

# Carbon Accounting Report 2024

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## Storebrand Real Estate

### Storebrand Eiendomsfond Norge (SEN KS)

The aim of this report is to get an overview of the organization's greenhouse gas (GHG) emissions, which is an integrated part of the company's climate strategy. Carbon accounting is a fundamental tool to assess and identify concrete measures to reduce GHG emissions. The annual report enables the organization to benchmark performance indicators like carbon intensity and evaluate progress over time. The report covers 100 % of the SEN KS portfolio with (for comparability) a full operational year in the company's ownership, consisting of 20 properties totaling 450 326 m<sup>2</sup> in 2023, as listed below. The fund invests in properties in Norway only.

#### SEN KS:

1. Grev Wedels Plass 9, including Skippergata
2. Brynsalleen
3. Nydalsveien 36-38
4. Gullhaug Torg 2B
5. Philip Pedersens vei 7-9 (Lysaker Polaris)
6. Solheimsgaten 7A-E
7. Dikeveien 28 (Østfoldhallen Kjøpesenter)
8. Dikeveien 17-19 (Østfoldhallene Big Box)
9. Biblioteksgata 30 (Metro Kjøpesenter)
10. Gneisveien 18 (Bergerterminalen)
11. Gneisveien 12 (Berger Omlastningssentral)
12. Stormåsan 19 (Deli Skog Syd Øst)
13. Bonntjennsvegen 12 – 14
14. Martin Linges Vei 2 (Fornebu Hotell)
15. Lagårdsveien 44 (Statens hus)
16. Destilleriveien 11
17. Innspurten 7 (Helsfyr Hotell)
18. Stillverksveien 28 (Portalen Hotell)
19. Lagårdsveien 46 (Skattens hus)
20. Dr. Hansteins Gate 13-17 (Spor X)

## Reporting Year Energy and GHG Emissions

Emission source	Description	Consumption	Unit	Energy (MWh)	Emissions tCO <sub>2</sub> e	% share
<b>Stationary combustion total</b>				<b>171.7</b>	<b>39.6</b>	<b>2.2 %</b>
LPG		-	kWh	-	-	-
LPG	Oppv/kjol	170,706.0	kWh	170.7	39.3	2.2 %
Burning oil	Oppv/kjol	994.0	kWh	1.0	0.3	-
<b>Scope 1 total</b>				<b>171.7</b>	<b>39.6</b>	<b>2.2 %</b>
<b>Electricity total</b>				<b>45,417.6</b>	<b>1,226.3</b>	<b>67.7 %</b>
Electricity Nordic mix	Fellesanlegg	7,336,869.8	kWh	7,336.9	198.1	10.9 %
Electricity Nordic mix	Leietakere	38,080,691.1	kWh	38,080.7	1,028.2	56.8 %
<b>District heating location total</b>				<b>15,182.8</b>	<b>151.1</b>	<b>8.3 %</b>
District heating NO/Oslo		7,405,596.0	kWh	7,405.6	81.5	4.5 %
District heating NO/Fredrikstad		1,360,392.3	kWh	1,360.4	10.3	0.6 %
District heating NO/Stavanger/Sandnes		1,187,947.4	kWh	1,187.9	1.5	0.1 %
District heating NO/Bergen		1,322,157.1	kWh	1,322.2	2.0	0.1 %
District heating NO/Nydalen		886,854.7	kWh	886.9	28.4	1.6 %
District cooling NO/Nydalen		291,998.4	kWh	292.0	1.8	0.1 %
District cooling NO/Sandvika		999,450.0	kWh	999.5	6.4	0.4 %
District heating NO/Lysaker/Fornebu/Lilleaker		498,100.0	kWh	498.1	2.8	0.2 %
District heating NO/Drammen		150,484.0	kWh	150.5	10.0	0.6 %
District cooling NO/Bergen		1,079,779.7	kWh	1,079.8	6.5	0.4 %
<b>District heating general total</b>				<b>379.2</b>	<b>-</b>	<b>-</b>
District heating, renewable	Bioolje	379,224.9	kWh	379.2	-	-
<b>Scope 2 total</b>				<b>60,979.5</b>	<b>1,377.4</b>	<b>76.1 %</b>
<b>Waste total</b>				<b>-</b>	<b>370.7</b>	<b>20.5 %</b>
Residual waste, incinerated	Usortert	722,377.4	kg	-	351.5	19.4 %
Mixed waste, recycled	Sortert	2,965,568.8	kg	-	19.0	1.0 %
Mixed waste, recycled	sortert	37,834.0	kg	-	0.2	-
<b>Water total</b>				<b>-</b>	<b>22.6</b>	<b>1.2 %</b>
Water withdrawal, municipal		147,869.9	m <sup>3</sup>	-	22.6	1.2 %
<b>Scope 3 total</b>				<b>-</b>	<b>393.4</b>	<b>21.7 %</b>
<b>Total*</b>				<b>61,151.2</b>	<b>1,810.3</b>	<b>100.0 %</b>
<b>KJ*</b>				<b>220,144,483,008.0</b>		
*The total numbers for MWh and KJ include only Scope 1 + Scope 2						

## Reporting Year Market-Based GHG Emissions

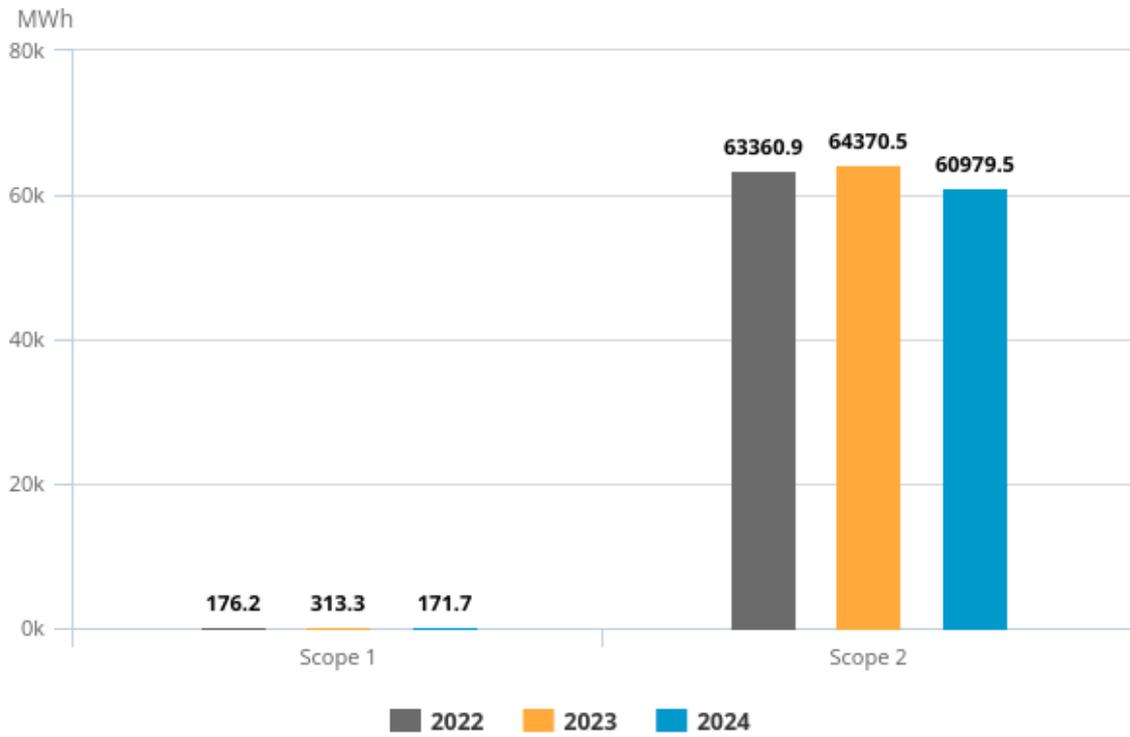
Category	Unit	2024
Electricity Total (Scope 2) with Market-based calculations	tCO <sub>2</sub> e	17,108.8
Scope 2 Total with Market-based electricity calculations	tCO <sub>2</sub> e	17,108.8
Scope 1+2+3 Total with Market-based electricity calculations	tCO <sub>2</sub> e	17,692.9

The above provides a comprehensive summary of the GHG emissions accounting of Storebrand Real Estate for the reporting year. It illustrates the scopes and scope 3 categories included, along with the respective emission sources. The table presents consumption data and its corresponding reporting unit (e.g., kg, liters, kgCO<sub>2</sub>e, km), consumption data converted into energy (MWh) and tCO<sub>2</sub>e, and the % share each emission source represented in the overall GHG emissions accounting.

## Annual GHG Emissions

Category	Description	2022	2023	2024	% change from previous year
<b>Stationary combustion total</b>		<b>37.8</b>	<b>67.3</b>	<b>39.6</b>	<b>-41.2 %</b>
LPG		-	-	-	-
LPG	Oppv/kjøøl	37.7	-	-	-
LPG	Oppv/kjøøl	-	66.8	39.3	-41.2 %
Burning oil	Oppv/kjøøl	0.2	-	-	-
Burning oil	Oppv/kjøøl	-	0.5	0.3	-40.0 %
<b>Refrigerants total</b>		<b>8.8</b>	<b>-</b>	<b>-</b>	<b>-</b>
R-452A		8.8	-	-	-
<b>Scope 1 total</b>		<b>46.6</b>	<b>67.3</b>	<b>39.6</b>	<b>-41.2 %</b>
<b>Electricity location-based total</b>		<b>1,265.4</b>	<b>1,347.7</b>	<b>1,226.3</b>	<b>-9.0 %</b>
Electricity Nordic mix	Fellesanlegg	208.6	220.5	198.1	-10.2 %
Electricity Nordic mix	Leietakere	934.4	1,127.2	1,028.2	-8.8 %
Electricity Nordic mix		122.4	-	-	-
<b>District heating location total</b>		<b>120.2</b>	<b>111.5</b>	<b>151.1</b>	<b>35.5 %</b>
District heating NO/Oslo		64.3	59.0	81.5	38.1 %
District heating NO/Fredrikstad		7.5	4.6	10.3	123.9 %
District heating NO/Stavanger/Sandnes		-	0.8	1.5	87.5 %
District heating NO/Bergen		1.9	1.7	2.0	17.6 %
District cooling NO/Bergen		6.8	6.3	6.5	3.2 %
District heating NO/Nydalen		11.3	12.2	28.4	132.8 %
District cooling NO/Nydalen		2.0	1.8	1.8	-
District cooling NO/Sandvika		11.2	7.1	6.4	-9.9 %
District heating NO/Lysaker/Fornebu/Lilleaker		3.4	11.0	2.8	-74.5 %
District heating NO/Drammen		6.6	6.9	10.0	44.9 %
District heating Norway mix		5.3	-	-	-
<b>District heating general total</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
District heating, renewable	Bioolje	-	-	-	-
<b>Scope 2 total</b>		<b>1,385.6</b>	<b>1,459.1</b>	<b>1,377.4</b>	<b>-5.6 %</b>
<b>Waste total</b>		<b>556.9</b>	<b>583.4</b>	<b>370.7</b>	<b>-36.5 %</b>
Residual waste, incinerated	Usortert	486.4	517.4	351.5	-32.1 %
Mixed waste, recycled	Sortert	70.5	65.4	19.0	-70.9 %
Mixed waste, recycled	sortert	-	0.7	0.2	-71.4 %
<b>Water total</b>		<b>21.4</b>	<b>28.8</b>	<b>22.6</b>	<b>-21.5 %</b>
Water withdrawal, municipal		21.4	28.8	22.6	-21.5 %
<b>Scope 3 total</b>		<b>578.3</b>	<b>612.2</b>	<b>393.4</b>	<b>-35.7 %</b>
<b>Total</b>		<b>2,010.6</b>	<b>2,138.6</b>	<b>1,810.3</b>	<b>-15.4 %</b>
<b>Percentage change</b>			<b>6.4 %</b>	<b>-15.4 %</b>	

### Annual energy consumption (MWh) Scope 1 & 2



### Annual Market-Based GHG Emissions

Category	Unit	2022	2023	2024
Electricity Total (Scope 2) with Market-based calculations	tCO <sub>2</sub> e	12,946.1	15,787.1	17,108.8
Scope 2 Total with Market-based electricity calculations	tCO <sub>2</sub> e	12,946.1	15,787.1	17,108.8
Scope 1+2+3 Total with Market-based electricity calculations	tCO <sub>2</sub> e	13,691.3	16,578.0	17,692.9
Percentage change			21.1 %	6.7 %

## Annual Key Energy and Climate Performance Indicators

Name	Unit	2022	2023	2024	% change from previous year
Scope 1 + 2 emissions (tCO <sub>2</sub> e)		1,432.2	1,526.4	1,417.0	-7.2 %
Total emissions (s1+s2+s3) (tCO <sub>2</sub> e)		2,010.6	2,138.6	1,810.3	-15.3 %
Total energy scope 1 + 2 (MWh)		63,537.1	64,683.8	61,151.2	-5.5 %
Sum energy per location (MWh)		63,360.9	64,370.5	60,979.5	-5.3 %
Sum square meters (m <sup>2</sup> )		444,900.2	450,326.2	450,326.2	-
Sum locations kWh/m <sup>2</sup>		142.4	142.9	135.4	-5.3 %

## 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 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., as well as leakage of refrigerants.

Scope 2 includes indirect emissions related to purchased energy, including electricity and heating/cooling in assets owned/controlled by the organisation.

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 generated by electricity production to the end consumers on a given grid, namely the location-based and the market-based method. 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 emissions accounting highlights the effect of both of these types of 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. Most location-based electricity emission factors used in CEMAsys are based on national gross electricity production mixes and are published by the International Energy Agency's statistics (IEA Stat). Emission factors per fuel type are in these calculations based on assumptions in the IEA methodological framework. Emission factors for district heating/cooling are either based on actual (local) production mixes, or average national statistics.

The market-based method: The choice of emission factors when using this method is determined by whether the organisation acquires GoOs/RECs or not. When selling GoOs for renewable electricity or RECs, the supplier guarantees that the same amount of electricity has been produced exclusively from renewable sources, which is assumed to have an emission factor of 0 grams CO<sub>2</sub>e per kWh. However, for electricity without GoOs or RECs, the emission factor should instead be based on the remaining electricity supply after all GoOs for renewable electricity and/or RECs have been sold and cancelled. This is called the residual mix, which in most cases is connected to a substantially higher emission factor than the location-based emission

factor.

Scope 3 includes indirect emissions resulting from other value chain activities. The scope 3 emissions are a result of the company's upstream and downstream activities, which are not directly controlled by the organisation. Examples include production of purchased goods and services, business travel, goods transportation, waste handling, use of sold products, etc.

In general, the carbon accounting should include information that stakeholders, 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:

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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 not complete, but contains the most essential references used in CEMAsys. In addition, other databases and local/national sources may be used, depending on the selection of emission factors.