



Greenhouse Gas Protocol (Dual Reporting) Report for SBAB

Assessment Period: 2019

Produced on Feb. 7, 2020 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
- Booli

Operational Boundary

- Air travel
- Bus and coach
- Cars
- Copy Paper
- District cooling
- District heating
- Electricity
- Employee owned cars (unknown fuel)
- Hotel night stays
- IT Equipment
- Incinerated waste
- Rail (train, tram, light rail, underground)
- Recycled waste
- Taxi
- Walk & Bike
- Water supply

Quality Assurance Assessor

- Johan Solberg - johan.solberg@uandwe.se

Table of Contents

| | |
|-------------------------------|----|
| Introduction | 4 |
| Data Quality and Availability | 5 |
| Assessment Summary for SBAB | 7 |
| Detailed Results | 10 |
| Location-Based methodology | 10 |
| Market-Based methodology | 11 |
| Summary by Company Unit | 14 |
| Location-Based methodology | 14 |
| Market-Based methodology | 15 |
| Annual Activity Data | 16 |
| References | 18 |

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 | 525 | 100 |
| Total | 525 | 100 |



| Market-based Accuracy Overview | | |
|--------------------------------|-------------------------|------------|
| | tCO ₂ e/year | % |
| Actual | 589 | 100 |
| Total | 589 | 100 |

Table 2. Data Quality and Availability

| Source of emissions | Data quality |
|---|--------------|
| Premises | |
| District cooling | Actual |
| District heating | Actual |
| Electricity | Actual |
| Incinerated waste | Actual |
| Recycled waste | Actual |
| Water supply | Actual |
| Company owned vehicles | |
| Cars | Actual |
| Business Travel | |
| Air travel | Actual |
| Employee owned cars (unknown fuel) | Actual |
| Hotel night stays | Actual |
| Rail (train, tram, light rail, underground) | Actual |
| Taxi | Actual |
| Commuting | |
| Bus and coach | Actual |

| | |
|---|--------|
| Cars | Actual |
| Rail (train, tram, light rail, underground) | Actual |
| Walk & Bike | Actual |
| Office supply | |
| Copy Paper | Actual |
| Hosted servers | |
| Electricity | Actual |
| Products | |
| IT Equipment | Actual |
| Company Owned Vehicles - Operations | |
| Cars | N/A |
| Waste | |
| Incinerated waste | N/A |
| Recycled waste | N/A |

Assessment Summary for SBAB

Gross Overall Emissions (location-based): 525 tCO₂e

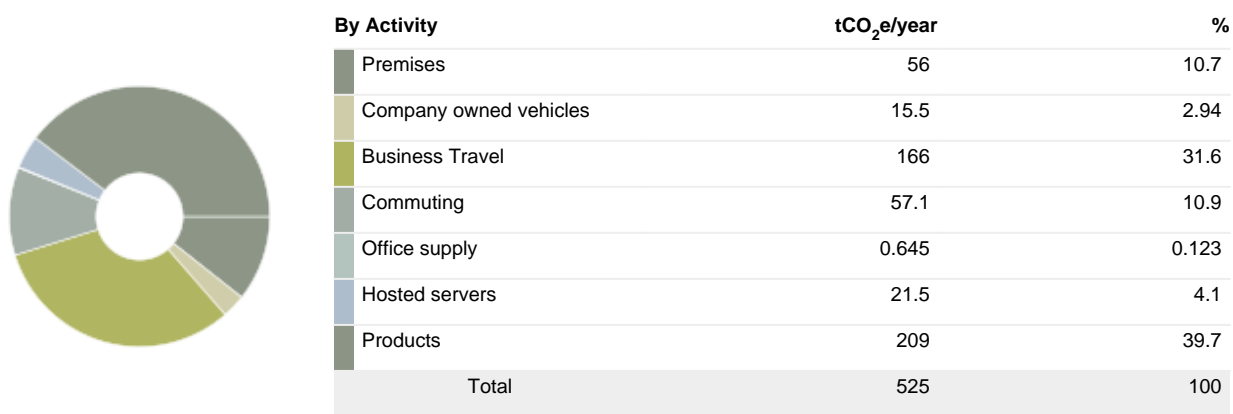
Gross Overall Emissions (market-based): 589 tCO₂e

Key Performance Indicators

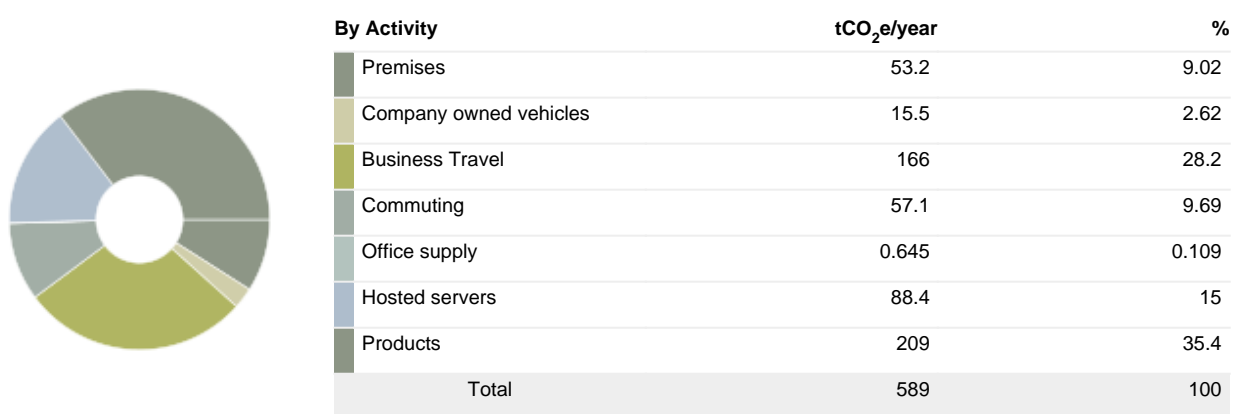
Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO₂e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

| Data | KPI |
|------------------------------------|---|
| 3,838 Credit volume (MSEK) | 0.137 tCO ₂ e per Credit volume (MSEK) (Location-Based) |
| 695 Full Time Equivalent Employees | 0.756 tCO ₂ e per Full Time Equivalent Employee (Location-Based) |
| 3,838 Credit volume (MSEK) | 0.154 tCO ₂ e per Credit volume (MSEK) (Market-Based) |
| 695 Full Time Equivalent Employees | 0.848 tCO ₂ e per Full Time Equivalent Employee (Market-Based) |

Summary by Activity (Location-Based, tCO₂e)



Summary by Activity (Market-Based, tCO₂e)



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



| Scope | tCO ₂ e/year | % |
|--------------|-------------------------|------------|
| Scope 1 | 13.9 | 2.64 |
| Scope 2 | 49 | 9.33 |
| Scope 3 | 462 | 88 |
| Total | 525 | 100 |

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



| Scope | tCO ₂ e/year | % |
|--------------|-------------------------|------------|
| Scope 1 | 13.9 | 2.36 |
| Scope 2 | 39.6 | 6.72 |
| Scope 3 | 536 | 90.9 |
| Total | 589 | 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 | 258 | 258 | 325 | 325 |
| CH ₄ | 25 | 0.0125 | 0.313 | 0.00537 | 0.134 |
| N ₂ O | 298 | 0.00454 | 1.35 | 0.00348 | 1.04 |
| CO ₂ e | 1 | 266 | 266 | 263 | 263 |
| Total | | 266 | 525 | 263 | 589 |

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 | 1,036 | 57.5 | 2.25 | 5.68 |
| Residual mix factors | 54.8 | 3.04 | 13.7 | 34.7 |
| Default location-based factors | 710 | 39.4 | 23.6 | 59.6 |
| Total | 1,801 | 100 | 39.6 | 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 | 13.8 | 5.25e-4 | 2.56e-4 | 13.9 | 2.64% |
| Commuting Total | 1.59 | 1.7e-5 | 2.13e-5 | 1.59 | 0.304% |
| Bus and coach | 0.808 | 9.33e-6 | 2.01e-5 | 0.814 | 0.155% |
| Cars | 0.78 | 7.68e-6 | 1.2e-6 | 0.78 | 0.149% |
| Company owned vehicles Total | 12.2 | 5.08e-4 | 2.35e-4 | 12.3 | 2.34% |
| Cars | 12.2 | 5.08e-4 | 2.35e-4 | 12.3 | 2.34% |
| Scope 2 Total | 25.1 | 0.00391 | 5.79e-4 | 49 | 9.33% |
| Premises Total | 25.1 | 0.00391 | 5.79e-4 | 49 | 9.33% |
| District cooling | 0 | 0 | 0 | 0.0616 | 0.0117% |
| District heating | 0 | 0 | 0 | 23.6 | 4.48% |
| Electricity | 25.1 | 0.00391 | 5.79e-4 | 25.4 | 4.83% |
| Scope 3 Total | 219 | 0.0081 | 0.00371 | 462 | 88% |
| Business Travel Total | 152 | 0.00329 | 0.00226 | 166 | 31.6% |
| Air travel | 118 | 0.00109 | 0.00188 | 119 | 22.7% |
| Air travel: Flights, long-haul, average, upstream emissions | 0 | 0 | 0 | 4.1 | 0.78% |
| Air travel: Flights, medium-haul, average, upstream emissions | 0 | 0 | 0 | 2.8 | 0.533% |
| Air travel: Flights, short-haul, upstream emissions | 0 | 0 | 0 | 5.49 | 1.04% |
| Employee owned cars (unknown fuel) | 11.6 | 4.22e-4 | 2.46e-4 | 11.7 | 2.23% |
| Hotel night stays | 19.2 | 0.00177 | 5.44e-5 | 19.3 | 3.67% |
| Rail (train, tram, light rail, underground) | 0.0211 | 1.54e-6 | 5.34e-7 | 0.353 | 0.0671% |
| Rail (train, tram, light rail, underground): Train, national, upstream emissions | 0 | 0 | 0 | 0.00411 | 7.82e-4% |
| Taxi | 2.65 | 2.19e-6 | 7.84e-5 | 2.67 | 0.508% |
| Taxi: Regular taxi, upstream emissions | 0 | 0 | 0 | 0.638 | 0.121% |
| Commuting Total | 44.9 | 0.00147 | 9.54e-4 | 55.5 | 10.6% |
| Bus and coach | 4.12 | 3.96e-5 | 9.44e-5 | 4.15 | 0.791% |
| Bus and coach: Average bus, upstream emissions | 0 | 0 | 0 | 0.897 | 0.171% |
| Bus and coach: City bus, upstream emissions | 0 | 0 | 0 | 0.29 | 0.0552% |
| Cars | 40.7 | 0.00142 | 8.58e-4 | 41 | 7.8% |
| Cars: Average diesel car, upstream emissions | 0 | 0 | 0 | 4.33 | 0.824% |
| Cars: Average petrol car, upstream emissions | 0 | 0 | 0 | 4.53 | 0.862% |
| Cars: Average petrol hybrid car, upstream emissions | 0 | 0 | 0 | 0.196 | 0.0373% |
| Cars: Electricity - transmission & distribution losses (MCR) | 0.00117 | 1.82e-7 | 2.7e-8 | 0.00118 | 2.26e-4% |

| | | | | | |
|---|--------------|----------------|----------------|--------------|---------------|
| Rail (train, tram, light rail, underground) | 0 | 0 | 0 | 0.00476 | 9.06e-4% |
| Rail (train, tram, light rail, underground): Light rail, upstream emissions | 0.118 | 7.96e-6 | 1.04e-6 | 0.118 | 0.0225% |
| Rail (train, tram, light rail, underground): Underground, upstream emissions | 0.0096 | 6.53e-7 | 8.48e-8 | 0.00964 | 0.00184% |
| Walk & Bike | 0 | 0 | 0 | 0 | 0% |
| Company owned vehicles Total | 0 | 0 | 0 | 3.17 | 0.603% |
| Cars: Average diesel car, upstream emissions | 0 | 0 | 0 | 1.24 | 0.235% |
| Cars: Average petrol car, upstream emissions | 0 | 0 | 0 | 1.93 | 0.367% |
| Hosted servers Total | 19.9 | 0.00309 | 4.58e-4 | 21.5 | 4.1% |
| Electricity | 18.6 | 0.0029 | 4.3e-4 | 18.8 | 3.59% |
| Electricity: Electricity - transmission & distribution losses (MCR) | 1.23 | 1.91e-4 | 2.83e-5 | 1.24 | 0.236% |
| Electricity: Electricity grid, T&D losses, upstream emissions | 0 | 0 | 0 | 0.0829 | 0.0158% |
| Electricity: Electricity grid, generated, upstream emissions | 0 | 0 | 0 | 1.39 | 0.264% |
| Office supply Total | 0.645 | 0 | 0 | 0.645 | 0.123% |
| Copy Paper | 0.645 | 0 | 0 | 0.645 | 0.123% |
| Premises Total | 1.66 | 2.57e-4 | 3.81e-5 | 6.96 | 1.32% |
| District heating: District Heating (Stockholm, Sweden), upstream emissions | 0 | 0 | 0 | 0.313 | 0.0597% |
| District heating: District Heating, Karlstads Energi AB, Karlstad, upstream emissions | 0 | 0 | 0 | 2.02 | 0.385% |
| District heating: District heating (EON - Malmö-Burlöv, Sweden), upstream emissions | 0 | 0 | 0 | 0.413 | 0.0786% |
| District heating: District heating (Göteborg Energi) Bra Miljöval, upstream emissions | 0 | 0 | 0 | 0.054 | 0.0103% |
| Electricity: Electricity - transmission & distribution losses (MCR) | 1.65 | 2.57e-4 | 3.81e-5 | 1.67 | 0.318% |
| Electricity: Electricity grid, T&D losses, upstream emissions | 0 | 0 | 0 | 0.112 | 0.0213% |
| Electricity: Electricity grid, generated, upstream emissions | 0 | 0 | 0 | 1.87 | 0.356% |
| Incinerated waste | 0.00906 | 0 | 0 | 0.161 | 0.0306% |
| Recycled waste | 0 | 0 | 0 | 0 | 0% |
| Water supply | 0 | 0 | 0 | 0.343 | 0.0653% |
| Products Total | 0 | 0 | 0 | 209 | 39.7% |
| IT Equipment | 0 | 0 | 0 | 209 | 39.7% |
| Total | 258 | 0.0125 | 0.00454 | 525 | 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 | 13.8 | 5.25e-4 | 2.56e-4 | 13.9 | 2.36% |

| | | | | | |
|--|------------|----------------|----------------|-------------|--------------|
| Commuting Total | 1.59 | 1.7e-5 | 2.13e-5 | 1.59 | 0.271% |
| Bus and coach | 0.808 | 9.33e-6 | 2.01e-5 | 0.814 | 0.138% |
| Cars | 0.78 | 7.68e-6 | 1.2e-6 | 0.78 | 0.132% |
| Company owned vehicles Total | 12.2 | 5.08e-4 | 2.35e-4 | 12.3 | 2.09% |
| Cars | 12.2 | 5.08e-4 | 2.35e-4 | 12.3 | 2.09% |
| Scope 2 Total | 16 | 0 | 0 | 39.6 | 6.72% |
| Premises Total | 16 | 0 | 0 | 39.6 | 6.72% |
| District cooling | 0 | 0 | 0 | 0.0616 | 0.0104% |
| District heating | 0 | 0 | 0 | 23.6 | 4% |
| Electricity | 16 | 0 | 0 | 16 | 2.71% |
| Scope 3 Total | 295 | 0.00484 | 0.00322 | 536 | 90.9% |
| Business Travel Total | 152 | 0.00329 | 0.00226 | 166 | 28.2% |
| Air travel | 118 | 0.00109 | 0.00188 | 119 | 20.2% |
| Air travel: Flights, long-haul, average, upstream emissions | 0 | 0 | 0 | 4.1 | 0.695% |
| Air travel: Flights, medium-haul, average, upstream emissions | 0 | 0 | 0 | 2.8 | 0.475% |
| Air travel: Flights, short-haul, upstream emissions | 0 | 0 | 0 | 5.49 | 0.931% |
| Employee owned cars (unknown fuel) | 11.6 | 4.22e-4 | 2.46e-4 | 11.7 | 1.98% |
| Hotel night stays | 19.2 | 0.00177 | 5.44e-5 | 19.3 | 3.27% |
| Rail (train, tram, light rail, underground) | 0.0211 | 1.54e-6 | 5.34e-7 | 0.353 | 0.0598% |
| Rail (train, tram, light rail, underground): Train, national, upstream emissions | 0 | 0 | 0 | 0.00411 | 6.97e-4% |
| Taxi | 2.65 | 2.19e-6 | 7.84e-5 | 2.67 | 0.453% |
| Taxi: Regular taxi, upstream emissions | 0 | 0 | 0 | 0.638 | 0.108% |
| Commuting Total | 44.9 | 0.00147 | 9.54e-4 | 55.5 | 9.42% |
| Bus and coach | 4.12 | 3.96e-5 | 9.44e-5 | 4.15 | 0.705% |
| Bus and coach: Average bus, upstream emissions | 0 | 0 | 0 | 0.897 | 0.152% |
| Bus and coach: City bus, upstream emissions | 0 | 0 | 0 | 0.29 | 0.0492% |
| Cars | 40.7 | 0.00142 | 8.58e-4 | 41 | 6.95% |
| Cars: Average diesel car, upstream emissions | 0 | 0 | 0 | 4.33 | 0.734% |
| Cars: Average petrol car, upstream emissions | 0 | 0 | 0 | 4.53 | 0.768% |
| Cars: Average petrol hybrid car, upstream emissions | 0 | 0 | 0 | 0.196 | 0.0333% |
| Cars: Electricity - transmission & distribution losses (MCR) | 0.00117 | 1.82e-7 | 2.7e-8 | 0.00118 | 2.01e-4% |
| Rail (train, tram, light rail, underground) | 0 | 0 | 0 | 0.00476 | 8.08e-4% |
| Rail (train, tram, light rail, underground): Light rail, upstream emissions | 0.118 | 7.96e-6 | 1.04e-6 | 0.118 | 0.0201% |
| Rail (train, tram, light rail, underground): Underground, upstream emissions | 0.0096 | 6.53e-7 | 8.48e-8 | 0.00964 | 0.00164% |
| Walk & Bike | 0 | 0 | 0 | 0 | 0% |
| Company owned vehicles Total | 0 | 0 | 0 | 3.17 | 0.537% |
| Cars: Average diesel car, upstream emissions | 0 | 0 | 0 | 1.24 | 0.21% |
| Cars: Average petrol car, upstream emissions | 0 | 0 | 0 | 1.93 | 0.328% |

| | | | | | |
|---|------------|----------------|----------------|------------|-------------|
| Hosted servers Total | 87.8 | 7.73e-5 | 1.15e-5 | 88.4 | 15% |
| Electricity | 82.2 | 0 | 0 | 82.2 | 14% |
| Electricity: Electricity - transmission & distribution losses (MCR) | 0.497 | 7.73e-5 | 1.15e-5 | 0.502 | 0.0852% |
| Electricity: Electricity grid, T&D losses, upstream emissions | 0 | 0 | 0 | 0.0336 | 0.0057% |
| Electricity: Electricity grid, generated, upstream emissions | 0 | 0 | 0 | 0.562 | 0.0953% |
| Electricity: MBI Upstream Emissions | 5.01 | 0 | 0 | 5.01 | 0.849% |
| Office supply Total | 0.645 | 0 | 0 | 0.645 | 0.109% |
| Copy Paper | 0.645 | 0 | 0 | 0.645 | 0.109% |
| Premises Total | 10.2 | 1.29e-5 | 1.91e-6 | 13.6 | 2.3% |
| District heating: District Heating (Stockholm, Sweden), upstream emissions | 0 | 0 | 0 | 0.313 | 0.0532% |
| District heating: District Heating, Karlstads Energi AB, Karlstad, upstream emissions | 0 | 0 | 0 | 2.02 | 0.343% |
| District heating: District heating (EON - Malmö-Burlöv, Sweden), upstream emissions | 0 | 0 | 0 | 0.413 | 0.07% |
| District heating: District heating (Göteborg Energi) Bra Miljöval, upstream emissions | 0 | 0 | 0 | 0.054 | 0.00916% |
| Electricity: Electricity - transmission & distribution losses (MCR) | 0.083 | 1.29e-5 | 1.91e-6 | 0.0839 | 0.0142% |
| Electricity: Electricity grid, T&D losses, upstream emissions | 0 | 0 | 0 | 0.00561 | 9.52e-4% |
| Electricity: Electricity grid, generated, upstream emissions | 0 | 0 | 0 | 0.0938 | 0.0159% |
| Electricity: MBI Upstream Emissions | 10.1 | 0 | 0 | 10.1 | 1.71% |
| Incinerated waste | 0.00906 | 0 | 0 | 0.161 | 0.0273% |
| Recycled waste | 0 | 0 | 0 | 0 | 0% |
| Water supply | 0 | 0 | 0 | 0.343 | 0.0582% |
| Products Total | 0 | 0 | 0 | 209 | 35.4% |
| IT Equipment | 0 | 0 | 0 | 209 | 35.4% |
| Total | 325 | 0.00537 | 0.00348 | 589 | 100% |

Summary by Company Unit

Location-Based methodology

| Assessment | 2018 | | 2019 | |
|--------------|--------------------------------------|--|--------------------------------------|--|
| 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 | 210 | 0.365 | 525 | 0.756 |
| Göteborg | 0.864 | - | 2.25 | - |
| Karlstad | 35.1 | - | 66.9 | - |
| Malmö | 4.22 | - | 6.37 | - |
| Stockholm | 13.6 | - | 31.7 | - |
| Booli | n/a | - | 8.62 | - |

Market-Based methodology

| Assessment | 2018 | | 2019 | |
|---------------------|---|---|---|---|
| Company Unit | Total Emissions (tCO₂e) | Emissions per FTE (tCO₂e/FTE) | Total Emissions (tCO₂e) | Emissions per FTE (tCO₂e/FTE) |
| SBAB | 193 | 0.337 | 589 | 0.848 |
| Göteborg | 0.65 | - | 2.05 | - |
| Karlstad | 27 | - | 58.5 | - |
| Malmö | 4.03 | - | 6.2 | - |
| Stockholm | 5.66 | - | 25.2 | - |
| Booli | n/a | - | 21.1 | - |

Annual Activity Data

| Source of Emissions | Value | Unit |
|---|-----------|---------|
| Business Travel | | |
| Air travel | | |
| Long-haul, average class (RFI 2) | 191,284 | pass.km |
| Medium-haul, average class (RFI 2) | 161,606 | pass.km |
| Short-haul (RFI 2) | 196,668 | pass.km |
| Employee owned cars (unknown fuel) | | |
| Average car (unknown fuel) | 66,014 | km |
| Hotel night stays | | |
| Hotel night stays | 1,293 | night |
| Rail (train, tram, light rail, underground) | | |
| Swedish rail | 1,325,345 | pass.km |
| Train, national | 482 | pass.km |
| Taxi | | |
| Average taxi | 12,695 | km |
| Commuting | | |
| Bus and coach | | |
| Average bus | 35,872 | pass.km |
| City bus | 14,763 | pass.km |
| Cars | | |
| Average LPG car | 9,600 | km |
| Average battery electric car | 5,408 | km |
| Average car (unknown fuel) | 23,498 | km |
| Average diesel car | 104,672 | km |
| Average hybrid car | 6,720 | km |
| Average petrol car | 92,214 | km |
| Rail (train, tram, light rail, underground) | | |
| Light rail/Tram | 101,513 | pass.km |
| Swedish rail | 28,000 | pass.km |
| Underground/Subway | 9,056 | pass.km |
| Walk & Bike | | |
| Bicycle | 90,912 | km |
| Company owned vehicles | | |
| Cars | | |
| Average diesel car | 29,897 | km |
| Average petrol car | 39,308 | km |
| Hosted servers | | |
| Electricity | | |
| Electricity consumption (Nordic Market) | 809,415 | kWh |
| Office supply | | |

| | | |
|--|-----------|-----|
| Copy Paper | | |
| Copy paper (Sweden) | 3,132 | kg |
| Premises | | |
| District cooling | | |
| District cooling (Solna/Sundbyberg, Norrenergi) | 61,567 | kWh |
| District cooling (Stockholm, Fortum) | 18,952 | kWh |
| District heating | | |
| District Heating (Stockholm), Sweden | 52,242 | kWh |
| District Heating, Göteborg Energi AB, Bra Miljöval, Göteborg, Partille och Ale | 9 | MWh |
| District Heating, Karlstads Energi AB, Karlstad | 382,006 | kWh |
| District heating EON Malmö-Burlöv | 25,643 | kWh |
| District heating, Solna/Sundbyberg (Norrenergi) | 160,828 | kWh |
| Electricity | | |
| Electricity consumption (Nordic Market) | 1,090,790 | kWh |
| Incinerated waste | | |
| Combusted waste, energy recovery, WEEE, mixed | 1,007 | kg |
| Combusted waste, energy recovery, WEEE, small | 3 | kg |
| Combusted waste, energy recovery, average plastics | 884 | kg |
| Combusted waste, energy recovery, board | 1,019 | kg |
| Combusted waste, energy recovery, glass | 2,016 | kg |
| Combusted waste, energy recovery, mixed cans | 19 | kg |
| Combusted waste, energy recovery, mixed paper and board | 520 | kg |
| Combusted waste, energy recovery, municipal waste, average | 1,290 | kg |
| Combusted waste, energy recovery, paper | 50 | kg |
| Combusted waste, energy recovery, scrap metal | 108 | kg |
| Combusted waste, energy recovery, wood | 195 | kg |
| Waste, incinerated (heat recovery), MSW | 2,853 | kg |
| Waste, incinerated (no heat recovery), MSW | 40 | kg |
| Recycled waste | | |
| Waste, recycled | 10,014 | kg |
| Water supply | | |
| Water supply | 3,432 | m3 |
| Products | | |
| IT Equipment | | |
| Total CO2e emissions | 208,535 | kg |

References

IEA (2019). Statistics. <http://www.iea.org/stats/index.asp>

IPCC (2006). Revised IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge.

0

BEIS (2019). UK Government conversion factors for greenhouse gas reporting. Department for Business, Energy and Industrial Strategy, London.

CIBSE (2012). Energy Efficiency in Buildings, Guide F. The Chartered Institution of Building Services Engineers.

Client-supplied market-based instrument emission factor

Department for Business, Energy and Industrial Strategy (2018). 2018 Government GHG Conversion Factors for Company Reporting.

Department for Business, Energy and Industrial Strategy (2019). 2019 Government GHG Conversion Factors for Company Reporting.

EON (2019). Miljövärden 2018. Sweden.

Energi Företagen (2017) Lokala miljövärden 2017. Sweden Available from <https://www.energiforetagen.se/statistik/fjarrvarmestatik/miljovardering-av-fjarrvarme/>

Energi Företagen (2019) Lokala miljövärden 2018. Sweden Available from <https://www.energiforetagen.se/statistik/fjarrvarmestatik/miljovardering-av-fjarrvarme/>

Fortum (2014). Fortum Värme och miljö, Stockholm 2014. AB Fortum Värme samägt med Stockholms stad.

Gov.UK (2018) Car fuel and CO2 emissions database.

Göteborg Energi (2019). Miljövärden för fjärrvärme märkt Bra Miljöval 2018 - Göteborg, Partille och Ale.

IEA (2019). Statistics. <http://www.iea.org/stats/index.asp>.

IPCC (2006). Revised IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge.

NTM (2017). NTMCalc Advanced 4.0. Environmental performance report.

Norrenergi (2015). Miljöprestanda för Norrenergis fjärrvärme 2014 (preliminär)

Norrenergi 2015. Miljöprestanda för Norrenergis fjärrvärme 2014 (preliminär)

SEPA (2019). Emissionsfaktorer och värmevärden 2019. Swedish Environmental Protection Agency.

SJ (2017). SJ Sustainability Report 2016.

SJ (2018). SJ Sustainability Report 2017.

Smith, A., K. Brown, S. Ogilvie, K. Rushton, and J. Bates, 2001: Waste management options and climate change. Final Report ED21158R4.1 to the European Commission, DG Environment, AEA Technology, Oxfordshire.

Swedish Energy Markets Inspectorate (2019). <https://www.ei.se/sv/for-energiforetag/el/ursprungsmarkning-av-el/>

The Swedish Institute for Food and Biotechnology (SIK) (2004). Jämförelse av dricksvatten - översiktlig livscykelanalys (LCA).

hanchor5. Accessed June 2019

provided by Antalis Paper Merchant