	203.5	-13.9 %
tCO <sub>2</sub> e/FTE	0.8	0.4	0.3	0.2	-24.6 %
Total tCO <sub>2</sub> e/Revenue	1.2	0.6	0.4	0.4	-9.4 %
MWh/FTE	16.1	10.9	10.7	9.0	-15.5 %
FTE	432.0	458.0	597.0	601.0	0.7 %

## 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 CO<sub>2</sub>-equivalents: CO<sub>2</sub>, CH<sub>4</sub> (methane), N<sub>2</sub>O (laughing gas), SF<sub>6</sub>, HFCs, PFCs and NF<sub>3</sub>.

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 CO<sub>2</sub>e 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.

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Sources:

[Department for Business, Energy & Industrial Strategy](#) (2022). Government emission conversion factors for greenhouse gas company reporting (DEFRA)

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WBCSD/WRI (2015). GHG protocol Scope 2 guidance: An amendment to the GHG protocol corporate standard. World Business Council on Sustainable Development (WBCSD), Geneva, Switzerland /World Resource Institute (WRI), Washington DC, USA, 117 pp.

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.