



Greenhouse Gas Protocol (Dual Reporting) Report for SBAB

Assessment Period: 2017

Produced on March 13, 2018 by *Our Impacts* on behalf of U&W

Assessment Details

Consolidation Approach

Operational Control

Organisational Boundaries

Operations of SBAB

Included

- SBAB
- Göteborg
- Karlstad
- Malmö
- Stockholm

Operational Boundary

- Air travel
- Cars
- District cooling
- District heating
- Electricity
- Employee owned cars (unknown fuel)
- Incinerated waste
- Rail (train, tram, light rail, underground)
- Recycled waste
- Taxi

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Introduction

A greenhouse gas (GHG) emissions assessment quantifies the total greenhouse gases produced directly and indirectly from a business or organisation's activities. Also known as a carbon footprint, it is an essential tool, providing your business with a basis for understanding and managing its climate change impacts.

A GHG assessment quantifies all seven Kyoto greenhouse gases where applicable and is measured in units of carbon dioxide equivalence, or CO₂e¹. The seven Kyoto gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), nitrogen trifluoride (NF₃), sulphur hexafluoride (SF₆) and perfluorocarbons (PFCs). The global warming potential (GWP) of each gas is illustrated in the Table 1.

Table 1. GWP of Kyoto Gases (IPCC 2007)

Greenhouse Gas	GWP
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	25
Nitrous oxide (N ₂ O)	298
Hydrofluorocarbons (HFCs)	124 - 14,800
Perfluorocarbons (PFCs)	7,390 - 12,200
Nitrogen trifluoride (NF ₃)	17,200
Sulphur hexafluoride (SF ₆)	22,800

This assessment has been carried out in accordance with the World Business Council for Sustainable Development and World Resources Institute's (WBCSD/WRI) Greenhouse Gas Protocol; a Corporate Accounting and Reporting Standard, including the GHG Protocol Scope 2 Guidance. This protocol is considered current best practice for corporate or organisational greenhouse gas emissions reporting. GHG emissions have been reported by the three WBCSD/WRI Scopes.

Scope 1 includes direct GHG emissions from sources that are owned or controlled by the company such as natural gas combustion and company owned vehicles.

Scope 2 accounts for GHG emissions from the generation of purchased electricity, heat and steam generated off-site. As the subject of this assessment operates in markets which offer contractual instruments with product or supplier-specific data, scope 2 emissions are reported using both the location-based method and the market-based method. The location-based method applies average emission factors that correspond to the grid where consumption occurs, whereas the market-based method applies emission factors that correspond to energy purchased (or not purchased) through contractual instruments. Contractual instruments include energy attribute certificates, direct energy contracts, and supplier specific emission rates. The subject of this assessment has ensured that any contractual instruments used in the market-based method have met the Scope 2 Quality Criteria, as defined in the Guidance. Where contractual instruments do not meet the Quality Criteria, or where contractual instruments were not purchased, market-based scope 2 emissions have been calculated using residual mix emission factors. Where residual mix emission factors are not available, market-based scope 2 emissions have been calculated using default location grid-average emission factors, per the Protocol hierarchy. This may result in double counting between electricity consumers, as an adjusted emission factor taking into account voluntary purchases of electricity with specific attributes was not available.

Scope 3 includes all other indirect emissions such as waste disposal, business travel and staff commuting. Reporting of these activities is optional under the WBCSD/WRI GHG Protocol, but as they can contribute a significant portion of overall emissions Ecometrica recommends they are reported where applicable.

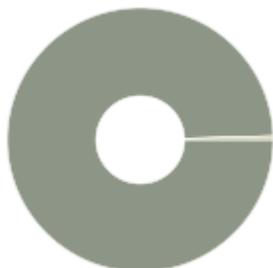
A GHG assessment is an essential tool in the process of monitoring and reducing an organisation's climate change impact as it allows reduction targets to be set and action plans formulated. GHG assessment results can also allow organisations to be transparent about their climate change impacts through reporting of GHG emissions to customers, shareholders, employees and other stakeholders. Regular assessments allow clients to track their progress in achieving reductions over time and provide evidence to support green claims in external marketing initiatives such as product labelling or CSR reporting. Ecometrica GHG assessments are designed to be transparent, consistent and repeatable over time.

¹ Carbon dioxide equivalent or CO₂e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of CO₂ which would have the equivalent global warming impact.

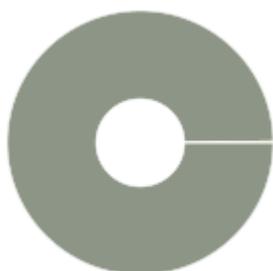
Data Quality and Availability

In order to provide the most accurate estimate of an organisation's GHG emissions, primary (actual) data should be used where it is available, up to date and geographically relevant. Secondary data in the form of estimates, extrapolations and industry averages may be used when primary data is not available. Table 2 details the quality of data submitted for this assessment with the key assumptions used stated below.

Data Quality Overview



Location-based Accuracy Overview		
	tCO ₂ e/year	%
Actual	196	99.5
Estimated	0.96	0.487
Total	197	100



Market-based Accuracy Overview		
	tCO ₂ e/year	%
Actual	183	99.8
Estimated	0.387	0.211
Total	184	100

Table 2. Data Quality and Availability

Source of emissions	Data quality
Premises	
District cooling	Actual
District heating	Actual
Electricity	Mixed
Incinerated waste	Actual
Recycled waste	Actual
Company owned vehicles	
Cars	Actual
Business Travel	
Air travel	Actual
Employee owned cars (unknown fuel)	Actual
Rail (train, tram, light rail, underground)	Actual
Taxi	Actual

Assessment Summary for SBAB

Gross Overall Emissions (location-based): 197 tCO₂e

Gross Overall Emissions (market-based): 184 tCO₂e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO₂e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

Data	KPI
3,149 Credit volume (MSEK)	0.0626 tCO ₂ e per Credit volume (MSEK) (Location-Based)
506 Full Time Equivalent Employees	0.389 tCO ₂ e per Full Time Equivalent Employee (Location-Based)
3,149 Credit volume (MSEK)	0.0583 tCO ₂ e per Credit volume (MSEK) (Market-Based)
506 Full Time Equivalent Employees	0.363 tCO ₂ e per Full Time Equivalent Employee (Market-Based)

Summary by Activity (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	48.6	24.7
Company owned vehicles	21.4	10.8
Business Travel	127	64.5
Total	197	100

Summary by Activity (Market-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	35.1	19.1
Company owned vehicles	21.4	11.6
Business Travel	127	69.2
Total	184	100

Summary by WBCSD/WRI Scope (Location-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 1	17	8.63
Scope 2	42.4	21.5
Scope 3	138	69.8
Total	197	100

Summary by WBCSD/WRI Scope (Market-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 1	17	9.27
Scope 2	22.5	12.3
Scope 3	144	78.5
Total	184	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO ₂ e/year (Location-Based)	tGHG/year (Market-Based)	tCO ₂ e/year (Market-Based)
CO ₂	1	154	154	143	143
CH ₄	25	0.00445	0.111	0.00136	0.034
N ₂ O	298	0.00253	0.755	0.00206	0.614
CO ₂ e	1	42.2	42.2	40.2	40.2
Total			197		184

Summary of Scope 2 Market-Based Method for SBAB

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy



Scope 2 Market-Based Emissions



Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO ₂ e	%
Client-supplied market-based instrument	980	61.4	1.33	5.91
Residual mix factors	0	0	0	0
Default location-based factors	617	38.6	21.2	94.1
Total	1,596	100	22.5	100

Detailed Results

Detailed Summary by WBCSD/WRI Scope

Location-Based methodology

Source of Emissions	tCO ₂ /yr	tCH ₄ /yr	tN ₂ O/yr	Total Emissions (tCO ₂ e/yr)	%
Scope 1 Total	16.9	7.47e-4	3.45e-4	17	8.63%
Company owned vehicles Total	16.9	7.47e-4	3.45e-4	17	8.63%
Cars	16.9	7.47e-4	3.45e-4	17	8.63%
Scope 2 Total	21	0.00295	4.52e-4	42.4	21.5%
Premises Total	21	0.00295	4.52e-4	42.4	21.5%
District cooling	0	0	0	0.0441	0.0224%
District heating	0	0	0	20.8	10.6%
District heating: District Heating EON Malmo (Sweden), upstream emissions	0	0	0	0.34	0.172%
Electricity	21	0.00295	4.52e-4	21.2	10.8%
Scope 3 Total	116	7.58e-4	0.00174	138	69.8%
Business Travel Total	115	6.14e-4	0.00172	127	64.5%
Air travel	104	4.83e-4	0.00166	105	53.2%
Air travel: Flights, long-haul, average, upstream emissions	0	0	0	5.4	2.74%
Air travel: Flights, medium-haul, average, upstream emissions	0	0	0	1.14	0.579%
Air travel: Flights, short-haul, upstream emissions	0	0	0	4.36	2.21%
Employee owned cars (unknown fuel)	7.33	0	0	7.33	3.72%
Rail (train, tram, light rail, underground)	0.0835	4.32e-6	2.18e-6	0.353	0.179%
Rail (train, tram, light rail, underground): Train, national, upstream emissions	0	0	0	0.0166	0.00842%
Taxi	2.98	1.27e-4	5.35e-5	3	1.52%
Taxi: Average petrol hybrid car, upstream emissions	0	0	0	0.349	0.177%
Taxi: Regular taxi, upstream emissions	0	0	0	0.332	0.168%
Company owned vehicles Total	0	0	0	4.37	2.22%
Cars: Average diesel car, upstream emissions	0	0	0	1.81	0.916%
Cars: Average petrol car, upstream emissions	0	0	0	2.56	1.3%
Premises Total	1.37	1.44e-4	2.2e-5	6.2	3.15%
District heating: District Heating, Karlstads Energi AB, upstream emissions	0	0	0	2.53	1.28%
District heating: District heating (Göteborg Energi), upstream emissions	0	0	0	0.21	0.107%
Electricity: Electricity - transmission & distribution losses (MCR)	1.03	1.44e-4	2.2e-5	1.04	0.526%
Electricity: Electricity grid, T&D losses, upstream emissions	0	0	0	0.118	0.0597%

Electricity: Electricity grid, generated, upstream emissions	0	0	0	1.92	0.975%
Incinerated waste	0.344	0	0	0.387	0.197%
Recycled waste	0	0	0	0	0%
Total	154	0.00445	0.00253	197	100%

Market-Based methodology

Source of Emissions	tCO ₂ /yr	tCH ₄ /yr	tN ₂ O/yr	Total Emissions (tCO ₂ e/yr)	%
Scope 1 Total	16.9	7.47e-4	3.45e-4	17	9.27%
Company owned vehicles Total	16.9	7.47e-4	3.45e-4	17	9.27%
Cars	16.9	7.47e-4	3.45e-4	17	9.27%
Scope 2 Total	1.33	0	0	22.5	12.3%
Premises Total	1.33	0	0	22.5	12.3%
District cooling	0	0	0	0.0441	0.024%
District heating	0	0	0	20.8	11.3%
District heating: District Heating EON Malmo (Sweden), upstream emissions	0	0	0	0.34	0.185%
Electricity	1.33	0	0	1.33	0.725%
Scope 3 Total	124	6.14e-4	0.00172	144	78.5%
Business Travel Total	115	6.14e-4	0.00172	127	69.2%
Air travel	104	4.83e-4	0.00166	105	57.1%
Air travel: Flights, long-haul, average, upstream emissions	0	0	0	5.4	2.94%
Air travel: Flights, medium-haul, average, upstream emissions	0	0	0	1.14	0.621%
Air travel: Flights, short-haul, upstream emissions	0	0	0	4.36	2.38%
Employee owned cars (unknown fuel)	7.33	0	0	7.33	3.99%
Rail (train, tram, light rail, underground)	0.0835	4.32e-6	2.18e-6	0.353	0.193%
Rail (train, tram, light rail, underground): Train, national, upstream emissions	0	0	0	0.0166	0.00904%
Taxi	2.98	1.27e-4	5.35e-5	3	1.64%
Taxi: Average petrol hybrid car, upstream emissions	0	0	0	0.349	0.19%
Taxi: Regular taxi, upstream emissions	0	0	0	0.332	0.181%
Company owned vehicles Total	0	0	0	4.37	2.38%
Cars: Average diesel car, upstream emissions	0	0	0	1.81	0.984%
Cars: Average petrol car, upstream emissions	0	0	0	2.56	1.4%
Premises Total	9.8	0	0	12.6	6.85%
District heating: District Heating, Karlstads Energi AB, upstream emissions	0	0	0	2.53	1.38%
District heating: District heating (Göteborg Energi), upstream emissions	0	0	0	0.21	0.114%
Electricity: MBI Upstream Emissions	9.45	0	0	9.45	5.15%

Incinerated waste	0.344	0	0	0.387	0.211%
Recycled waste	0	0	0	0	0%
Total	143	0.00136	0.00206	184	100%

Summary by Company Unit

Location-Based methodology

Assessment	2016		2017	
Company Unit	Total Emissions (tCO ₂ e)	Emissions per FTE (tCO ₂ e/FTE)	Total Emissions (tCO ₂ e)	Emissions per FTE (tCO ₂ e/FTE)
SBAB	188	0.388	197	0.389
Göteborg	1.15	-	1.97	-
Karlstad	29.5	-	31.5	-
Malmö	3.78	-	3.63	-
Stockholm	9.95	-	11.5	-

Market-Based methodology

Assessment	2016		2017	
Company Unit	Total Emissions (tCO ₂ e)	Emissions per FTE (tCO ₂ e/FTE)	Total Emissions (tCO ₂ e)	Emissions per FTE (tCO ₂ e/FTE)
SBAB	186	0.383	184	0.363
Göteborg	1.07	-	1.8	-
Karlstad	26.6	-	24.7	-
Malmö	7.24	-	3.51	-
Stockholm	6.87	-	5.09	-

Annual Activity Data

Source of Emissions	Value	Unit
Business Travel		
Air travel		
Long-haul, average class (RFI 2)	249,847	pass.km
Medium-haul, average class (RFI 2)	64,651	pass.km
Short-haul (RFI 2)	148,871	pass.km
Employee owned cars (unknown fuel)		
Average swedish car	59,556	km
Rail (train, tram, light rail, underground)		
Swedish rail	1,222,910	pass.km
Train, national	1,801	pass.km
Taxi		
Average hybrid car	11,603	km
Average taxi	6,371	km
Company owned vehicles		
Cars		
Average diesel car	42,442	km
Average petrol car	50,718	km
Premises		
District cooling		
District cooling (Solna/Sundbyberg, Norrenergi)	44,083	kWh
District heating		
District Heating Karlstads Energi AB	421,474	kWh
District heating (Göteborg Energi)	21,000	kWh
District heating EON Malmo	26,580	kWh
District heating, Solna/Sundbyberg (Norrenergi)	103,403	kWh
Electricity		
Electricity consumption (Nordic Market)	979,857	kWh
Incinerated waste		
Combusted waste, energy recovery, WEEE, small	80	kg
Combusted waste, energy recovery, aluminum cans and foil	10	kg
Combusted waste, energy recovery, average plastic films (incl. bags)	10	kg
Combusted waste, energy recovery, average plastics	40	kg
Combusted waste, energy recovery, glass	140	kg
Combusted waste, energy recovery, mixed paper and board	1,710	kg
Waste, incinerated (heat recovery), MSW	3,194	kg
Waste, incinerated (no heat recovery), MSW	1,520	kg
Recycled waste		
Waste, recycled	10,326	kg

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Client-supplied market-based instrument emission factor

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Assessment Summary for Göteborg

Gross Overall Emissions (location-based): 1.97 tCO₂e

Gross Overall Emissions (market-based): 1.8 tCO₂e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO₂e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

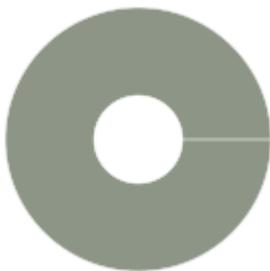
Data	KPI
350 Office floor area (square metres)	0.00564 tCO ₂ e per Office floor area (square metre) (Location-Based)
350 Office floor area (square metres)	0.00515 tCO ₂ e per Office floor area (square metre) (Market-Based)

Summary by Activity (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	1.97	100
Total	1.97	100

Summary by Activity (Market-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	1.8	100
Total	1.8	100

Summary by WBCSD/WRI Scope (Location-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	1.72	87.3
Scope 3	0.25	12.7
Total	1.97	100

Summary by WBCSD/WRI Scope (Market-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	1.45	80.7
Scope 3	0.348	19.3
Total	1.8	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO ₂ e/year (Location-Based)	tGHG/year (Market-Based)	tCO ₂ e/year (Market-Based)
CO ₂	1	0.286	0.286	0.143	0.143
CH ₄	25	4.02e-5	0.00101		
N ₂ O	298	6.16e-6	0.00184		
CO ₂ e	1	1.69	1.69	1.66	1.66
Total			1.97		1.8

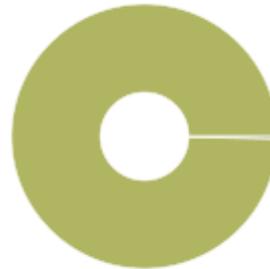
Summary of Scope 2 Market-Based Method for Göteborg

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy



Scope 2 Market-Based Emissions



Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO ₂ e	%
Client-supplied market-based instrument	12.7	37.8	0.00473	0.325
Residual mix factors	0	0	0	0
Default location-based factors	21	62.2	1.45	99.7
Total	33.7	100	1.45	100

Assessment Summary for Karlstad

Gross Overall Emissions (location-based): 31.5 tCO₂e

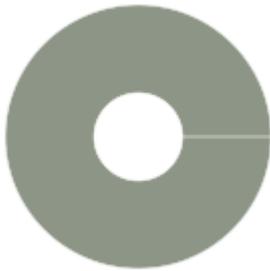
Gross Overall Emissions (market-based): 24.7 tCO₂e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO₂e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

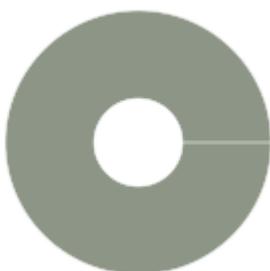
Data	KPI
5,948 Office floor area (square metres)	0.00529 tCO ₂ e per Office floor area (square metre) (Location-Based)
5,948 Office floor area (square metres)	0.00415 tCO ₂ e per Office floor area (square metre) (Market-Based)

Summary by Activity (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	31.5	100
Total	31.5	100

Summary by Activity (Market-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	24.7	100
Total	24.7	100

Summary by WBCSD/WRI Scope (Location-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	27.3	86.8
Scope 3	4.17	13.2
Total	31.5	100

Summary by WBCSD/WRI Scope (Market-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	17.1	69.4
Scope 3	7.57	30.6
Total	24.7	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO ₂ e/year (Location-Based)	tGHG/year (Market-Based)	tCO ₂ e/year (Market-Based)
CO ₂	1	11.7	11.7	6.15	6.15
CH ₄	25	0.00165	0.0412		
N ₂ O	298	2.52e-4	0.0752		
CO ₂ e	1	19.6	19.6	18.5	18.5
Total			31.5		24.7

Summary of Scope 2 Market-Based Method for Karlstad

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy



Scope 2 Market-Based Emissions



Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO ₂ e	%
Client-supplied market-based instrument	522	55.3	1.11	6.47
Residual mix factors	0	0	0	0
Default location-based factors	421	44.7	16	93.5
Total	943	100	17.1	100

Assessment Summary for Malmö

Gross Overall Emissions (location-based): 3.63 tCO₂e

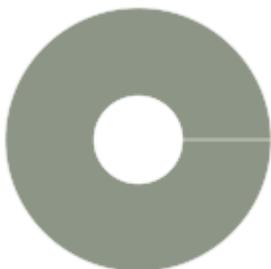
Gross Overall Emissions (market-based): 3.51 tCO₂e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO₂e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

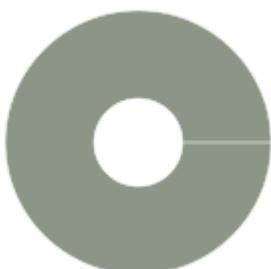
Data	KPI
248 Office floor area (square metres)	0.0146 tCO ₂ e per Office floor area (square metre) (Location-Based)
248 Office floor area (square metres)	0.0141 tCO ₂ e per Office floor area (square metre) (Market-Based)

Summary by Activity (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	3.63	100
Total	3.63	100

Summary by Activity (Market-Based, tCO₂e)



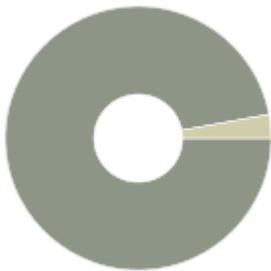
By Activity	tCO ₂ e/year	%
Premises	3.51	100
Total	3.51	100

Summary by WBCSD/WRI Scope (Location-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	3.59	99.1
Scope 3	0.0331	0.913
Total	3.63	100

Summary by WBCSD/WRI Scope (Market-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	3.41	97.1
Scope 3	0.101	2.89
Total	3.51	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO ₂ e/year (Location-Based)	tGHG/year (Market-Based)	tCO ₂ e/year (Market-Based)
CO ₂	1	0.237	0.237	0.143	0.143
CH ₄	25	3.33e-5	8.33e-4		
N ₂ O	298	5.1e-6	0.00152		
CO ₂ e	1	3.39	3.39	3.37	3.37
Total			3.63		3.51

Summary of Scope 2 Market-Based Method for Malmö

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy



Scope 2 Market-Based Emissions



Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO ₂ e	%
Client-supplied market-based instrument	10.6	28.4	0.0422	1.24
Residual mix factors	0	0	0	0
Default location-based factors	26.6	71.6	3.37	98.8
Total	37.1	100	3.41	100

Assessment Summary for Stockholm

Gross Overall Emissions (location-based): 11.5 tCO₂e

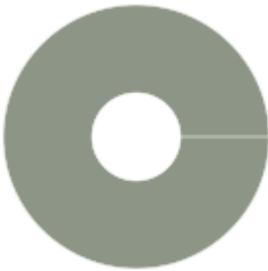
Gross Overall Emissions (market-based): 5.09 tCO₂e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO₂e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

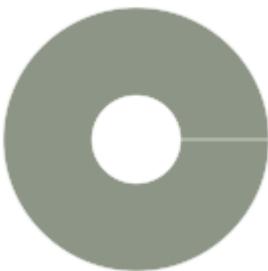
Data	KPI
4,720 Office floor area (square metres)	0.00244 tCO ₂ e per Office floor area (square metre) (Location-Based)
4,720 Office floor area (square metres)	0.00108 tCO ₂ e per Office floor area (square metre) (Market-Based)

Summary by Activity (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	11.5	100
Total	11.5	100

Summary by Activity (Market-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	5.09	100
Total	5.09	100

Summary by WBCSD/WRI Scope (Location-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	9.77	84.8
Scope 3	1.75	15.2
Total	11.5	100

Summary by WBCSD/WRI Scope (Market-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	0.528	10.4
Scope 3	4.56	89.6
Total	5.09	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO ₂ e/year (Location-Based)	tGHG/year (Market-Based)	tCO ₂ e/year (Market-Based)
CO ₂	1	10.1	10.1	4.69	4.69
CH ₄	25	0.00137	0.0343		
N ₂ O	298	2.1e-4	0.0626		
CO ₂ e	1	1.3	1.3	0.398	0.398
Total			11.5		5.09

Summary of Scope 2 Market-Based Method for Stockholm

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy



Scope 2 Market-Based Emissions



Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO ₂ e	%
Client-supplied market-based instrument	435	74.7	0.174	32.9
Residual mix factors	0	0	0	0
Default location-based factors	147	25.3	0.354	67.1
Total	582	100	0.528	100