

# Greenhouse gas emissions disclosure 2013

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## FOREWORD

**There are two sides to the coin:** risks and opportunities. When the World Economic Forum's annual survey Global Risks 2014 asked 700 business leaders and decision-makers from around the world what they considered to be the most significant global risks, climate change was ranked fifth. This shows that co-operation is needed outside of the traditional roles and responsibilities within which we in business operate, and that is why we members of the Haga Initiative have chosen to make work on climate change a priority. Alongside risks, we see opportunities. We believe that by focusing on the opportunities we can contribute to the necessary shift that needs to take place.

**If we show that ambitious climate change strategies** create business advantages and improve profitability, companies will be inspired to reduce their emissions. The Haga Initiative has a vision of a profitable business sector without climate impact. We are convinced that tomorrow's winners in business will be those who are early in taking on board what the UN's Intergovernmental Panel on Climate Change (IPCC) is now concluding ever more clearly: climate change is serious, man-made and needs to reduce drastically. There are strong reasons for businesses to increase their work on climate change – not least at a time when the world needs fresh impetus and confidence.

**We are convinced that businesses will find that it pays** to change. Among the many reasons for this are more aware customers, reduced costs, a stronger brand, competitive advantages and the ability to recruit the best talent. We are also convinced that the key to getting the entire business world on board depends on us succeeding in showing how ambitious climate change measures can help improve profitability. We hope to see more companies making greenhouse gas emissions disclosures in the future and we would encourage other businesses to highlight good examples that result in reduced emissions and increased profitability.

**Together, the members of the Haga Initiative** are showing that climate change is a business opportunity.

**Happy reading!**



**Anders Strålman**  
President and CEO, Axfood



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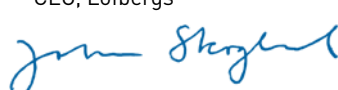
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## THE HAGA INITIATIVE'S GREENHOUSE GAS EMISSIONS DISCLOSURE

**A profitable business sector without climate impact** is the Haga Initiative's vision. The companies realise that it pays to take responsibility for climate change and want to inspire other companies to do the same. That is why this greenhouse gas emissions disclosure highlights profitable examples from the companies.

**The Haga Initiative wants to show opportunities** to reduce climate impact and at the same time to work actively on creating the right conditions for the business sector to contribute to this in the best way possible. Business has a central role to play when it comes to taking action against climate change, not least since companies are well placed to drive development in the right direction. Companies can be innovative and can bring about rapid changes.

**An initial step in the right direction** is knowing where the company currently stands by calculating its greenhouse gas emissions. The Haga Initiative sees this as providing an obvious basis from which to move on and produce a climate change strategy which aims to reduce climate impact over time.

**Calculations are important** in enabling us to know where we stand today, where we are headed and whether we will succeed in achieving our climate targets in the future. They are needed so that companies can take the right action and set the right priorities.

**The member companies of the Haga Initiative can see that often it pays** to take responsibility for their climate impact, and it is partly this message that we are hoping will inspire other companies to raise their sights when it comes to climate change. As a new feature in this year's greenhouse gas emissions disclosure we have therefore provided examples from each company in the network of climate measures that have had a noticeable result on both climate impact and the bottom line. Every measure counts – however large or small!

**The companies making up the network have set their own climate targets** of at least a 40% reduction by 2020 compared with a post-1990 base year of their choice. The member companies' climate targets must cover the Haga scope as a minimum. The Haga scope is defined as emissions in scope 1 and scope 2 plus business travel in scope 3. Many of the companies have set broader system boundaries and/or more ambitious climate targets than this.

**The Haga Initiative currently follows the GNG Protocol**, which members are free to choose between setting absolute or relative targets. The former reflects an absolute reduction in emissions of greenhouse gases into the atmosphere. The companies in the network all operate in growing markets, however, which in many cases makes relative objectives the most appropriate option. In the greenhouse gas emissions disclosures the companies present their targets, the measures they have taken and plan to take to achieve their targets, and how they are doing so far in meeting these targets.

### ABOUT THE HAGA INITIATIVE

The Haga Initiative is made up of twelve well-known companies: Axfood, Coca-Cola Enterprises Sverige, Fortum Värme, Lantmännen, Löfbergs, JM, McDonald's, HKScan Sweden, Stena Metall Sverige, Statoil Fuel & Retail, Sveaskog and Vasakronan.

Among other things, the member companies of the Haga Initiative make the following commitments:

- ▶ A climate-committed CEO/management who takes active responsibility for the climate.
- ▶ A broad-based, ambitious climate strategy.
- ▶ Regular measurement and accounting of the company's climate impact according to the GHG Protocol.
- ▶ A clearly diminishing emissions trend.
- ▶ A defined emissions target in the company to reduce CO<sub>2</sub>e by at least 40% by 2020 or an equivalent level of ambition.

### THE HAGA INITIATIVE

#### Vision

A profitable business sector without climate impact.

#### Aim

The Haga Initiative wants to show that companies can do good business profitably while at the same time actively taking responsibility for the climate.

### GREENHOUSE GAS PROTOCOL

The GHG Protocol is the international accounting standard that is most frequently used by nations and companies as a calculation tool for understanding, quantifying and managing emissions of greenhouse gases. For more than ten years, the GHG Protocol has been working in partnership with the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), and with companies, nations and environmental groups across the world to build a new generation of credible and effective programmes for managing climate change.

## THE HAGA INITIATIVE'S CALCULATION METHOD AND THE GHG PROTOCOL

**All calculations and reporting under the Haga Initiative** conform to the guidelines set out in the GHG Protocol. The GHG Protocol (Greenhouse Gas Protocol) is an international calculation standard guided by the following principles:

**Relevance** – the reporting shall reflect the company's or the organisation's emissions in a relevant manner, enabling it to be used as a basis for decisions both internally and externally.

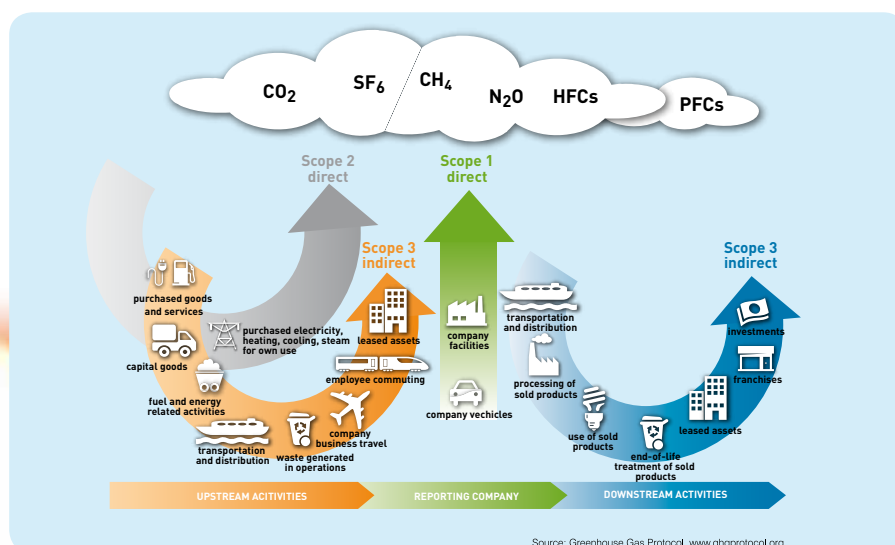
**Completeness** – the reporting shall cover all emissions within the stated system boundaries. Any exceptions shall be described and explained.

**Consistency** – the calculation methodology shall be consistent, so as to allow comparisons to be made over time. Changes in data, system boundaries, methods or similar shall be documented.

**Transparency** – all background data, methods, sources and assumptions shall be documented.

**Accuracy** – the calculated emissions shall be as close to actual emissions as possible.

**The Haga Initiative's calculation method** describes the methodology that the Haga Initiative uses for the emissions sources that are relevant to the calculation of climate impact. The scope or scopes in the GHG Protocol to which the emissions belong are detailed in each description. The emissions are classified as either scope 1 (direct emissions), scope 2 (indirect emissions) or scope 3 (other indirect emissions). [Click here to read more about the calculation method.](#) ➔



## COMPANY REPORTS ACCORDING TO THE GHG PROTOCOL

### THE HAGA SCOPE

The Haga scope is defined as emissions under scope 1 and scope 2 plus business travel under scope 3. The member companies have climate targets that encompass the Haga scope as a minimum.

**In its greenhouse gas emissions disclosure** each company reports the emissions generated during the year, in previous years and in its chosen base year. The companies also report on the climate targets they have set and what they intend to do to achieve these targets.

**Each year the Haga Initiative aims** to become more transparent and more uniform in its reporting. As part of this, the emissions have been broken down into the three scopes set out in the GHG Protocol in each company's disclosure table. Emissions in scope 3, which arise upstream and downstream in the value chain, have also been linked to the categories in the broadened scope 3 standard (Corporate Value Chain Accounting and Reporting Standard). See Appendix 3 for more information on the various categories that are included in scope 3.

**To help understand the disclosure table** for each company we include here an explanatory table detailing all the categories in scopes 1 and 2 and the categories included in the broader scope 3 in this greenhouse gas emissions disclosure.

| Emissions from operations  | Comments   | GHG Scope 3* |
|--|--|--------------|
| <b>Scope 1</b>   |  |              |
| Business travel  | Vehicles used by the company, e.g. company cars, leased cars, personal vehicles used for business.   |              |
| Heating  | Emissions from heating systems controlled by the company, e.g. oil-fired boilers.  |              |
| Refrigerants   | Emissions of refrigerants from facilities controlled by the company.   |              |
| Own transportation   | Transportation using vehicles owned by the company.  |              |
| Own machinery  | Machinery owned by the company.  |              |
| Other company-specific emissions in scope 1  | Activity controlled by the company, e.g. roasting.   |              |
| <b>Scope 2</b>   |  |              |
| Purchased energy   | Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix).   |              |
| <b>Scope 3</b>   |  |              |
| Business travel  | Other business travel, e.g. by air, rail and taxi.   | 6            |
| <b>TOTAL excluding origin-labelling</b>  |  |              |
| Reduction through purchase of origin-labelled renewable electricity or district heating  | If a company buys origin-labelled energy products in which a certain part of production is earmarked for the customer, this is deducted from the energy recorded in scope 2.   |              |
| <b>TOTAL Haga scope</b>  |  |              |
| <b>The member companies have climate targets that cover the Haga scope as a minimum. The Haga scope is defined as emissions in scope 1 and scope 2 plus business travel.</b> |  |              |
| Production and distribution of energy and vehicle fuels  | Extraction, refining and transportation of the fuels consumed in scope 1 and scope 2. In the greenhouse gas emissions disclosure emissions are broken down into whether they are consumed in business travel, energy production, transportation or by machinery. | 3            |
| Outsourced transportation  | Transportation bought by the company. Both emissions from the vehicle and upstream emissions.  | 4 and 9      |
| Commuting  | Travel by employees to and from the workplace. Both emissions from the vehicle and upstream emissions.   | 7            |
| Leased machinery   | Both emissions from the vehicle and upstream emissions.  | 8            |
| Packaging, other materials, cultivation  | Emissions for production of products and materials, e.g. packaging that takes place outside the company.   | 1            |
| Waste disposal   | Emissions from the disposal of waste, e.g. collection, landfill and incineration.  | 5            |
| Carbon dioxide in packaging  | Carbon dioxide that has been sealed inside packaging and is released when the end consumer opens the packaging.  | 11           |
| End consumer's disposal of packaging waste   | Emissions from the disposal of waste, e.g. collection and incineration.  | 12           |
| Electricity and heating – franchise operations   | Production of electricity and heating consumed in franchise operations, including upstream emissions.  | 3 and 14     |
| <b>TOTAL (excl. carbon offset)</b>   |  |              |
| <b>Total of all reported emissions excluding deduction of any carbon offset.</b>   |  |              |
| Reduction resulting from purchase of carbon-offset products  | Emissions that have been carbon-offset by the supplier. Includes only emissions reported above. In this year's greenhouse gas emissions disclosure this item relates only to district heating and district cooling.  |              |
| Own carbon offset  | Details the emissions for which the company has carried out carbon offset measures, if any; e.g. flights during a particular year.   |              |
| <b>TOTAL (incl. carbon offset)</b>   |  |              |
| <b>Total of all reported emissions after deducting any carbon offset.</b>  |  |              |
| <b>Haga Initiative key indicators</b>  |  |              |
| <b>Unit</b>  |  |              |
| Emissions per unit chosen by the company   | Depends on the key indicator selected (e.g. gCO <sub>2</sub> e/SEK, gCO <sub>2</sub> e/employee, etc.)   |              |

\* See Appendix 3 for a description of the categories in scope 3.



## EXTERNAL FACTORS AFFECTING EMISSIONS

**The calculation of emissions** is based on activity data such as energy use and fuel consumption. The figures are then converted into emissions of greenhouse gases (CO<sub>2</sub>e) using emission factors for each emissions source.

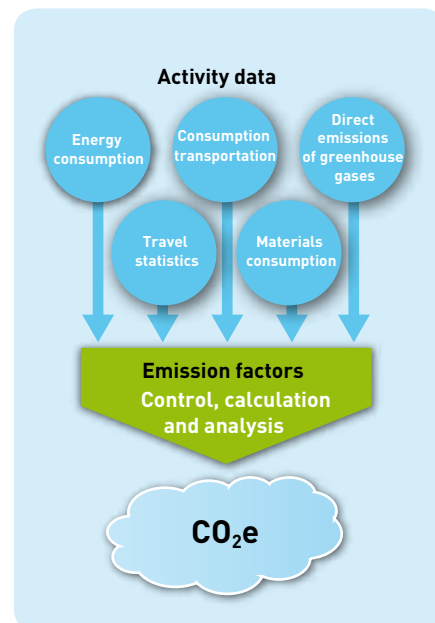
**Sometimes a company's emissions may** increase despite the fact that energy and resource efficiency measures have been implemented. How does this happen?

**Companies can do a lot to influence** their consumption of resources, but sometimes there are external factors that result in emissions increasing nonetheless, despite the company's efficiencies. For example, there might be a cold winter that results in increased energy use and the district heating companies having to use fossil peak production, or changes in social functions may result in different logistics flows.

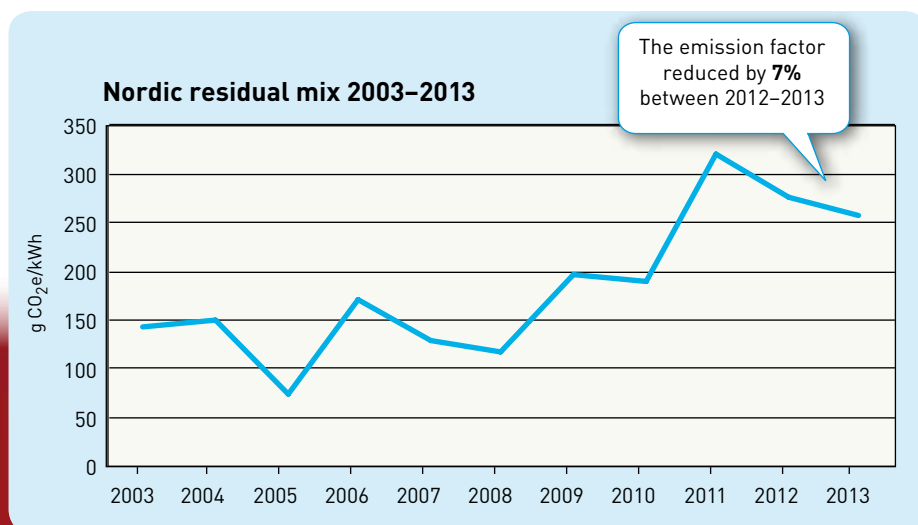
**Changes in the emission factors** cannot be influenced by the companies. The emission factors for electricity and district heating in particular vary from year to year due to changes in production.

**Companies can use different types of electricity:** origin-labelled electricity or unspecified electricity. In the case of origin-labelled electricity, an emission factor for the chosen energy source is used. In the case of unspecified electricity, an emission factor for what is known as a Nordic residual mix is used.

The diagram shows changes in the emission factor for the Nordic residual mix between 2003 and 2013\*. The emission factor has reduced for two successive years and is 7% lower than in the previous year and 19% lower than two years ago, but is still 37% higher than three years ago. ↓

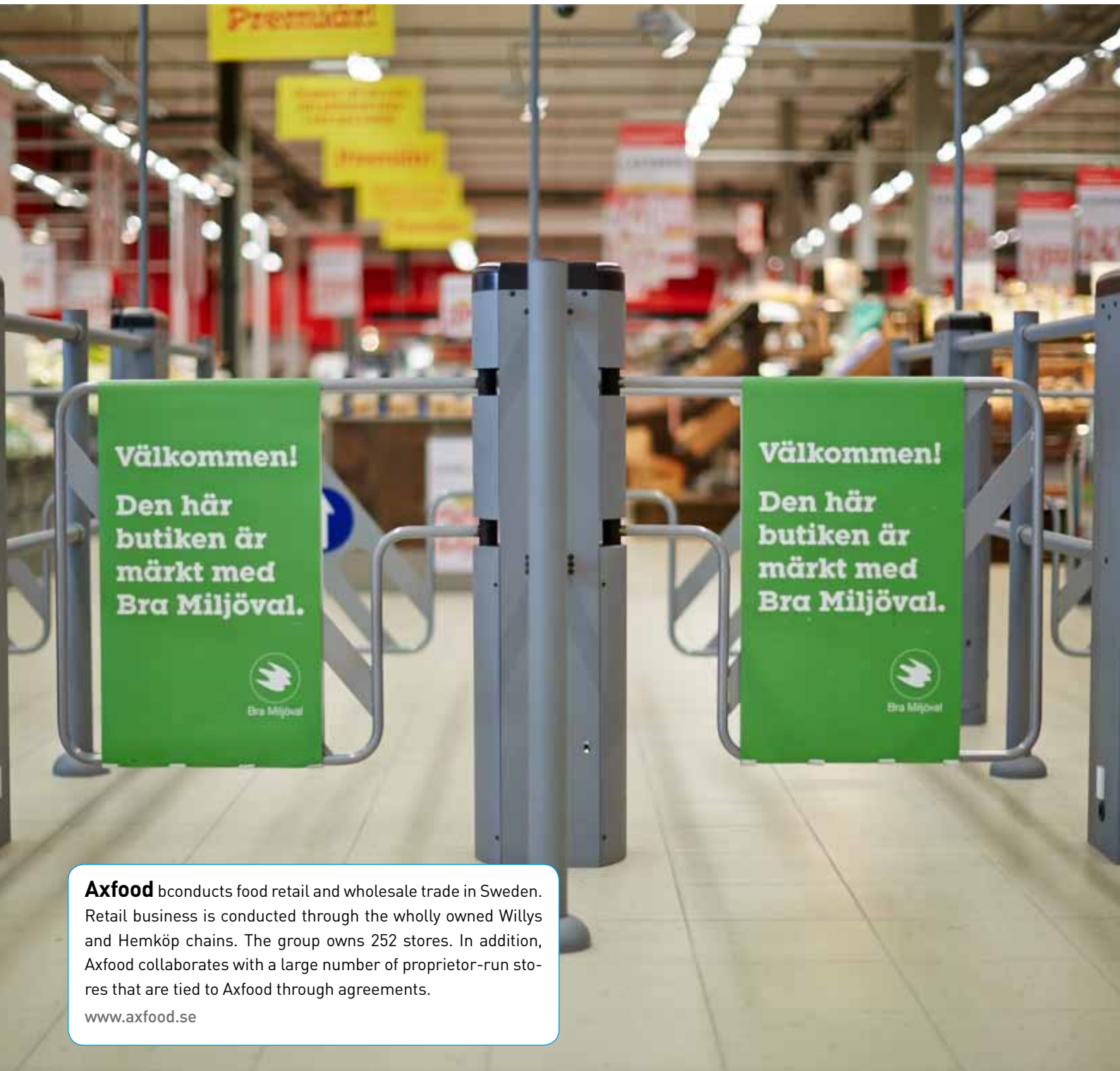


↑ For 2011–2013 the emission factor is a year in arrears. The emission factor used in the 2013 disclosures therefore relates to the year 2012. All emission factors report carbon dioxide equivalents (CO<sub>2</sub>e) with the exception of 2011–2013, when data from Swedenergy and the Swedish Energy Markets Inspectorate did not allow conversion to carbon dioxide equivalents.



### RESIDUAL MIX

The residual mix means the production mix remaining after origin-labelled production has been deducted.



**Axfood** conducts food retail and wholesale trade in Sweden. Retail business is conducted through the wholly owned Willys and Hemköp chains. The group owns 252 stores. In addition, Axfood collaborates with a large number of proprietor-run stores that are tied to Axfood through agreements.

[www.axfood.se](http://www.axfood.se)

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### Climate targets

Axfood aims to reduce greenhouse gas emissions from its own operations by 75% over the period 2009–2020. A further target is to improve energy efficiency by 30% over the same period.

### How will the targets be achieved?

In the main, Axfood is achieving its goals by switching to renewable electricity. In 2013 a further step was taken and Axfood now buys electricity bearing the 'Bra Miljöval' (Good Environmental Choice) eco-label. Dagab, which takes care of Axfood's transportation and warehouses, uses Evolution diesel which is made with 25% biofuel. It is hoped that the days when it can be made with 100% biofuel are not so far off. The expansion of detailed electricity measurement in the stores is in its final stages and the technology will now be used in further efficiency measures. The stores are also being modernised, an important element of which is switching to cooling systems that do not contain refrigerants that use greenhouse gases. Axfood is also focusing on its own business travel and is working to achieve more travel-free meetings such as video conferences and to replace air travel by rail journeys.

### THE PAST YEAR

- Axfood has continued to work on the efficiency of its energy use. Efficiency measures have been particularly successful within Dagab.
- Dagab has also installed a large solar panel system on the roof of the new frozen products warehouse in Gothenburg.
- Work on improving sorting at source has continued in order to increase materials recycling.
- A carbon offset partnership has been begun by investing in solar/hydroelectric.

### CLIMATE MEASURES

#### THAT ENHANCE PROFITABILITY

#### Sorting at source contributes in various ways

Putting its material flows in order, with sorting at source into many fractions, was profitable for Axfood since waste incineration costs reduced and sales of primary materials increased. This change also brought about improvements in contracts with contractors. Dagab's own vehicles take back the valuable soft plastics fraction to the warehouse, making transportation cost-effective. Another major gain is that sorting at source is helping to make employees more committed to environmental matters.

### FUTURE INVESTMENTS

- The long-term priorities of improving the efficiency of energy use, materials flows and biofuel will naturally continue.
- Investment in own electricity generation using solar panels has been successful and Axfood will investigate opportunities to take this further.
- Another important element is greener packaging for its own-brand goods.

## AXFOOD

| Emissions from operations (tonnes CO <sub>2</sub> e)                                    | 2009<br>Base year | 2010          | 2011           | 2012           | 2013          | Share of<br>total in 2013 | Change<br>2009-2013 | GHG<br>Scope 3 |
|---|-------------------|---------------|----------------|----------------|---------------|---------------------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |               |                |                |               |                           |                     |                |
| Business travel   | 851               | 818           | 738            | 658            | 599           | 2%                        | -30%                |                |
| Own transportation  | 10,531            | 10,376        | 9,960          | 9,209          | 10,207        | 35%                       | -3%                 |                |
| Refrigerants  | 4,147             | 4,147         | 4,147          | 3,422          | 3,422         | 10%                       | -17%                |                |
| <b>Scope 2</b>  |                   |               |                |                |               |                           |                     |                |
| Purchased energy <sup>1</sup>   | 61,578            | 64,148        | 104,459        | 89,615         | 82,768        | 56%                       | 34%                 |                |
| <b>Scope 3</b>  |                   |               |                |                |               |                           |                     |                |
| Business travel <sup>2</sup>  | 770               | 762           | 868            | 614            | 644           | 2%                        | -16%                | 2              |
| <b>TOTAL excluding origin-labelling</b>   | <b>77,877</b>     | <b>80,251</b> | <b>120,172</b> | <b>103,518</b> | <b>97,640</b> | <b>299%</b>               | <b>25%</b>          |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | 0                 | -50,165       | -77,637        | -71,790        | -66,504       |                           | -                   |                |
| <b>TOTAL Haga scope</b>   | <b>77,877</b>     | <b>30,087</b> | <b>42,535</b>  | <b>31,728</b>  | <b>31,136</b> | <b>95%</b>                | <b>-64%</b>         |                |
| Production and distribution of energy and vehicle fuels <sup>3</sup>                    | 14,008            | 6,050         | 1,414          | 1,510          | 1,502         | 5%                        | -89%                | 3              |
| <b>TOTAL (excl. carbon offset)</b>  | <b>91,885</b>     | <b>36,137</b> | <b>43,949</b>  | <b>33,238</b>  | <b>32,638</b> | <b>100%</b>               | <b>-68%</b>         |                |
| Carbon offset   | 0                 | -2,057        | -868           | -605           | -622          | -2%                       | -                   |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>91,885</b>     | <b>34,080</b> | <b>43,081</b>  | <b>32,633</b>  | <b>32,016</b> | <b>98%</b>                | <b>-69%</b>         |                |

| Haga Initiative key indicators                        | 2009<br>Base year | 2010  | 2011  | 2012  | 2013  | Change<br>2009-2013 | Unit                             |
|---|-------------------|-------|-------|-------|-------|---------------------|----------------------------------|
| Emissions per tonne of goods transported <sup>4</sup> | 24.3              | 21.6  | 21.2  | 20.1  | 21.9  | -10%                | kg CO <sub>2</sub> / tonne goods |
| Energy use per square metre (total) <sup>5</sup>      | 378.3             | 371.5 | 369.0 | 363.6 | 361.7 | -4%                 | kWh/m <sup>2</sup>               |

1. Refers to electricity consumption in retail stores and premises owned by Axfood. "Share of total" includes contracts for origin-labelled electricity.

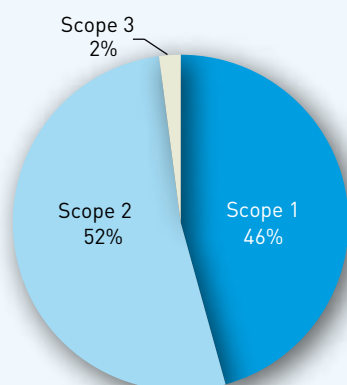
2. Refers to business air travel.

3. Refers to fuels consumed in scope 1 and scope 2.

4. Refers only to goods transportation using own vehicles.

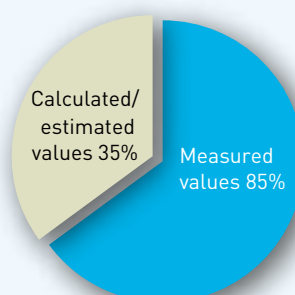
5. Only facilities with at least 12 months' results are included.

**Emissions breakdown by scope included in the Haga scope in 2013**

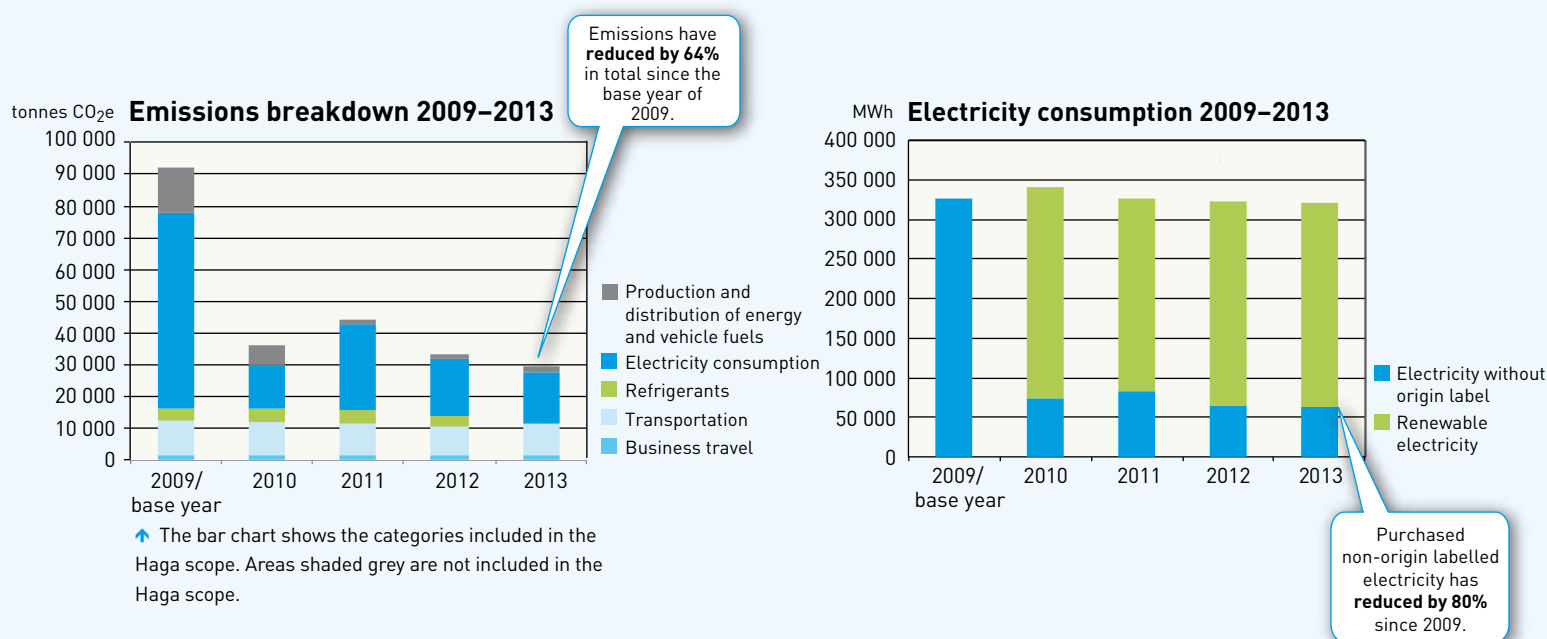


↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013.

**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 85% of total emissions were calculated based on measured activity data.



### Analysis and comments:

Axfood's emissions within the Haga scope have reduced by 60% since its base year of 2009, and by 64% in total.

Axfood's greatest climate impact is in scope 2, with electricity in stores and warehouses accounting for 50% of total emissions. Own transportation in scope 1 accounts for around a third of the emissions and refrigerant emissions correspond to one tenth of total emissions.

Despite the fact that around 80% of electricity consumption in 2013 was purchased as origin-labelled renewable electricity, electricity in retail stores and warehouses represents the area with greatest climate impact. In 2009 all electricity purchased was unspecified electricity, as a result of which the climate impact of electricity in retail stores and warehouses was more dominant still.

There has been relatively little variation in total electricity consumption over the years, with a 2% reduction since 2009. Nonetheless, emissions from electricity consumption have fallen by 74% since 2009. A major factor in this is that since 2010 Axfood has been purchasing electricity that is origin-labelled.

Emissions from goods transportation have increased by 11% since 2012.

Axfood has decided to carbon offset emissions from air travel in 2013, corresponding to 622 tonnes CO<sub>2</sub>e. The carbon offset covers around 2% of total emissions.



**Coca-Cola Enterprises Sverige AB** produces, distributes and sells non-alcoholic beverages on the Swedish market. Its brands include Coca-Cola, Fanta, Sprite, MER, Bonaqua Silver, Powerade, Minute Maid, Glacéau and Chaqwa. Around 800 people work for Coca-Cola Enterprises in Sweden, of which around 600 are in Jordbro outside Stockholm, where approximately 1 million litres of beverages are produced every day. Coca-Cola was launched in Sweden in 1953.

For more information please visit [www.cceansvar.se](http://www.cceansvar.se)

**Deliver for Today,  
Inspire for Tomorrow**

*Coca-Cola Enterprises Sverige AB*



PlantBottle is made of up to 30% plant-based material.

## Climate targets

Coca-Cola Enterprises aims to be the industry leader in respect of energy and emissions. Its overall emissions target is to reduce emissions throughout the value chain by at least a third for every beverage by 2020 compared with 2007.

## How will the targets be achieved?

Coca-Cola Enterprises takes responsibility for its climate impact throughout the chain and is focusing its efforts where they will have greatest effect. In Sweden the company is working continuously to reduce greenhouse gas emissions from manufacture, distribution and cold drink equipment. Refrigerators placed on customers' premises account for a large proportion of the emissions. Working in partnership with customers to choose energy-efficient technology and electricity from renewable sources is essential if the emissions target is to be achieved. Coca-Cola Enterprises is working on making its refrigerator fleet more energy-efficient by switching to low-energy technology, LED lighting and refrigerators with doors. All refrigerators are HFC-free.

The company continually implements energy efficiency measures in its own production, focusing on electricity consumption. All electricity and heating come from renewable energy sources.

Within distribution, the company is working on efficient logistics and switching to renewable fuels. Just over 70% of its own vehicle fleet uses RME.

### THE PAST YEAR

In 2013 Coca-Cola Enterprises Sverige took the following measures, among other things:

- Reduced electricity consumption for cold drink equipment on customer premises through further switching to energy-saving technology and LED lighting.
- Continued investment in biofuel for distribution. The Malmö–Stockholm route mainly uses biogas vehicles, powered by 75% liquid biogas and 25% diesel.
- Energy efficiencies in production, such as through better routines for shutting down equipment.

### CLIMATE MEASURES

#### THAT ENHANCE PROFITABILITY

#### No production equipment running unnecessarily

**ACTION:** Daily monitoring of energy consumption in production over the past 24 hours. Better routines for shutting down equipment.

**EMISSIONS REDUCTION** Energy consumption reduced by 115 MWh in 2013. (Coca-Cola Enterprises used electricity bearing the 'Bra Miljöval' (Good Environmental Choice) eco-label.)

**COST SAVING:** Corresponds to over 5% reduction in energy consumption per litre of beverage.

The measures primarily involved better routines and behaviours; no specific investments were required.

### FUTURE INVESTMENTS

In 2014 priority is being given to the following measures:

- Switching to low energy LED lighting in factory and warehouse.
- Further energy efficiencies in the cold drink equipment, in cooperation with customers.
- Continued investment in Plant Bottle, recycled plastic, light weighing and other activities to make the packaging more resource-efficient.



## COCA-COLA ENTERPRISES SVERIGE AB

| Emissions from operations (tonnes CO <sub>2</sub> e)                                    | 2007<br>Base year | 2010          | 2011          | 2012          | 2013          | Share of<br>total in 2013 | Change<br>2007-2013 | GHG<br>Scope 3 |
|---|-------------------|---------------|---------------|---------------|---------------|---------------------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |               |               |               |               |                           |                     |                |
| Business travel <sup>1</sup>  | 2,533             | 1,852         | 1,799         | 1,989         | 1,857         | 23 %                      | -27 %               |                |
| Refrigerants  | 157               | 41            | 13            | 13            | 10            | 0 %                       | -93 %               |                |
| Own transportation  | 2,618             | 1,300         | 538           | 357           | 280           | 3 %                       | -89 %               |                |
| <b>Scope 2</b>  |                   |               |               |               |               |                           |                     |                |
| Purchased energy <sup>2</sup>   | 6,107             | 4,840         | 7,990         | 6,890         | 6,486         | 6 %                       | 6 %                 |                |
| <b>Scope 3</b>  |                   |               |               |               |               |                           |                     |                |
| Business travel <sup>3</sup>  | 1,118             | 262           | 496           | 560           | 728           | 9 %                       | -35 %               | 6              |
| <b>TOTAL excluding origin-labelling</b>   | <b>12,533</b>     | <b>8,296</b>  | <b>10,837</b> | <b>9,808</b>  | <b>9,360</b>  |                           | <b>-25 %</b>        |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | -2,792            | -4,298        | -7,521        | -6,409        | -6,016        |                           | 115 %               |                |
| <b>TOTAL Hagascope</b>  | <b>9,741</b>      | <b>3,998</b>  | <b>3,316</b>  | <b>3,399</b>  | <b>3,345</b>  | <b>41 %</b>               | <b>-66 %</b>        |                |
| Outsourced transportation <sup>4</sup>  | 5,993             | 4,620         | 4,268         | 3,488         | 3,342         | 41 %                      | -44 %               | 4,9            |
| Production and distribution of energy and vehicle fuels <sup>5</sup>                    | 1,738             | 1,285         | 1,239         | 1,470         | 1,465         | 18 %                      | -16 %               | 3              |
| - of which fuel for business travel   | 239               | 459           | 359           | 430           | 407           | 5 %                       | 70 %                |                |
| - of which fuel for own transportation  | 637               | 470           | 592           | 760           | 774           | 9 %                       | 22 %                |                |
| - of which fuel for energy production   | 862               | 356           | 288           | 280           | 285           | 3 %                       | -67 %               |                |
| <b>TOTAL Haga commitments</b>   | <b>17,472</b>     | <b>9,903</b>  | <b>8,823</b>  | <b>8,357</b>  | <b>8,152</b>  | <b>100 %</b>              | <b>-53 %</b>        |                |
| Refrigeration of beverages on customer premises <sup>6</sup>                            | 25,131            | 35,357        | 40,353        | 38,151        | 35,006        |                           | 39 %                | 8              |
| <b>TOTAL (excl. carbon offset)</b>  | <b>42,603</b>     | <b>45,259</b> | <b>49,176</b> | <b>46,509</b> | <b>43,158</b> |                           | <b>1 %</b>          |                |
| Carbon offset   | 0                 | 0             | 0             | 0             | 0             |                           | 0 %                 |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>42,603</b>     | <b>45,259</b> | <b>49,176</b> | <b>46,509</b> | <b>43,158</b> |                           | <b>1 %</b>          |                |

| Haga Initiative key indicators                        | 2007 base<br>year | 2010    | 2011    | 2012    | 2013    | Change<br>2007-2013 | Unit                           |
|---|-------------------|---------|---------|---------|---------|---------------------|--------------------------------|
| Emissions per unit of revenue <sup>7</sup>            | 6.400             | 3.374   | 2.863   | 2.677   | 2.470   | -61 %               | tonnes CO <sub>2</sub> e/SEK m |
| Emissions per litre of beverage produced <sup>7</sup> | 59.631            | 29.737  | 26.338  | 25.116  | 22.301  | -63 %               | g CO <sub>2</sub> e/litre      |
| Emissions per unit of revenue <sup>8</sup>            | 15.605            | 15.421  | 15.956  | 14.897  | 13.078  | -16 %               | tonnes CO <sub>2</sub> e/SEK m |
| Emissions per litre beverage prod. <sup>8</sup>       | 145.403           | 135.914 | 146.797 | 139.773 | 118.062 | -19 %               | g CO <sub>2</sub> e/litre      |

1. Leased cars and hire cars.

2. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total" includes contracts for origin-labelled electricity.

3. Refers to other business travel: air and rail.

4. Refers to goods transportation provided by external contractors.

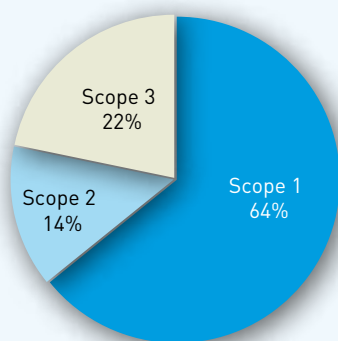
5. Refers to fuels consumed in scope 1 and scope 2.

6. Electricity consumption and refrigerant leakage for refrigeration are based on standard amounts, which are conservative because all electricity is assumed not to be origin-labelled renewable electricity.

7. Own operations, i.e. excluding electricity consumption and refrigerant leakage on customer premises.

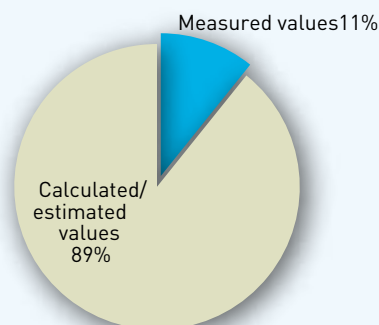
8. Own operations plus electricity consumption and refrigerant leakage on customer premises.

**Emissions breakdown by scope included in the Haga scope in 2013**

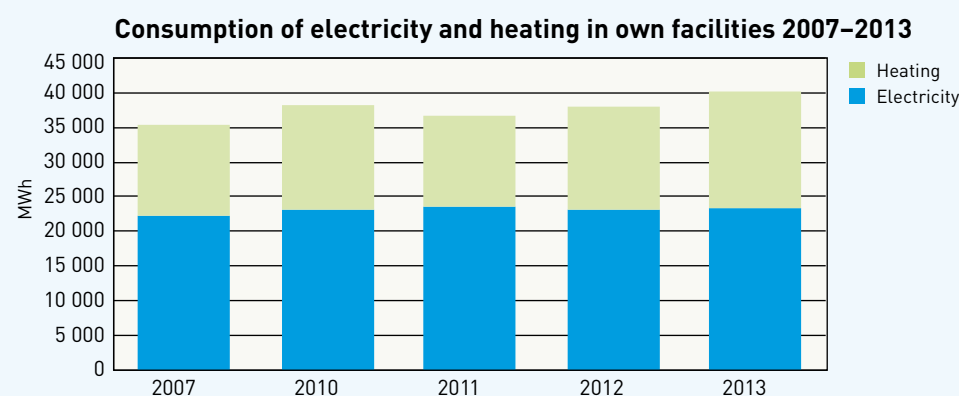
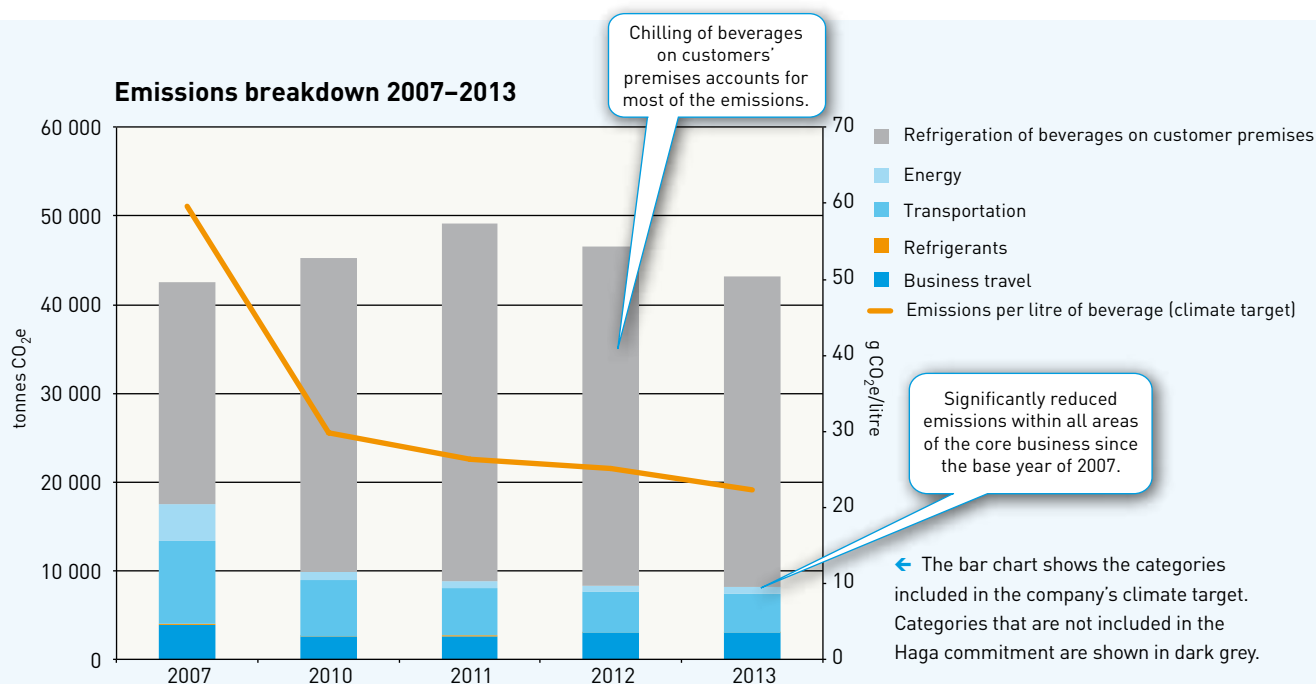


↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013. In 2013 64% of these emissions came from scope 1, 14% from scope 2 and 22% from scope 3.

**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 11% of total emissions were calculated based on measured activity data.



### Analysis and comments:

Some changes have been made since last year's disclosure in order to coordinate the Swedish operations' emissions disclosure and emissions target with those of the other European operations. As a result:

- The base year has been changed from 2004 to 2007.
- Commuting and certain goods transportation are not included.

All years have been restated based on the new scope and are therefore comparable. The change of base year has made achieving the emissions target a greater challenge, since 2004 emissions were greater than in 2007.

Of the categories included in Coca-Cola Enterprises Sverige's emissions target, goods transportation accounts for 54%, business travel for 37% and purchased electricity and district heating for 9%. The

categories include emissions in scope 1, 2 and 3, as well as emissions in the scope 3 category "production and distribution of energy and vehicle fuels".

Coca-Cola Enterprises Sverige has reduced its emissions in all areas of its core operations since its base year of 2007. If the purchased electricity had not been origin-labelled renewable electricity, purchased electricity and district heating would together account for around 6,000 tonnes more emissions and would be the category with the greatest emissions - around 50% greater than goods transportation. The share of origin-labelled electricity has increased since 2007, which contributed to a reduction in emissions from purchased energy of more than 80%.

Despite beverage production having increased by around 25% since 2007, there have also been reductions in emissions

from transportation (52%), business travel (23%) and refrigerants (93%).

In addition to its own emissions, Coca-Cola Enterprises includes in its overall climate targets emissions caused by its own chillers on customer premises. This is also the most significant source of emissions overall, accounting for around 80% of all emissions in 2013. These emissions have increased by 51% since the base year of 2007. The reason for this is partly that the number of chillers has increased since 2007, and partly that the emission factor for unspecified electricity has increased by nearly 70% since the base year. However, electricity consumption and refrigerant leakage for refrigeration are based on standard amounts, which are conservative because all electricity is assumed not to be origin-labelled renewable electricity.





**Fortum Värme** produces district heating, district cooling and electricity. The company has helped make Stockholm one of the world's cleanest capitals and in 2010 the EU named Stockholm as the world's first Green Capital. In the period 2010–2015 Fortum Värme is investing SEK 6.5 billion in combined heat and power production in the Stockholm region. By 2030 at the latest its district heating will be 100% produced from renewable or recovered energy. The company has 9,500 district heating and district cooling customers.

[www.fortum.se](http://www.fortum.se)

Using energy that would  
otherwise be wasted



## Climate targets

Fortum aims to reduce the climate impact of its district heating by an interim target of 40% by 2020, through switching to renewable energy, waste to energy production efficiency measures and, as a last resort, carbon offsetting. By 2030 at the latest production will be 100% based on renewable or recovered energy. The aim is to achieve this target significantly earlier than 2030.

## How will the targets be achieved?

Annual emissions from heating in Stockholm are 960,000 tonnes lower than in 1990 due to connection to district heating. Moreover, during the same period an additional 10 million square metres have been built and connected to district heating. Construction of one of the world's largest combined heat and power plants for biofuel is in progress at Värtan, with operation scheduled to begin in autumn 2015. In 2014 the new biofuel unloading and storage system is being started, replacing some use of coal at Värtan. Also in 2014 Fortum Värme is launching its Open District Heating concept, which aims to increase energy recovery from various suppliers. With district cooling, electricity consumption can be reduced while at the same time increasing energy recycling. In addition, the company offsets emissions from district heating production that is dependent on the fossil fuels coal and oil.

### THE PAST YEAR

In 2013 Fortum Värme's actions included:

- Commissioning of a new combined heat and power station in Sigtuna (Brista 2). The new combined heat and power station in Brista can deal with 240,000 tonnes of waste per year, which equals the amount to waste originating from the population of Stockholm.
- Construction of KVV8, the largest renewable energy production plant in Europe and one of the largest in the world, was started.
- 9 MW or 12 GWh connected to the district cooling network. The electricity saving will be around 2.5 GWh and the benefit to the climate will be a reduction in emissions of around 1,700 tonnes CO<sub>2</sub> per year.
- 57 MW, equivalent to annual supply of 177 GWh, was connected to the district heating network, reducing emissions by 18,000 tonnes of CO<sub>2</sub> per year. In addition, newly built properties with an area of 500,000 square metres were connected to district heating.

### CLIMATE MEASURES

#### THAT ENHANCE PROFITABILITY

### Profitable emissions reduction

**ACTION:** Surplus heat from a data centre is recycled into the district heating network. Suppliers sell the recovered energy at market price to Fortum. Bahnhof invests in heat pumps and Fortum Värme constructs the distribution line.

**EMISSIONS REDUCTION:** In total more than 500 MWh of district heating will be produced each year using waste heat as the energy source, with emissions reduced by around 40 tonnes of CO<sub>2</sub> per year (calculated using the heating industry's standard method).

**PAYBACK PERIOD:** 3-4 years.

### FUTURE INVESTMENTS

- Recover and utilise more surplus heat through Open District Heating and waste heat solutions together with customers and businesses.
- Energy from residual products and combustible waste where materials recycling is not the best option.
- The energy producers in the region are working in partnership with their customers to optimise the distribution of heat in an increasingly integrated district heating network.
- Renewable energy from biofuels.



## FORTUM

| Emissions from operations (tonnes CO <sub>2</sub> e)   | 2010<br>Base year | 2011             | 2012             | 2013             | Share<br>2013 | Change<br>2010-2013 | GHG<br>Scope 3 |
|--|-------------------|------------------|------------------|------------------|---------------|---------------------|----------------|
| <b>Scope 1</b>   |                   |                  |                  |                  |               |                     |                |
| Production <sup>1</sup>  | 1,455,002         | 1,032,863        | 910,938          | 995,730          | 79 %          | -32 %               |                |
| Business travel  | 3,709             | 3,526            | 3,526            | 3,529            | 0 %           | -5 %                |                |
| <b>Scope 2</b>   |                   |                  |                  |                  |               |                     |                |
| Energy <sup>2</sup>  | 410,018           | 344,671          | 358,724          | 305,788          | 4 %           | -25 %               |                |
| <b>Scope 3</b>   |                   |                  |                  |                  |               |                     |                |
| Business travel <sup>3</sup>   | 1,734             | 1,735            | 1,735            | 1,727            | 0 %           | 0 %                 | 6              |
| <b>TOTAL excluding origin-labelling</b>  | <b>1,870,464</b>  | <b>1,382,795</b> | <b>1,274,922</b> | <b>1,306,774</b> |               | <b>-30 %</b>        |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating <sup>4</sup> | -364,020          | -300,161         | -315,061         | -258,968         |               | -29 %               |                |
| <b>TOTAL Haga scope</b>  | <b>1,506,444</b>  | <b>1,082,634</b> | <b>959,861</b>   | <b>1,047,806</b> | <b>83 %</b>   | <b>-30 %</b>        |                |
| Prod. by other district heating producer that is supplied by Fortum Värme <sup>5</sup>               | 124,850           | 63,851           | 112,651          | 104,658          | 8 %           | -16 %               |                |
| Production and distribution of energy and vehicle fuels <sup>6</sup>                                 | 338,694           | 111,018          | 89,790           | 104,374          | 8 %           | -69 %               | 3              |
| - of which fuel for business travel  | 542               | 732              | 757              | 750              | 0 %           | 38 %                |                |
| - of which fuel for energy production  | 338,152           | 110,285          | 89,033           | 103,624          | 8 %           | -69 %               |                |
| <b>TOTAL (excl. carbon offset)</b>   | <b>1,969,988</b>  | <b>1,257,502</b> | <b>1,162,303</b> | <b>1,256,838</b> | <b>100 %</b>  | <b>-36 %</b>        |                |
| Carbon offset  | -7 797            | -9 916           | -13 398          | -172 600         |               |                     |                |
| <b>TOTAL (incl. carbon offset)</b>   | <b>1,962,191</b>  | <b>1,247,586</b> | <b>1,148,905</b> | <b>1,084,238</b> |               | <b>-45 %</b>        |                |

| Haga Initiative key indicators                     | 2010 base year | 2011 | 2012 | 2013 | Change 2010-2013 | Unit                    |
|--|----------------|------|------|------|------------------|-------------------------|
| Emissions per unit of energy supplied <sup>7</sup> | 148            | 120  | 113  | 107  | -28 %            | g CO <sub>2</sub> e/kWh |

1. Production of district heating, electricity, district cooling, town gas and CNG, emissions of greenhouse gases from own production, including refrigerants.

2. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total" includes contracts for origin-labelled electricity.

3. Refers to business air travel and taxi journeys.

4. Fortum Värme buys renewable electricity for its district heating and district cooling production.

5. Emissions by players other than Fortum Värme in the case of production partnerships for district heating. The emissions include both emissions from plants and from the extraction and distribution of the fuels for these plants.

6. In addition to production and distribution of fuels, also transportation of additives and ash.

7. Total emissions from scope 1, 2 and 3 as above per total delivery of district heating, electricity, district cooling, town gas and CNG.

### A HEATING CYCLE FOR A SUSTAINABLE CITY



**1 Thanks to more efficient energy use** more customers can share the district heating produced. Fortum estimates around 100 GWh being saved every year for many years, equivalent to Skara municipality's entire heat supply.

**2 More efficient production** – flue gas condensation which recovers more heat energy in flue gases. The energy is equivalent to 10% of the district heating or heating for 80,000 apartments.

**3 Energy in sorted waste from households and companies** produces enough energy to heat nearly 250,000 apartments.

**4 We share electricity systems with Europe.** The households in district heated properties are part of an energy system which contributes to around 40% of their electricity consumption being produced

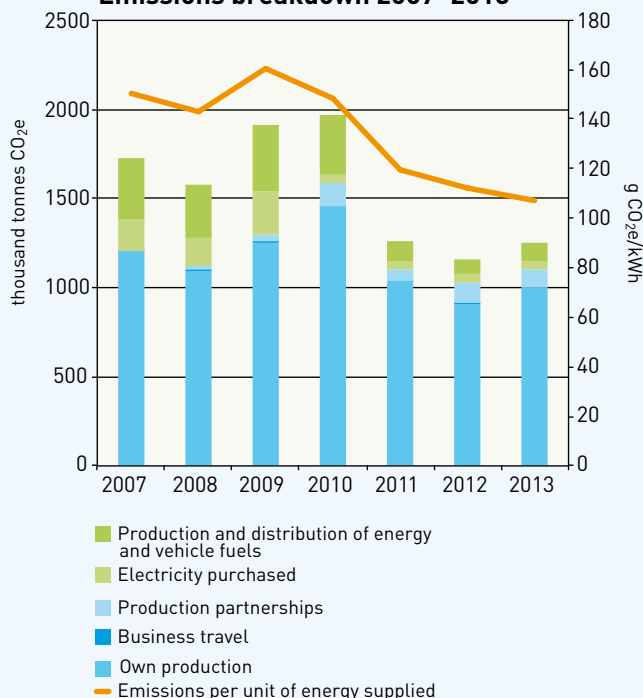
simultaneously in efficient combined heat and power production. Had this electricity been produced in a coal-fired power plant in northern Europe then the households' electricity consumption would have caused 3,000 kg of emissions per year.

**5 Renewable biofuel from the forestry industry and solar energy from the sea.** Residual products from the forestry industry produce 2,100 GWh of energy when burnt in combined heat and power plants. Solar energy recovered from seawater using heat pumps produces 900 GWh of energy.

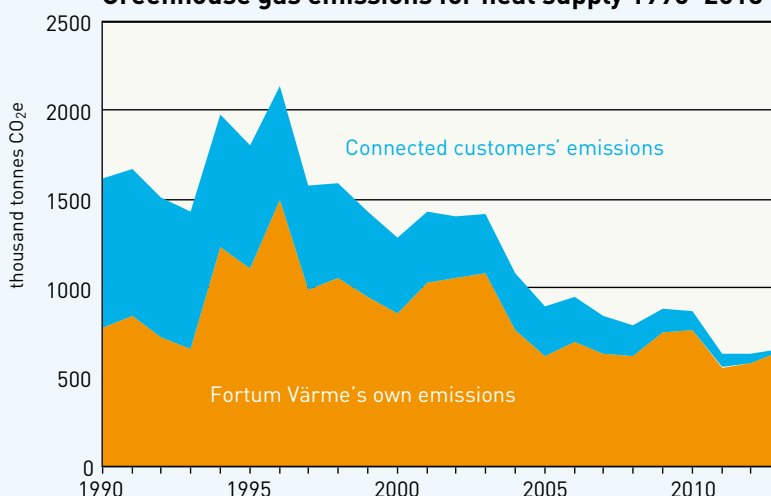
**6 Waste heat from wastewater, district cooling returns and data centres.** 700 GWh of heat from treated wastewater is utilised in Fortum's heat pumps. In the future around 1,000 GWh of surplus heat can be utilised, e.g. from data centres and supermarkets in Stockholm – equivalent to Norrköping's annual heating requirement for its 133,000 inhabitants.



Emissions breakdown 2007–2013



Greenhouse gas emissions for heat supply 1990–2013



↑ Since 1990 properties representing annual supply of 4,300 GWh have been connected to the district heating network. Of these, properties switching from own heating to district heating account for annual supply of 3,000 GWh. The chart shows the combined emissions for Fortum Värme's heat production and the properties that existed in 1990 and which have been connected to district heating over the years. In addition to the reduced climate impact shown in the diagram, there is the climate benefit of the emissions that never arose as a result of 10 million square metres of new-built properties being connected to district heating.

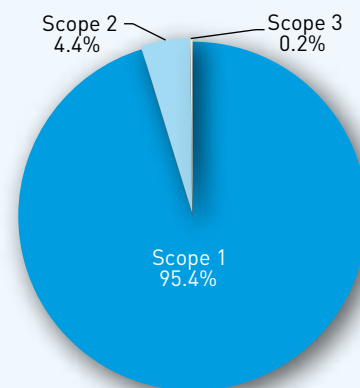
### Analysis and comments:

80% of Fortum Sweden's emissions come from its own operations. If the production partnerships are included, i.e. district heating produced by other producers but the heat of which is supplied by Fortum Värme, this adds another 8%.

Purchased electricity for production of the products district heating and district cooling is origin-labelled electricity, which means that unspecified electricity is only purchased for electricity that is consumed in the plants' support processes and has been allocated to electricity production. Emissions for electricity consumption therefore make up only 4% of the total emissions. Production and distribution of fuel accounts for around 8% of total emissions. This also includes transportation of additives and ash. Since its base year of 2010 Fortum Värme's emissions have reduced by 36% in total and by 30% in its own production, even including production partnerships. This has been possible due to a gradual phasing out of fossil fuels.

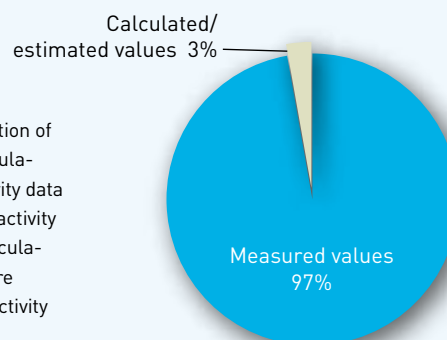
Since 2010 the entire life cycle emissions for customers choosing "carbon-neutral district heating" has been offset. For 2013 the company has carbon-offset the difference from the 2012 specific emissions for the entire volume of district heating supplied. Emissions per unit of energy supplied have reduced by 16% excluding carbon offsets and by 27% including carbon offsets since the base year of 2010.

Emissions breakdown by scope included in the Haga scope in 2013



↑ The diagram shows emissions breakdown by scope included in the Haga scope in 2013.

Breakdown of results based on type of activity data 2013



The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 97% of total emissions were calculated based on measured activity data. →



**HKScan Sweden** known for its Scan and Pärsons brands, has turnover of EUR 1 billion and employs around 2,000 people. HKScan Sweden is part of the HKScan group, which is a leading Nordic meat expert. It produces, markets and sells high-quality, responsibly-produced pork, beef, poultry and lamb products, processed meats and convenience foods under strong brand names. HKScan's customers are the retail, food service, industrial and export sectors, its home markets are Finland, Sweden, Denmark, the Baltics and Poland. HKScan exports to close to 50 countries. In 2013 HKScan had net sales of EUR 2.5 billion and some 11,000 employees, making it one of Europe's leading meat companies.

[www.sweden.hkscan.com](http://www.sweden.hkscan.com)

LED lighting outside HKScan's plant in Skara.

For more sustainable  
meat production

**HKSCAN**



#### CLIMATE MEASURES

##### THAT ENHANCE PROFITABILITY

#### Investing in district heating in Kristianstad

**ACTION:** Switch from LPG-fired to district heating produced from biofuel and biogas.

**EMISSIONS REDUCTION:** An annual reduction of 2,700 tonnes of carbon dioxide, corresponding to 1% of Kristianstad municipality's total emissions.

**PAYBACK PERIOD:** 12 months.

#### Climate targets

HKScan Sweden target is a 50% reduction in greenhouse gas emissions between 2003 and 2020. The target has been set in absolute figures to reflect the company's total emissions. The emissions target includes scope 1 and scope 2 as well as business travel, outsourced inward transportation and the production and distribution of energy and vehicle fuels in scope 3.

#### How will the emissions target be achieved?

- Surveying energy use and individual measurement of consumption per production line enables energy use to be reduced and continual improvement work to be directly measured.
- Higher requirements of company cars have been introduced, demanding reduced emissions of CO<sub>2</sub>.
- HKScan is working to optimise inward transportation of animals in order to reduce the distance that they are transported.
- As part of its Lean work to streamline all its processes HKScan has in its follow-up linked its environmental work to the positive financial results that are being achieved. Through this they are building the skills needed to work from a more sustainable perspective.

#### THE PAST YEAR

- In Kristianstad LPG has been replaced by district heating.
- Continued switch to LED lighting.
- Movement detectors for lighting have been installed.

These activities have all had positive results, not only in terms of saving energy and reducing environmental impact but also sending out the right messages to set a good example to employees and make it easier for people to change their behaviour.

#### FUTURE INVESTMENTS

- Installation of district heating and biogas in Skara.
- Consistent work to reduce all media consumption.
- Reduce usage of fossil fuels.



## HKSCAN SWEDEN

| Emissions from operations (tonnes CO <sub>2</sub> e)                                    | 2003<br>Base year | 2011          | 2012          | 2013          | Share<br>2013 | Change<br>2003-2013 | GHG<br>Scope 3 |
|---|-------------------|---------------|---------------|---------------|---------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |               |               |               |               |                     |                |
| Business travel   | 1,596             | 866           | 846           | 889           | 1 %           | -44 %               |                |
| Heating   | 22,334            | 12,483        | 13,118        | 12,853        | 19 %          | -42 %               |                |
| Refrigerants  | 0                 | 130           | 3             | 17            | 0 %           | -                   |                |
| Own transportation  | 2,965             | 276           | 139           | 125           | 0 %           | -96 %               |                |
| Carbon dioxide in production <sup>1</sup>   | 2,897             | 2,143         | 1,447         | 1,361         | 2 %           | -53 %               |                |
| <b>Scope 2</b>  |                   |               |               |               |               |                     |                |
| Purchased energy <sup>2</sup>   | 23,790            | 29,080        | 25,146        | 21,991        | 32 %          | -8 %                |                |
| <b>Scope 3</b>  |                   |               |               |               |               |                     |                |
| Business travel <sup>3</sup>  | 0                 | 202           | 238           | 360           | 1 %           | -                   | 6              |
| <b>TOTAL excluding origin-labelling</b>   | <b>53,582</b>     | <b>45,181</b> | <b>40,938</b> | <b>37,596</b> | <b>59 %</b>   | <b>-30 %</b>        |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | 0                 | 0             | -844          | 0             |               | -                   |                |
| <b>TOTAL Haga scope</b>   | <b>53,582</b>     | <b>45,181</b> | <b>40,094</b> | <b>37,596</b> | <b>55 %</b>   | <b>-30 %</b>        |                |
| Production and distribution of energy and vehicle fuels <sup>4</sup>                    | 10,923            | 1,118         | 1,117         | 2,454         | 4 %           | -78 %               | 3              |
| - of which fuel for business travel   | 110               | 247           | 210           | 201           | 0 %           | 84 %                |                |
| - of which fuel for own transportation  | 0                 | 57            | 30            | 27            | 0 %           | -                   |                |
| - of which fuel for purchased energy  | 10,813            | 815           | 876           | 2,226         | 3 %           | -79 %               |                |
| Outsourced inward transportation <sup>5</sup>   | 10,516            | 7,968         | 6,648         | 6,414         | 9 %           | -39 %               | 4              |
| <b>TOTAL Scan's climate target</b>  | <b>75,021</b>     | <b>54,267</b> | <b>47,859</b> | <b>46,463</b> | <b>68 %</b>   | <b>-38 %</b>        |                |
| Carbon dioxide in packaging <sup>1</sup>  | 2,897             | 2,143         | 1,447         | 1,361         | 2 %           | -53 %               |                |
| Other outsourced transportation <sup>5</sup>  | 0                 | 0             | 9,432         | 10,812        | 16 %          | -                   | 4              |
| Waste disposal <sup>6</sup>   | 0                 | 0             | 6,004         | 5,548         | 8 %           | -                   | 5              |
| Packaging <sup>7</sup>  | 0                 | 0             | 4,161         | 4,232         | 6 %           | -                   | 1              |
| End consumer's disposal of packaging waste <sup>8</sup>                                 | 0                 | 0             | 202           | 199           | 0 %           | -                   | 12             |
| <b>TOTAL (excl. carbon offset)</b>  | <b>77,918</b>     | <b>56,410</b> | <b>69,104</b> | <b>68,616</b> | <b>100 %</b>  | <b>-12 %</b>        |                |
| Carbon offset   | 0                 | 0             | 0             | 0             |               | -                   |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>77,918</b>     | <b>56,410</b> | <b>69,104</b> | <b>68,616</b> | <b>100 %</b>  | <b>-12 %</b>        |                |

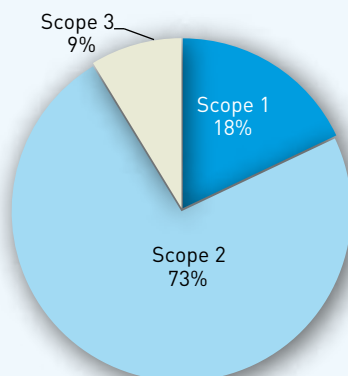
| Haga Initiative key indicators                                    | 2003<br>Base year | 2011  | 2012  | 2013  | Change<br>2003-2013 | Unit                                       |
|---|-------------------|-------|-------|-------|---------------------|--|
| Emissions per tonne of weight produced<br>(Scan's climate target) | 0.147             | 0.134 | 0.135 | 0.139 | -5 %                | tonnes CO <sub>2</sub> e/<br>tonne product |

1. The carbon dioxide is a residual product from the industry. Approximately half is emitted during production (scope 1) and half when the end consumer opens the carbon dioxide filled packaging (scope 3).

2. Emissions from production of purchased electricity, district heating or district cooling.  
3. Refers to business air travel, rail travel and hotels.  
4. Refers to fuels consumed in scope 1 and scope 2.

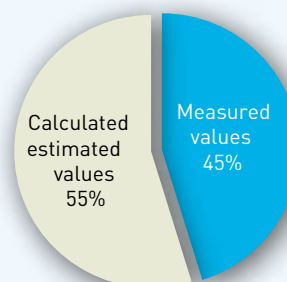
5. Refers to outsourced transportation.  
6. Refers to waste disposal (to landfill, materials recycling and production of biogas).  
7. Emissions from the production of packaging materials.

**Emissions breakdown by scope included in the Haga scope in 2013**

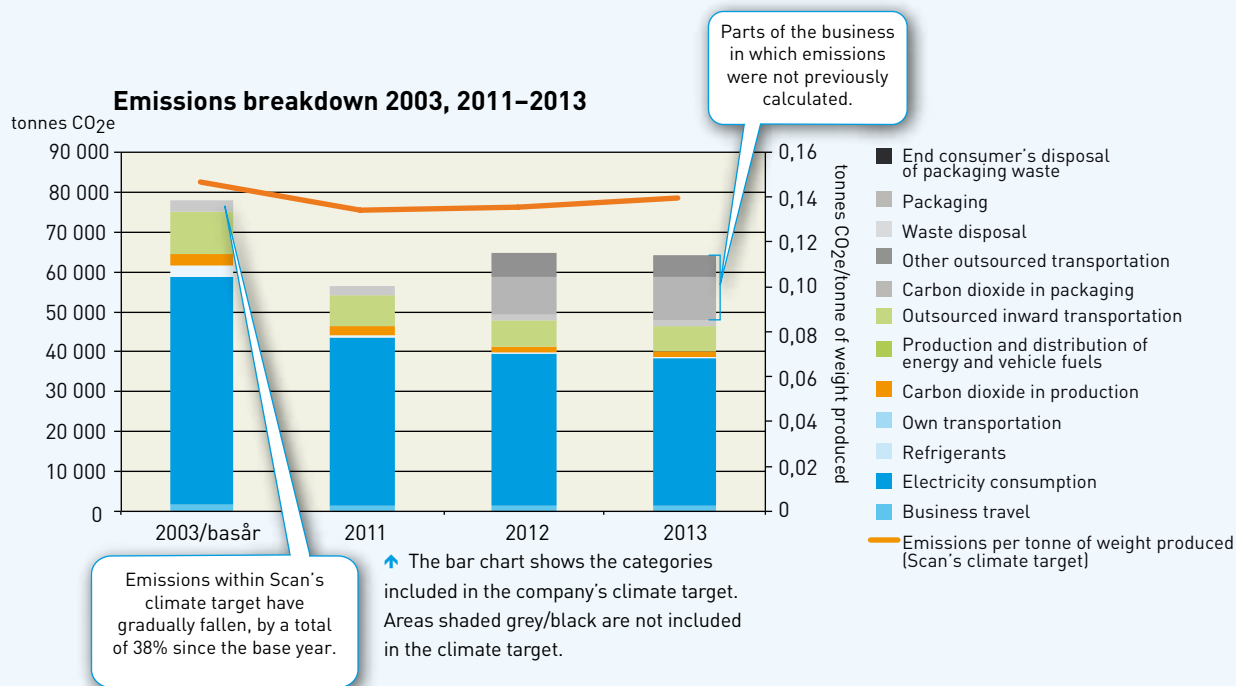


↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013.

**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 55% of total emissions were calculated based on measured activity data.



### Analysis and comments:

HKScan Sweden's emissions within the climate target set have reduced by 38% since the base year of 2003. This is due to reduced emissions within all categories.

HKScan Sweden's climate impact within the Haga scope is greatest in scope 2, where emissions for production of purchased electricity and district heating account for 58% of emissions. Viewed overall, the next largest emissions are from business travel, heating and refrigerants in scope 1, which account for 41% of total emissions within the Haga scope. Emissions from business travel in scope 3 make up only 1% of emissions.

In addition to the Haga scope, HKScan Sweden's climate target also includes production and distribution of fuel and outsourced inward transportation. Production and distribution of fuel has reduced as a result of reduced consumption of vehicle and energy fuels. The emissions reduction by inward transportation contractors is due mainly to reduced production, but also to improved logistics. Emissions within the framework of HKScan Sweden's climate target made up 68% of the total emissions disclosed in 2013.

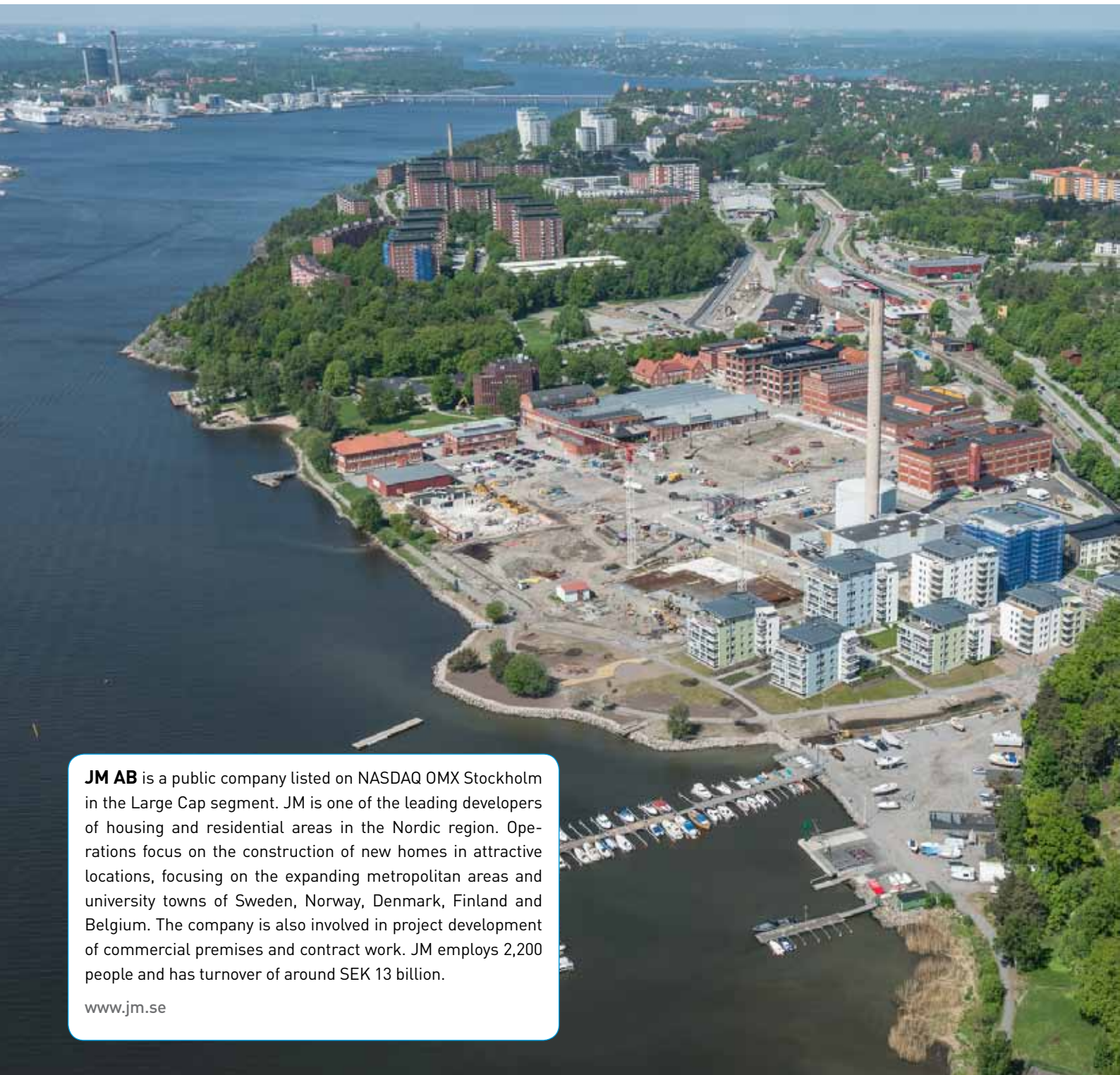
Other than emissions of carbon dioxide when the customers open the packaging, the other categories in scope 3 were new in 2012 and are therefore not comparable with the base year. The extended remit of scope 3 has meant the disclosure of an additional nearly 20,000 tonnes in 2013 compared with the years 2003 and 2011.

The reporting of outsourced transportation has been expanded to include a category for "other outsourced transportation" and has not been included in the emissions target for the sake of comparability with the base year. In addition, a further three scope 3 categories were included in the calculations in 2012 that had not previously been included: waste disposal in own operations, production of packaging materials and waste disposal by end consumers. These three categories together account for around 15% of HKScan Sweden's total emissions.

Emissions per unit of weight produced have reduced by 5% for the emissions target compared with the absolute reduction in emissions reduction of 38%, which is due to the fact that production has reduced.

Despite the lower production, however, a certain fixed amount of energy is required in the processes, which is why a decrease in meat production does not result in an equivalent decrease in emissions.

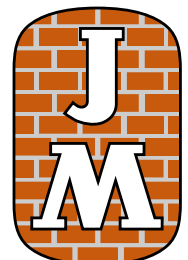




**JM AB** is a public company listed on NASDAQ OMX Stockholm in the Large Cap segment. JM is one of the leading developers of housing and residential areas in the Nordic region. Operations focus on the construction of new homes in attractive locations, focusing on the expanding metropolitan areas and university towns of Sweden, Norway, Denmark, Finland and Belgium. The company is also involved in project development of commercial premises and contract work. JM employs 2,200 people and has turnover of around SEK 13 billion.

[www.jm.se](http://www.jm.se)

The European leader  
in low energy homes





One of JM's construction projects on Liljeholmskajen in Stockholm.

## Climate targets

JM's climate target is a 40% reduction in greenhouse gas emissions by 2020 compared with 1990. The reduction includes not just emissions from own operations, but also emissions from the homes built during their warranty period.

## How will the target be achieved?

JM is today a European market leader in the construction of low energy homes. Its strategy for the future is to continue its efforts to reduce energy use both in the homes built and on its building sites. As well as building better insulated, more airtight homes with low energy fittings, JM also works to influence energy use by those who live in its homes; for example, through individual measurement and charging of hot tap water. The aim is for the energy requirement of homes produced by JM to be around 25% less than the current norm. JM also works to reduce energy use on its building sites. Measures such as better insulated site cabins, low energy light bulbs and time-controlled heating and lighting have all helped reduce energy use.

## CLIMATE MEASURES

### THAT ENHANCE PROFITABILITY

#### Weather forecast management saves energy

Houses built by JM are today fitted with weather forecast control, which means that the heating system is set based on data from detailed local weather forecasts instead of a local thermometer. It takes into account temperature, humidity and wind, and this solution means that the system can work more evenly – which in turn saves on purchased energy. The measures result in a CO<sub>2</sub> reduction of roughly 100 tonnes per year, resulting in an annual cost saving of around SEK 1 million.

## THE PAST YEAR

In 2013 work continued on the gradual introduction of energy efficiency measures in all JM's construction projects. JM also worked on developing its requirements specification for transport and machinery contractors on its construction projects. The requirements cover areas such as fuel types, engine types, reduced fuel use and action plans to reduce dependence on fossil fuels.

## FUTURE INVESTMENTS

In 2014 priority is being given to the following measures:

- Continued improvement of energy performance in housing.
- Continued development of the design of homes to facilitate carbon-efficient living.
- Continued work to reduce greenhouse gas emissions from transportation and machinery.

## JM AB

| Emissions from operations (tonnes CO <sub>2</sub> e)                                    | 2010          | 2011          | 2012          | 2013          | Share 2013   | Change 2010-2013 | GHG Scope 3 |
|---|---------------|---------------|---------------|---------------|--------------|------------------|-------------|
| <b>Scope 1</b>  |               |               |               |               |              |                  |             |
| Business travel <sup>1</sup>  | 3,970         | 3,873         | 3,984         | 3,598         | 18 %         | -9 %             |             |
| Heating   | 1,785         | 1,338         | 1,016         | 1,474         | 7 %          | -17 %            |             |
| <b>Scope 2</b>  |               |               |               |               |              |                  |             |
| Purchased energy <sup>2</sup>   | 9,608         | 13,679        | 10,549        | 9,861         | 10 %         | 3 %              |             |
| <b>Scope 3</b>  |               |               |               |               |              |                  |             |
| Business travel <sup>3</sup>  | 357           | 523           | 486           | 485           | 2 %          | 36 %             | 6           |
| <b>TOTAL excluding origin-labelling</b>   | <b>15,720</b> | <b>19,414</b> | <b>16,036</b> | <b>15,418</b> |              | <b>-2 %</b>      |             |
| Reduction through purchase of origin-labelled renewable electricity or district heating | -7,065        | -11,323       | -8,557        | -7,820        |              | 11 %             |             |
| <b>TOTAL Haga scope</b>   | <b>8,656</b>  | <b>8,091</b>  | <b>7,478</b>  | <b>7,598</b>  | <b>38 %</b>  | <b>-12 %</b>     |             |
| Outsourced transportation   | 2,487         | 2,905         | 2,626         | 2,424         | 12 %         | -3 %             | 4           |
| Leased machinery  | 8,663         | 8,124         | 8,878         | 8,795         | 44 %         | 2 %              | 8           |
| Production and distribution of energy and vehicle fuels <sup>4</sup>                    | 1,485         | 1,718         | 1,359         | 1,334         | 7 %          | -10 %            | 3           |
| - of which fuel for business travel   | 692           | 1,162         | 1,053         | 919           | 5 %          | 33 %             |             |
| - of which fuel for energy production   | 793           | 556           | 306           | 415           | 2 %          | -48 %            |             |
| Energy consumption in new homes (first 2 years)   | 1,437         | 1,631         | 2,462         | 1,811         | 8 %          | 26 %             | 13          |
| <b>TOTAL (excl. carbon offset)</b>  | <b>22,728</b> | <b>22,468</b> | <b>22,803</b> | <b>21,962</b> | <b>100 %</b> | <b>3 %</b>       |             |
| Carbon offset   | -359          | -351          | -387          | -391          | -2 %         | 9 %              |             |
| <b>TOTAL (incl. carbon offset)</b>  | <b>22,369</b> | <b>22,117</b> | <b>22,416</b> | <b>21,572</b> | <b>98 %</b>  | <b>-4 %</b>      |             |

| Haga Initiative key indicators                           | 2010 | 2011 | 2012 | 2013 | Change 2010-2013 | Unit                         |
|--|------|------|------|------|------------------|------------------------------|
| Emissions per home<br>[JM's climate target] <sup>7</sup> | 7.5  | 6.4  | 7.2  | 6.9  | -9 %             | ton CO <sub>2</sub> e/bostad |

1. Car journeys in vehicles controlled by JM.

2. Refers to electricity used in production, electricity used in properties owned by JM, district heating used in production and district heating in properties owned by JM. Emissions from production of purchased electricity, district heating or district

cooling assuming that all are unspecified (residual mix). "Share of total" includes contracts for origin-labelled electricity (residual mix).

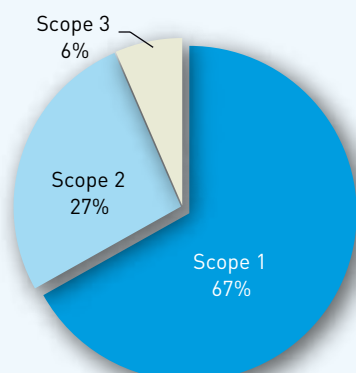
3. Refers to air, taxi, bus and train travel and hotels used for business purposes.

4. Refers to fuels consumed in scope 1 and scope 2.

These correspond to upstream emissions from the fuel (production of the fuel) and energy consumption in newly built properties in their first two years.

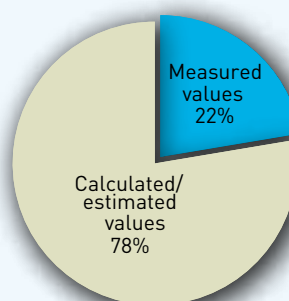
5. Excluding energy consumption in homes in the first two years.

**Emissions breakdown by scope included in the Haga scope in 2013**



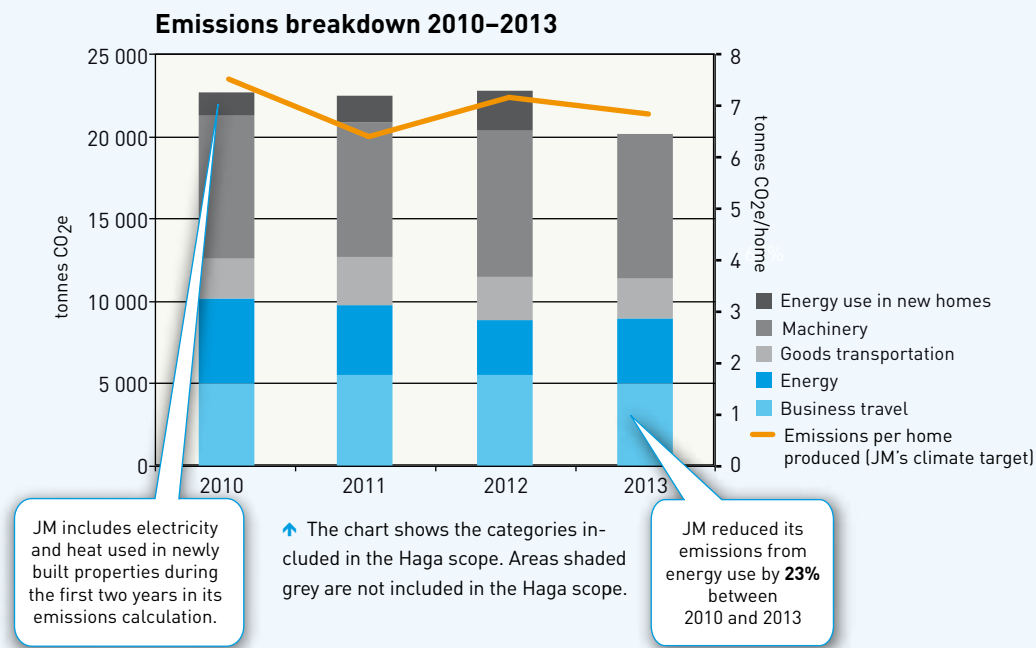
↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013. In 2013 67% of these emissions were from scope 1, 27% were from scope 2 and 6% were from scope 3.

**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 22% of total emissions were calculated based on measured activity data.





### Analysis and comments:

JM's emissions in scope 1 and scope 2 account for 67% and 27% respectively of its total emissions and the Haga scope, which also includes business travel, accounts for 35% of total emissions. Emissions within the Haga scope have reduced by 12% since 2010.

In addition to the emissions included in the Haga scope, JM also includes in its scope 3 emissions outsourced transportation and machinery as well as the electricity and heat consumed in newly built properties in their first two years. Emissions per home have reduced by around 9%, while total emissions have reduced by 3%. The fact that total emissions have not reduced by as much as emissions per home is because the production volume has grown. More completed projects in the past two years compared with 2010 is one reason for the 26% increase in the category of energy use in new homes.

JM's greatest climate impact is from machinery, which accounts for 40% of total emissions.

JM has chosen to carbon offset emissions from air travel using emissions reductions from CDM Gold Standard projects.



**Lantmännen** is one of the Nordic area's largest groups within agriculture, machinery, energy and food. Lantmännen's brands include AXA, Kungsörnen, GoGreen, Hatting, Schulstad and Gooh. Lantmännen is owned by 32,000 Swedish farmers, operates in around 20 countries, and has approximately 8,500 employees and turnover of around SEK 33 billion. The company was founded on knowledge and values that go back generations among its owners. Access to research, development and operations throughout the chain means that Lantmännen can shoulder responsibility from field to fork.

[www.lantmannen.com](http://www.lantmannen.com)

Sharing responsibility  
from field to fork





Lantmännen Cerealia's goods vehicles run on the biodiesel RME.



### Climate targets

Lantmännen has adopted a proactive and clear target: between 2009 and 2020 carbon dioxide emissions must reduce by 40% in relation to value added. The interim target for 2013 is 15%. The target is restricted to transportation and energy use in own production.

### How will the target be achieved?

Lantmännen's production facilities process grain and other ingredients into foodstuffs, feeds and renewable fuels. Lantmännen is constantly working to improve energy efficiency and to convert fossil-fired systems to biofuel. Lantmännen has reduced its use of heating oil by around two thirds. They are also working on utilising residual products for energy production and works continually to optimise transport and to switch to greener fuels and methods of transport. The company has also placed greater emphasis on climate performance when buying electricity and heating.

Lantmännen's measurable climate target is restricted to energy use in own production and outsourced transportation. It is also working to reduce its climate impact at other stages, along with suppliers and customers.

### THE PAST YEAR

In 2013 Lantmännen took the following measures, among other things:

- Lantmännen Reppe converted from heating oil to bio-oil, reducing emissions of fossil carbon dioxide by 95%..
- Along with a transport contractor, Lantmännen Cerealia converted goods vehicles to run on the biodiesel RME.
- At Lantmännen Unibake's bakery in Norway waste heat from freezers is utilised to heat a neighbouring school and sports centre, reducing carbon dioxide emissions by 370 tonnes a year.

### CLIMATE MEASURES

#### THAT ENHANCE PROFITABILITY

#### Reduced empty running in Mantorp

An energy consumption survey at Lantmännen Unibake's plant in Mantorp showed unnecessary energy consumption during the night break. All energy thieves were identified and a checklist was drawn up for equipment that can be turned off. Before leaving for the night the staff now have a shut-off round. Since its introduction overnight power consumption has decreased by more than 60 percent.

### FUTURE INVESTMENTS

In 2014 priority is being given to the following measures:

- Lantmännen's target is to phase out the use of heating oil by 2020. Its use has reduced by 65% since 2009, and in 2014 there will be a special initiative to find alternatives for the remaining oil consumers.
- Training will be given in energy analysis in order to increase energy efficiency measures through continual improvements.
- Special focus on climate performance when buying energy.

# LANTMÄNNEN

| Utsläpp verksamhet (ton CO <sub>2</sub> e)  | 2009<br>Base year | 2011           | 2012           | 2013           | Share<br>2013 | Change<br>2009-2013 | GHG<br>Scope 3 |
|---|-------------------|----------------|----------------|----------------|---------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |                |                |                |               |                     |                |
| Business travel   | 4,508             | 4,223          | 4,169          | 3,895          | 2 %           | -14 %               |                |
| Heating   | 53,637            | 37,876         | 38,506         | 26,465         | 13 %          | -51 %               |                |
| <b>Scope 2</b>  |                   |                |                |                |               |                     |                |
| Energy <sup>1</sup>   | 100,138           | 152,930        | 163,167        | 151,398        | 47 %          | 51 %                |                |
| <b>Scope 3</b>  |                   |                |                |                |               |                     |                |
| Business travel <sup>2</sup>  | 2,893             | 2,835          | 2,817          | 2,669          | 1 %           | -8 %                | 6              |
| <b>TOTAL excluding origin-labelling</b>   | <b>161,177</b>    | <b>197,863</b> | <b>208,659</b> | <b>184,427</b> |               | 14 %                |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | 0                 | 0              | 0              | -53,629        |               | -                   |                |
| <b>TOTAL Hagascope</b>  | <b>161,177</b>    | <b>197,863</b> | <b>208,659</b> | <b>130,798</b> | <b>63 %</b>   | -19 %               |                |
| Outsourced goods transportation <sup>3</sup>  | 79,867            | 89,347         | 66,173         | 63,834         | 31 %          | -20 %               | 4              |
| Production and distribution of energy and vehicle fuels <sup>4</sup>                    | 32,993            | 17,837         | 17,257         | 12,563         | 6 %           | -62 %               | 3              |
| - of which fuel for business travel   | 953               | 1,113          | 1,088          | 918            | 0 %           | -4 %                |                |
| - of which fuel for production of energy  | 32,040            | 16,723         | 16,169         | 11,645         | 6 %           | -64 %               |                |
| <b>TOTAL (excl. carbon offset)</b>  | <b>274,037</b>    | <b>305,046</b> | <b>292,089</b> | <b>207,195</b> | <b>100 %</b>  | -24 %               |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>274,037</b>    | <b>305,046</b> | <b>292,089</b> | <b>207,195</b> | <b>100 %</b>  | -24 %               |                |

| Haga Initiative key indicators | 2009 | 2011 | 2012 | 2013 | Change<br>2009-2013 | Unit                               |
|--------------------------------|------|------|------|------|---------------------|------------------------------------|
| Emissions per unit of revenue  | 14.2 | 15.1 | 16.0 | 12.5 | -12 %               | tonnes CO <sub>2</sub> e/<br>SEK m |

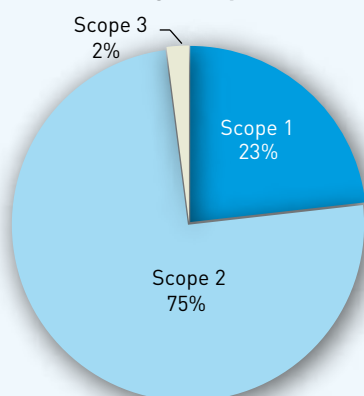
1. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total" includes contracts for origin-labelled electricity.

2. Refers to business air travel and rail journeys.

3. Refers to goods transportation provided by external contractors.

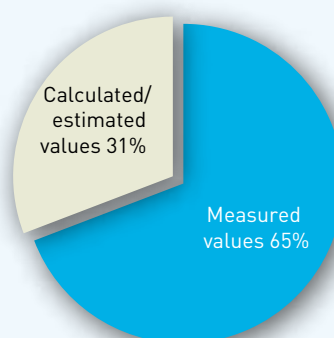
4. Refers to fuels consumed in scope 1 and scope 2.

**Emissions breakdown by scope included in the Haga scope in 2013**

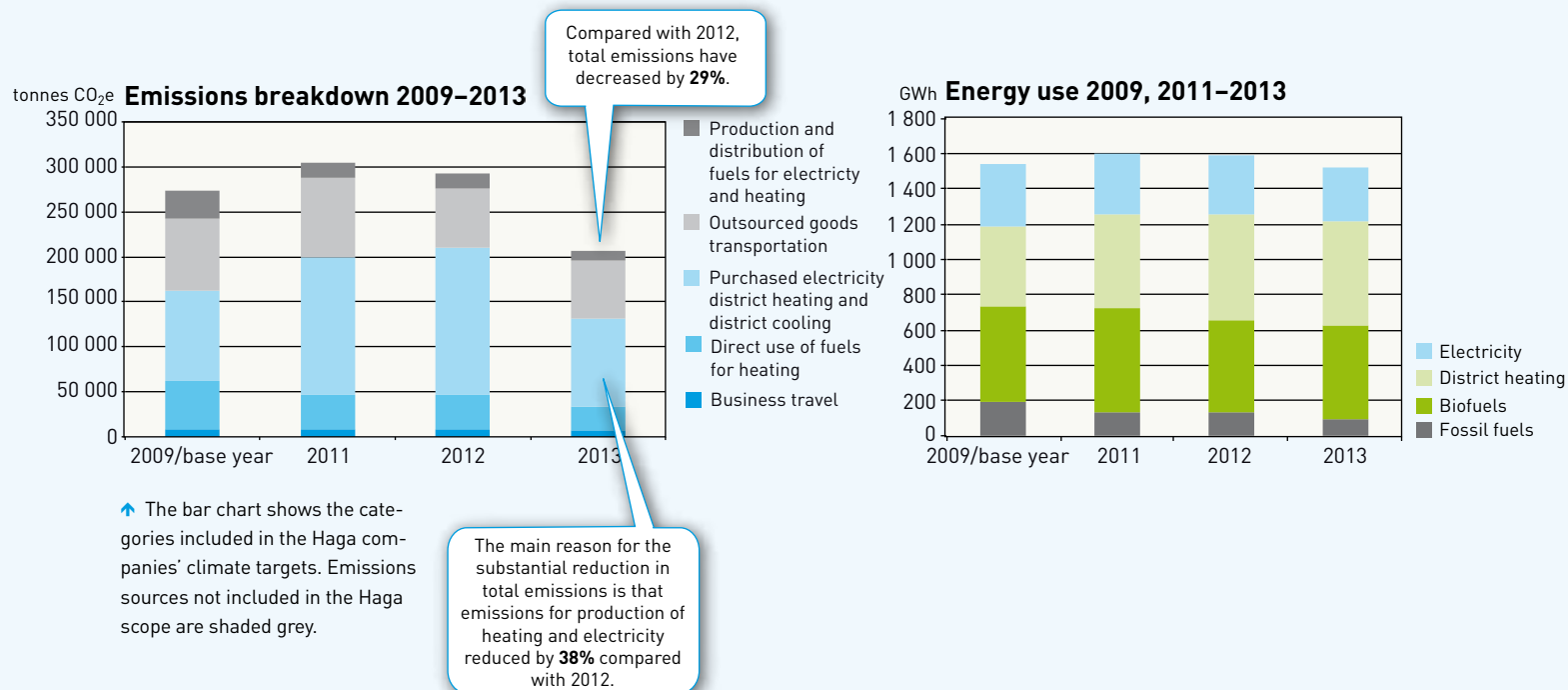


↑ The diagram shows the break-down of emissions by scope included in the Haga scope in 2013. In 2013 75% of these emissions came from scope 2, 23% from scope 1 and 2% from scope 3.

**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 65% of total emissions were calculated based on measured activity data.



### Analysis and comments:

Lantmännen's climate impact is greatest in scope 2, where emissions for production from purchased electricity, district heating and district cooling account for 47% of total emissions. Emissions for own heating and for purchased electricity and heating have reduced by 19% in 2013 compared with the base year of 2009. Total energy use has decreased by 2% in the same period. The reason for the large reduction in emissions associated with energy use for electricity and heating is that Lantmännen signed a specific contract with a district heating supplier in respect of a renewable fuel mix. Energy use can be broken down into 41% fuel for own boilers, 39% district heating and 20% purchased electricity. Viewed overall, the next largest emissions are from outsourced goods transportation in scope 3, which accounts for around 31% of total emissions. Heating in scope 1 is in third place in terms of size, corresponding to 13% of total emissions.

The use of fossil fuels has reduced by 54% since the base year of 2009, while electricity consumption has decreased by 13% in the same period. The use of district heating has increased by 27% and the use of biofuels has increased by 1% since 2009. Although electricity consumption has decreased by 13%, the emissions are largely unchanged because of a 15% increase in the emission factor for the Nordic residual mix over the years concerned.

Thanks to the great reduction in emissions from heating, Lantmännen's total emissions have also reduced by 19% compared with the base year of 2009.

Emissions from business travel were measured for 2013 and make up around 4% of total emissions.

Lantmännen's total emissions have decreased by 19% since the base year of 2009, and emissions per unit of revenue have decreased by 12%.





**Löfbergs** is one of the largest family-owned coffee roasters in the Nordic region. Production corresponds to just over 10 million cups of good coffee a day. The company was founded in 1906 and is today one of the world's biggest importers of organic and Fairtrade certified coffee. The group has 300 employees and turnover of SEK 1.5 billion. Headquartered in Karlstad, the company has its own roasting facilities in Sweden, Norway, Denmark and Latvia. Löfbergs also owns the Kobbs tea brand.

[www.lofbergs.se](http://www.lofbergs.se)

## Brewing a better world







### Climate targets

- 100% certified coffee by 2016 (e.g. Fairtrade, Krav and Rainforest Alliance).
- 100% renewable energy by 2020.
- 40% reduction in emissions by 2020 (compared with 2005)\*.

### How will the targets be achieved?

Between 80% and 90% of emissions from coffee derive from the plantations. Thus it is here that efforts have the greatest impact. It is therefore important to have long and close relationships with coffee growers around the world, so that Löffbergs can contribute to more sustainable growing methods. One of the ways Löffbergs does this is through its own development projects linked to the global climate challenges (Coffee & Climate). To increase both the supply of and the demand for sustainable coffee, the company is working actively to increase the share of certified coffee (e.g. Fairtrade, Krav and Rainforest Alliance).

At the same time, Löffbergs is working to streamline production and transportation in order to reduce its climate impact. A major challenge is to find or develop a solution for roasting coffee using non-fossil fuel.

\* Based on the scope of the Haga Initiative

### CLIMATE MEASURES THAT ENHANCE PROFITABILITY

#### Reduced leakage saves money and electricity

Systematic maintenance of pressure valves at the Karlstad plant reduced leakage, which resulted in a reduction in electricity consumption for compressors of 80,000 kWh. This relatively small and simple measure brought about savings equivalent to the annual electricity consumption of 16 family houses.

### THE PAST YEAR

- As part of the Coffee & Climate project a toolbox was launched that helps coffee growers minimise their climate impact and adapt to climate change.
- Smarter logistics enabled Löffbergs to close a warehouse, reducing the transportation of 1,000 tonnes of coffee.
- Löffbergs installed proximity- and energy-efficient LED lighting in even more premises.

### FUTURE INVESTMENTS

- To continue with development projects in coffee growing countries and continually increase the share of certified coffee, in order to stimulate more sustainable growing methods and get more people to brew a better world.
- To contribute to a pilot project for unique sun catchers that generate both heating and cooling.
- To actively find or develop a solution for roasting coffee using renewable alternatives.

## LÖFBERGS

| Emissions from operations (tonnes CO <sub>2</sub> e)                                    | 2005<br>Base year | 2011 <sup>8</sup> | 2012 <sup>9</sup> | 2013 <sup>10</sup> | Share<br>2013  | Change<br>2005-2013 | GHG<br>Scope 3 |
|---|-------------------|-------------------|-------------------|--------------------|----------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |                   |                   |                    |                |                     |                |
| Roasting  | 1,623             | 1,977             | 2,011             | 2,062              | 1,3 %          | 27 %                |                |
| Energy  | 295               | 55                | 54                | 67                 | 0,0 %          | -77 %               |                |
| Business travel <sup>1</sup>  | 265               | 218               | 262               | 237                | 0,2 %          | -10 %               |                |
| Own transportation  | 511               | 0                 | 0                 | 0                  | 0,0 %          | -100 %              |                |
| <b>Scope 2</b>  |                   |                   |                   |                    |                |                     |                |
| Purchased energy <sup>2</sup>   | 459               | 1,681             | 1,500             | 1,493              | 0,1 %          | 225 %               |                |
| <b>Scope 3</b>  |                   |                   |                   |                    |                |                     |                |
| Business travel <sup>3</sup>  | 236               | 401               | 425               | 377                | 0,2 %          | 60 %                | 6              |
| <b>TOTAL excluding origin-labelling</b>   | <b>3,390</b>      | <b>4,331</b>      | <b>4,252</b>      | <b>4,236</b>       |                | <b>25 %</b>         |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | 0                 | -1,525            | -1,334            | -1,362             |                | -                   |                |
| <b>TOTAL Haga scope</b>   | <b>3,390</b>      | <b>2,806</b>      | <b>2,918</b>      | <b>2,874</b>       | <b>1,9 %</b>   | <b>-15 %</b>        |                |
| Production and distribution of energy and vehicle fuels <sup>4</sup>                    | 310               | 269               | 261               | 265                | 0,2 %          | -14 %               | 3              |
| - of which fuel for roasting  | 112               | 107               | 110               | 107                | 0,1 %          | -4 %                |                |
| - of which fuel for energy  | 136               | 93                | 92                | 104                | 0,1 %          | -23 %               |                |
| - of which fuel for business travel   | 33                | 69                | 59                | 54                 | 0,0 %          | 63 %                |                |
| - of which fuel for own transportation  | 29                | 0                 | 0                 | 0                  | 0,0 %          | -100 %              |                |
| Outsourced transportation <sup>5</sup>  | 6,825             | 7,915             | 8,094             | 8,977              | 5,8 %          | 32 %                | 4, 9           |
| Packaging <sup>6</sup>  | 2,966             | 3,087             | 2,640             | 3,564              | 2,3 %          | 20 %                | 1              |
| Coffee growing <sup>7</sup>   | 122,873           | 125,699           | 126,338           | 138,341            | 89,8 %         | 13 %                | 1              |
| <b>TOTAL (excl. carbon offset)</b>  | <b>136,363</b>    | <b>139,776</b>    | <b>140,252</b>    | <b>154,021</b>     | <b>100,0 %</b> | <b>13 %</b>         |                |
| Air travel  | 0                 | 0                 | 0                 | -18                | 0 %            | -                   |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>136,363</b>    | <b>139,776</b>    | <b>140,252</b>    | <b>154,003</b>     | <b>100,0 %</b> | <b>13 %</b>         |                |

| Haga Initiative key indicators                          | 2005  | 2011  | 2012  | 2013  | Förändring 2005-2013 | Enhet                                    |
|---|-------|-------|-------|-------|----------------------|--|
| Emissions per tonne coffee sold (Haga scope)            | 0.154 | 0.117 | 0.124 | 0.117 | -24 %                | ton CO <sub>2</sub> e/ton sålt bönkaffe  |
| Emissions per tonne coffee sold (total)                 | 6.21  | 5.84  | 5.96  | 6.24  | -0,6 %               | ton CO <sub>2</sub> e/ton sålt bönkaffe  |
| Emissions per tonne green coffee purchased (Haga scope) | 0.130 | 0.098 | 0.101 | 0.091 | -30 %                | ton CO <sub>2</sub> e/ton inköpt råkaffe |
| Emissions per tonne green coffee purchased (total)      | 5.22  | 4.89  | 4.851 | 4.868 | - 6,7 %              | ton CO <sub>2</sub> e/ton inköpt råkaffe |

1. Refers to leased vehicles.

2. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total" includes contracts for origin-labelled electricity.

3. Refers to air, rail and taxi travel and hotels.

4. Refers to fuels consumed in scope 1 and scope 2.

5. Refers to transportation of green coffee from grower to factory, transportation of packaging materials and distribution.

6. Extraction of raw material and production of packaging.

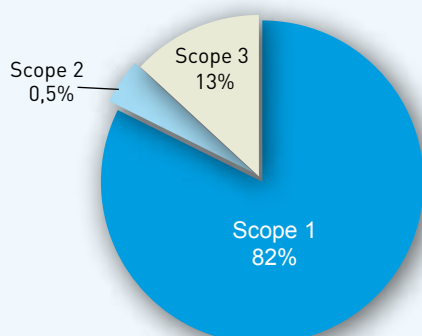
7. Coffee growing, including associated processes.

8. Refers to the 2010/2011 financial year.

9. Refers to the 2011/2012 financial year.

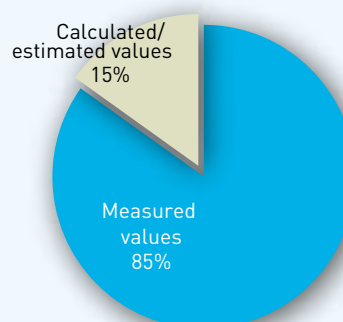
10. Refers to the 2012/2013 financial year.

**Emissions breakdown by scope included in the Haga scope in 2013**

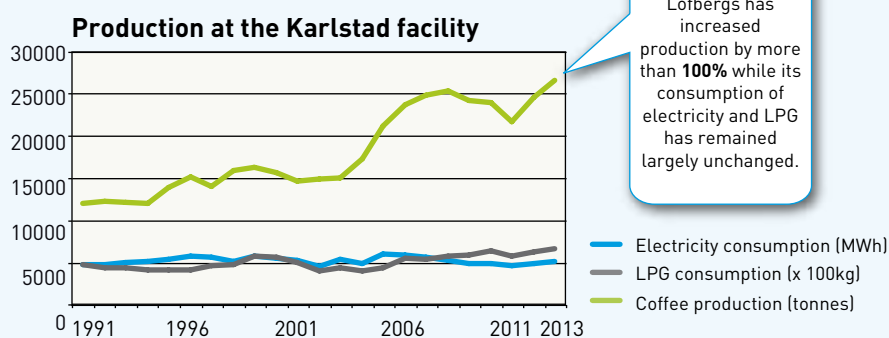
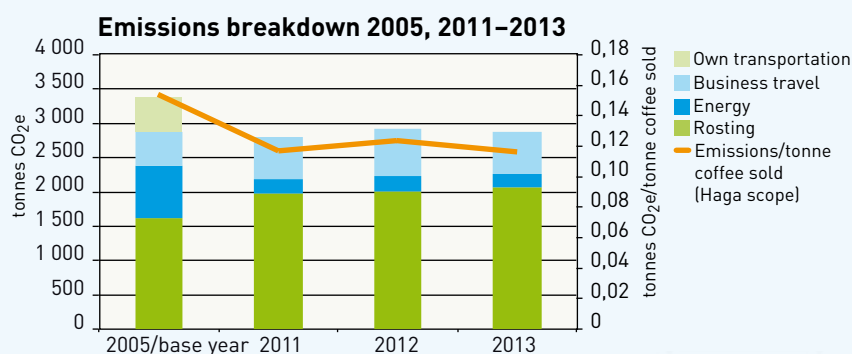


↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013. In 2013 82% of these emissions were from scope 1, 13% were from scope 3 and 0.5% were from scope 2.

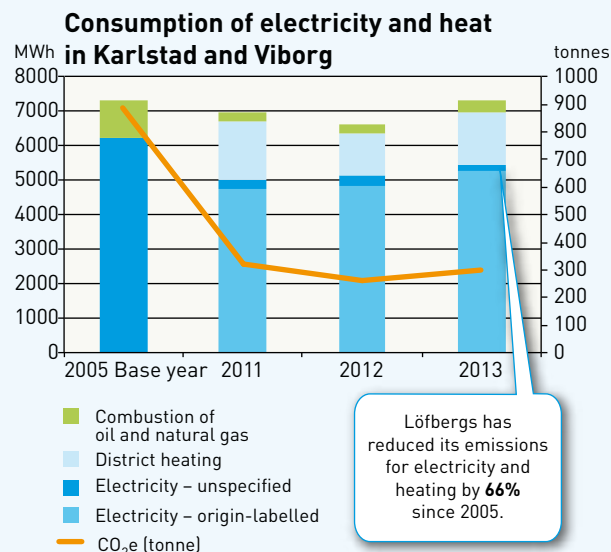
**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 85% of total emissions were calculated based on measured activity data if coffee growing is not included. If coffee growing is included, the percentage is 9%.



Since 1991 Löfbergs has increased production by more than **100%** while its consumption of electricity and LPG has remained largely unchanged.



Löfbergs has reduced its emissions for electricity and heating by **66%** since 2005.

## Analysis and comments:

Löfbergs' disclosure covers its Swedish operations as well as its production site in Viborg, Denmark. Löfbergs has applied a broad definition of its scope 3 emissions by also including the climate impact of the growing of the coffee that it buys. Calculated emissions have not been adjusted for the carbon sinks provided by the coffee plantations and their shade plants, and are therefore relatively high; around 90% of Löfbergs' reported climate impact. Outsourced transportation in scope 3 accounts for a scant 6% of total emissions. In third place is the roasting of coffee, the largest source of emissions in scope 1, accounting for 1.3% of total emissions. Within the framework of the Haga scope the roasting of coffee represents the greatest source of emissions.

The climate impact from the growing of coffee has increased by 13% in total since the base year of 2005. The reason for this is that the production volume has increased

by 12%. In addition, emissions from roasting have increased by 27% as a result of increased production. In relative terms, emissions per tonne of coffee beans sold have been largely unchanged since 2005 but have reduced by just on 7% per tonne of green coffee purchased.

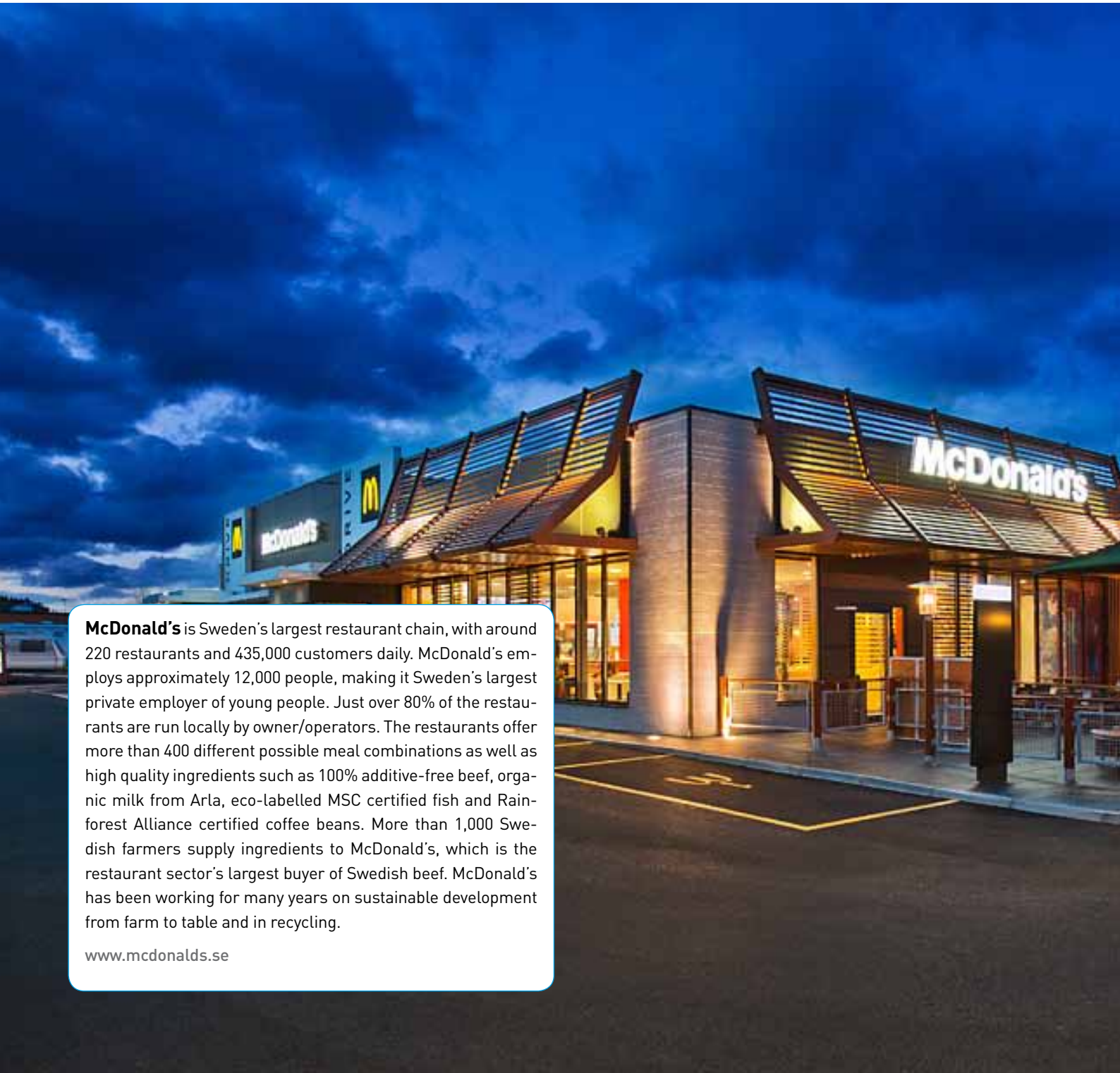
Emissions from electricity and heating have reduced substantially, thanks partly to connection to district heating rather than oil-fired systems and partly to the fact that electricity consumption in Sweden is purchased as origin-labelled wind power. As a result, Löfbergs has succeeded in reducing its climate impact per unit of premises area by around 80%. In 2013 the production plant in Viborg also began buying origin-labelled wind power.

Löfbergs works continually to reduce its climate impact for packaging materials. For example, in the early 1990s it launched plastic laminate packaging that did not contain aluminium. A more accurate cal-

culation method has been introduced for this year's disclosure, and the Viborg plant has also been included. Emissions for 2012 and 2013 were able to be calculated using the new method. For comparability 2005 and 2011 have been restated based on the difference between the new method and the old method for 2012.

Combined emissions from own transportation and outsourced transportation have increased by around 22% since the base year. This is mainly due to the increase in production, but the more accurate packaging calculation also means that the calculation of emissions from transportation of packaging has increased. In its base year of 2005 Löfbergs had some vehicles of its own and also outsourced some transportation, whereas all transportation is now outsourced.

Emissions from business travel have increased by 25% since 2005 because of increased air travel.



**McDonald's** is Sweden's largest restaurant chain, with around 220 restaurants and 435,000 customers daily. McDonald's employs approximately 12,000 people, making it Sweden's largest private employer of young people. Just over 80% of the restaurants are run locally by owner/operators. The restaurants offer more than 400 different possible meal combinations as well as high quality ingredients such as 100% additive-free beef, organic milk from Arla, eco-labelled MSC certified fish and Rainforest Alliance certified coffee beans. More than 1,000 Swedish farmers supply ingredients to McDonald's, which is the restaurant sector's largest buyer of Swedish beef. McDonald's has been working for many years on sustainable development from farm to table and in recycling.

[www.mcdonalds.se](http://www.mcdonalds.se)

## A greener McDonald's





## Climate targets

McDonald's has a target of a 40% reduction in carbon emissions by 2020 in relation to the number of customers, from its base year of 2010. The emissions included in this emissions target are scope 1, scope 2 and business travel in scope 3. A further goal is to achieve 95% renewable fuel for deliveries of ingredients to restaurants by 2020.

## How will the targets be achieved?

Emissions reductions are to be achieved through McDonald's continuing to choose energy-efficient equipment such as CO<sub>2</sub> sensors that control ventilation based on the number of customers, LED lighting, energy efficient fryers, etc. To date, McDonald's has reduced its direct emissions by 39% in relation to the number of customers since 2010. This is due to energy efficiency measures and increasing numbers of restaurants buying renewable electricity. McDonald's is working on continued reductions in its carbon emissions by 2020 through improved waste disposal and energy efficiency.

Deliveries to the restaurants are increasingly being transported using rapeseed methyl ester (RME). In 2013 the trucks ran on approximately 84% renewable fuel. As a result of RME replacing diesel, carbon emissions are around 690 tonnes lower than if the trucks ran only on diesel.

### THE PAST YEAR

In 2013 McDonald's took the following measures, among other things:

- Reduced its emissions from own transportation through increased use of RME (84% of transportation ran on RME in 2013).
- Started a training programme so that each restaurant has an environmental officer – Planet Champions.
- Began its expansion of rapid charging points for electric vehicles at selected restaurants.
- Started a project for more efficient transportation of certain recycled fractions (corrugated cardboard, PE-foils and PET).

### CLIMATE MEASURES

#### THAT ENHANCE PROFITABILITY

### Recycled fractions reduce emissions

**ACTION:** Joint transportation of certain recycled fractions (corrugated cardboard, PE-foils and PET).

#### EMISSIONS REDUCTION WHEN THE \*SYSTEM IS FULLY DEVELOPED IN 2014:

Annual reduction of around 300 tonnes of carbon dioxide.

#### COST SAVING/PAYBACK PERIOD:

The cost saving will be around SEK 14,000 annually for each associated restaurant.

### FUTURE INVESTMENTS

In 2014 priority is being given to the following measures:

- Expansion of more efficient transportation of certain recycled fractions (corrugated cardboard, PE-foils and PET).
- Continued work to reduce electricity consumption.
- Continued training of Planet Champions at each restaurant.
- Continued expansion of rapid charging points along the green corridors.

## MC DONALD'S

| Emissions from operations (tonnes CO <sub>2</sub> e)                          | 2010<br>Base year | 2011          | 2012          | 2013          | Share<br>2013 <sup>4</sup> | Change<br>2010-2013 | GHG<br>Scope 3 |
|---|-------------------|---------------|---------------|---------------|----------------------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |               |               |               |                            |                     |                |
| Business travel <sup>1</sup>  | 251               | 235           | 210           | 183           | 2 %                        | -27 %               |                |
| Refrigerants  | 861               | 911           | 582           | 567           | 5 %                        | -34 %               |                |
| <b>Scope 2</b>  |                   |               |               |               |                            |                     |                |
| Purchased energy  | 33,834            | 32,091        | 31,534        | 28,843        | 28 %                       | -15 %               |                |
| <b>Scope 3</b>  |                   |               |               |               |                            |                     |                |
| Business travel <sup>2</sup>  | 427               | 545           | 416           | 365           | 3 %                        | -15 %               | 6              |
| <b>TOTAL excluding origin-labelling</b>                                       | <b>35,373</b>     | <b>33,782</b> | <b>32,743</b> | <b>29,959</b> |                            | <b>-15 %</b>        |                |
| Reduction through purchase of origin-labelled renewable electricity (scope 2) | -26,695           | -25,563       | -27,194       | -25,777       |                            | -3 %                |                |
| <b>TOTAL Haga scope</b>   | <b>8,678</b>      | <b>8,219</b>  | <b>5,548</b>  | <b>4,181</b>  | <b>39 %</b>                | <b>-52 %</b>        |                |
| Waste disposal  | 6,078             | 5,947         | 6,160         | 5,941         | 55 %                       | -2 %                | 5              |
| Production and distribution of energy and vehicle fuels <sup>3</sup>          | 3,061             | 2,931         | 1,156         | 684           | 6 %                        | -78 %               | 3              |
| - of which fuel for business travel   | 23                | 22            | 19            | 17            | 0 %                        | -27 %               |                |
| - of which fuel for energy production   | 3,038             | 2,909         | 1,137         | 667           | 6 %                        | -78 %               |                |
| <b>TOTAL McDonald's Sverige climate target</b>                                | <b>17,817</b>     | <b>17,096</b> | <b>12,865</b> | <b>10,807</b> | <b>100 %</b>               | <b>-39 %</b>        |                |
| Logistics   | 3,144             | 2,838         | 2,776         | 2,937         |                            | -7 %                | 4              |

| Key indicators                                    | 2010 base year | 2011  | 2012  | 2013  | Change 2010-2013 | Unit                           |
|---|----------------|-------|-------|-------|------------------|--------------------------------|
| Emissions per customer visit (climate target)     | 215.4          | 204.8 | 154.5 | 132.8 | -38 %            | g CO <sub>2</sub> e/customer   |
| Emissions per month of operation (climate target) | 6.5            | 6.2   | 4.7   | 4.2   | -36 %            | tonnes CO <sub>2</sub> e/month |
| Energy use per customer visit                     | 1.6            | 1.6   | 1.5   | 1.6   | -4 %             | kWh/customer                   |

1) Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix).

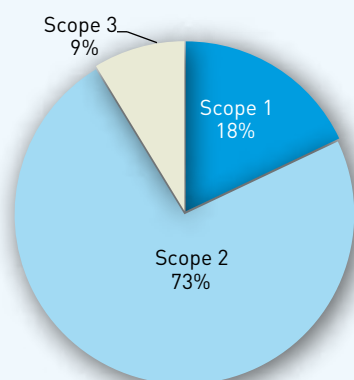
"Share of total" includes contracts for origin-labelled electricity.

2) Refers to business air travel, train and taxi journeys.

3) Refers to fuels consumed in scope 1 and scope 2.

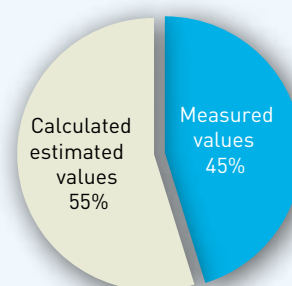
4) In relation to the scope within the emissions target.

**Emissions breakdown by scope included in the Haga scope in 2013**

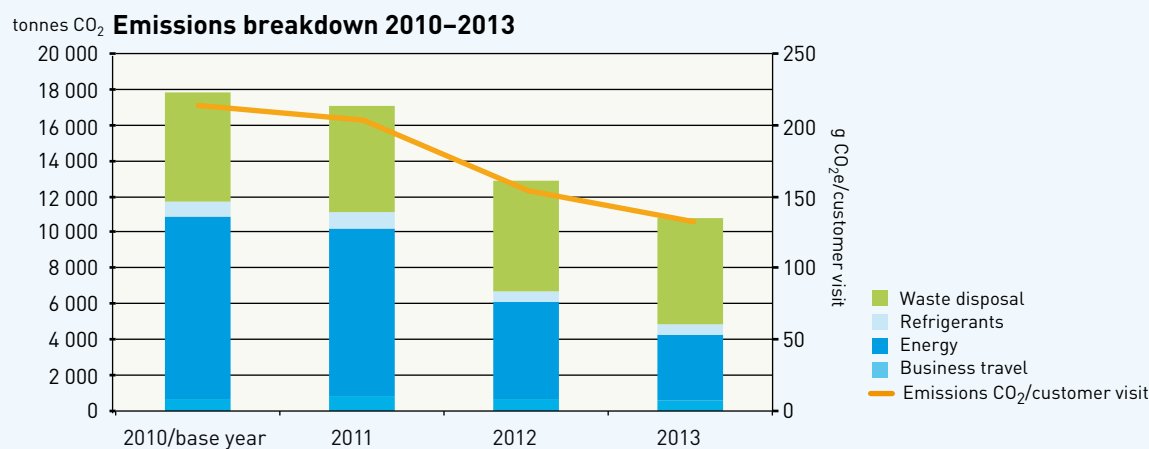


↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013. In 2013 73% of these emissions came from scope 2, 18% from scope 1 and 9% from scope 3.

**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 45% of total emissions were calculated based on measured activity data.



### Analysis and comments:

Within its emissions target, McDonald's Sverige has reduced its emissions by 39% compared with the base year of 2010 and by 16% since last year.

Emissions are reducing in all categories, but the greatest reduction is within energy.

Energy use in number of kWh has reduced by 6%. However, emissions for energy use have reduced by a full 63%, mainly due to the fact that a greater percentage of restaurants have contracts for origin-labelled renewable electricity.

Compared with last year's emissions disclosure more accurate data on waste quantities has been able to be obtained, including for earlier years. All the years shown therefore have updated waste quantity calculations, which explains the significantly higher emissions for waste disposal. Of the emissions included in the emissions target, waste disposal now accounts for 55%.





**Statoil Fuel & Retail Sverige AB** is one of Sweden's leading transport fuel companies and is a wholly owned subsidiary of Statoil Fuel & Retail AS. The Swedish operations include around 700 service stations for both cars and heavy vehicles. Operations in Sweden include sales and distribution of petrol, CNG, diesel, E85, aviation fuel and lubricants. Statoil Fuel & Retail's network of full service stations extends throughout the country and in addition to fuel offers customer service, knowledge, food, coffee from freshly ground organic and Fairtrade-labelled beans, car rental, car washing and Swan eco-labelled screen wash at the pump.

[www.statoil.se](http://www.statoil.se)

Every small step counts!







### Climate targets

Statoil's target is a 50% reduction in carbon emissions from its own operations by 2020 (base year 2008). The target includes emissions in scope 1 and scope 2 as well as business air travel, transportation by tanker, filling stations, depots and offices in scope 3.

### How will the targets be achieved?

Statoil has charted electricity consumption down to facility level, enabling tracking consumption at individual stations and depots. In 2013 Statoil continued to replace equipment and fluorescent tubes with low energy alternatives. In addition, they implemented a "behaviour campaign" at manned service stations with rewards for the best energy saving tips. Increasing commitment to environmental/climate issues in this way is an important part of their work to reduce both their own and their customers' environmental footprint. At the depots, which are working actively to reduce energy consumption and carbon dioxide emissions, there is now no oil-fired heating at all. The combination of technical measures and commitment has resulted in depot operations reducing their carbon emissions by around 80% since the base year.

#### THE PAST YEAR

- The "Energy@station" campaign at all manned service stations aims to increase commitment to the environment and energy saving among the approximately 3,000 service station employees.
- Continued right-sizing at the depots. Buildings and premises adapted and optimised based on their needs, which reduces energy consumption for heating.
- Modern fuel trucks combined with Statoil's miles diesel (containing up to 30% renewables) have resulted in significant emissions reductions.

#### CLIMATE MEASURES

##### THAT ENHANCE PROFITABILITY

#### Modern fuel trucks and central transport planning

**ACTION:** Changing to efficient fuel trucks, centralized truck route planning, focus on eco-driving combined with an increased share of renewables in the fuel have brought environmental and financial benefits.

**EMISSIONS REDUCTION:** Annual reduction of around 2,400 tonnes CO<sub>2</sub>.

**COST SAVING:** Annual reduction in fuel costs of around SEK 5 million (approximately 15% reduction).

#### FUTURE INVESTMENTS

- New environmental training. The primary focus is to emphasize the importance of everyone being committed to the environmental work.
- Continued work on phasing out oil-fired heating and switching to LED lighting outdoors at the service stations.
- New deposit/recycling solution at all manned service stations in partnership with BRIS – Children's Rights in Society.

## STATOIL FUEL & RETAIL SVERIGE AB

| Emissions from operations (tonnes CO <sub>2</sub> ) <sup>1</sup>                        | 2008<br>base year | 2010          | 2011          | 2012          | 2013          | Share of<br>total in 2013 | Change<br>2008–2013 | GHG<br>Scope 3 |
|---|-------------------|---------------|---------------|---------------|---------------|---------------------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |               |               |               |               |                           |                     |                |
| Business travel   | 1,002             | 738           | 794           | 793           | 825           | 2 %                       | -18 %               |                |
| Own heating   | 1,875             | 2,693         | 1,548         | 1,125         | 857           | 2 %                       | -54 %               |                |
| Own transportation  | 3,264             | 3,917         | 1,810         | 0             | 0             | 0 %                       | -100 %              |                |
| <b>Scope 2</b>  |                   |               |               |               |               |                           |                     |                |
| Purchased energy <sup>2</sup>   | 8,190             | 12,774        | 22,844        | 19,669        | 19 024        | 45 %                      | 132 %               |                |
| <b>Scope 3</b>  |                   |               |               |               |               |                           |                     |                |
| Business travel <sup>3</sup>  | 856               | 535           | 788           | 802           | 677           | 2 %                       | -21 %               | 6              |
| <b>SUMMA exklusive ursprungsmärkning</b>  | <b>15,187</b>     | <b>20,657</b> | <b>27,784</b> | <b>22,388</b> | <b>21,382</b> |                           | <b>41 %</b>         |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | 0                 | 0             | 0             | 0             | 0             |                           |                     |                |
| <b>SUMMA Hagascope</b>  | <b>15,187</b>     | <b>20,657</b> | <b>27,784</b> | <b>22,388</b> | <b>21,382</b> | <b>50 %</b>               | <b>41 %</b>         |                |
| Outsourced goods transportation <sup>4</sup>  | 9,666             | 6,128         | 7,435         | 8,966         | 6,683         | 16 %                      | -31 %               | 4              |
| Production and distribution of energy and vehicle fuels <sup>5</sup>                    | 1,670             | 1,261         | 715           | 271           | 257           | 1 %                       | -85 %               | 3              |
| - of which fuel for business travel   | 172               | 120           | 201           | 175           | 180           | 0 %                       | 5 %                 |                |
| - of which fuel for own transportation  | 592               | 710           | 373           | 0             | 0             | 0 %                       | -100 %              |                |
| - of which fuel for own heating and purchased energy                                    | 907               | 431           | 141           | 96            | 76            | 0 %                       | -92 %               |                |
| Electricity and heating – franchise operations <sup>6</sup>                             | 13,732            | 11,688        | 20,293        | 17,420        | 14,106        | 33 %                      | 3 %                 | 3, 14          |
| <b>TOTAL (excl. carbon offset)</b>  | <b>40,256</b>     | <b>39,734</b> | <b>56,227</b> | <b>49,045</b> | <b>42 427</b> | <b>100 %</b>              | <b>5 %</b>          |                |
| Carbon offset <sup>7</sup>  | 0                 | -9,922        | -4,922        | -2,679        | -1,005        | -2 %                      |                     |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>40,256</b>     | <b>29,812</b> | <b>51,305</b> | <b>46,366</b> | <b>41,422</b> | <b>98 %</b>               | <b>3 %</b>          |                |

| Haga Initiative key indicators   | 2008<br>base year | 2010 | 2011 | 2012 | 2013 | Change<br>2008–2013 | Unit                             |
|--|-------------------|------|------|------|------|---------------------|----------------------------------|
| Emissions per employee (excluding franchise operations (Haga scope))                     | 8.9               | 12.2 | 17.4 | 14.0 | 12.8 | 44 %                | tonnes CO <sub>2</sub> /employee |
| Emissions per employee after carbon offset (excluding franchise operations) (Haga scope) | 8.9               | 6.3  | 14.3 | 12.3 | 12.2 | 37 %                | tonnes CO <sub>2</sub> /employee |
| Emissions per employee (excluding franchise operations) (total)                          | 15.6              | 16.5 | 22.5 | 19.8 | 17.0 | 9 %                 | tonnes CO <sub>2</sub> /employee |
| Emissions per employee after carbon offset (excluding franchise operations) (total)      | 15.6              | 10.7 | 19.4 | 18.1 | 16.4 | 5 %                 | tonnes CO <sub>2</sub> /employee |

1. Carbon dioxide emissions.

2. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). The emission factor for the residual mix was significantly lower in 2008 than for 2011–2013.

3. Refers to business air travel.

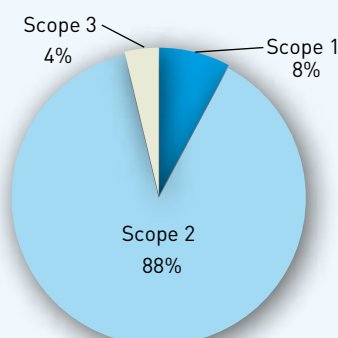
4. Refers to external tanker transportation, including production and distribution of fuel.

5. Refers to fuels consumed in scope 1 and scope 2.

6. Electricity and heating in franchise operations, including production and distribution of fuel.

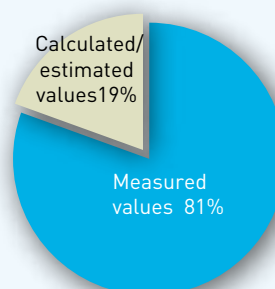
7. Carbon offsets using European emissions rights or reduction units from projects corresponding to emissions from company cars, business travel by air, outsourced LPG transportation and some emissions from outsourced tanker transportation.

**Emissions breakdown by scope included in the Haga scope in 2013**

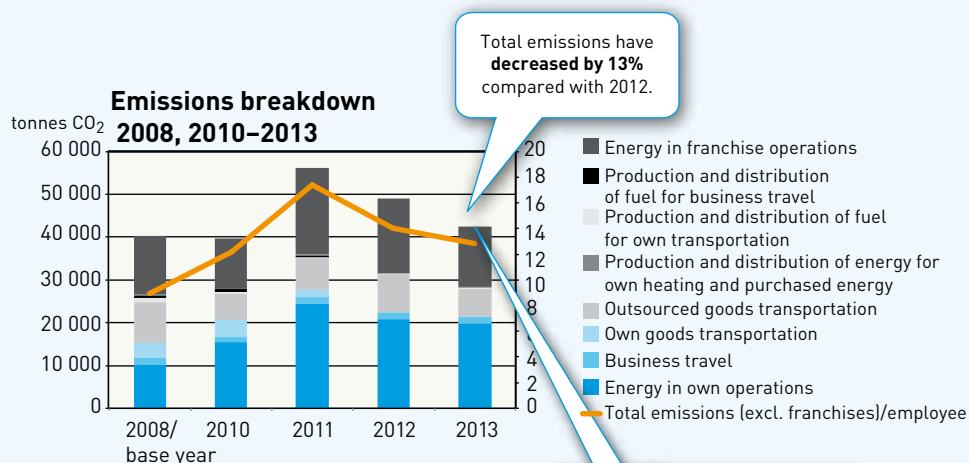


↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013.

**Breakdown of results based on type of activity data 2013**

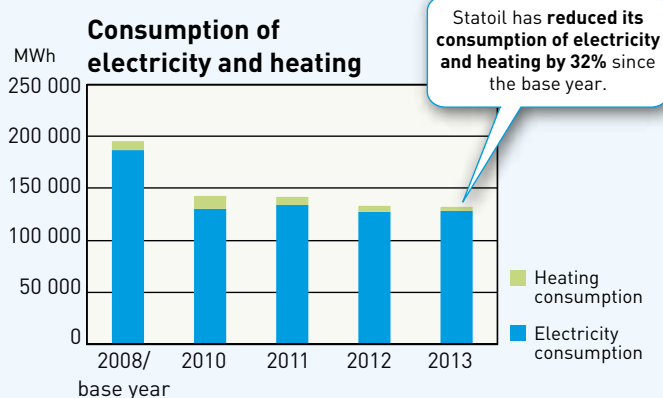


↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 81% of total emissions were calculated based on measured activity data.



↑ The chart shows the categories included in the Haga scope. Areas shaded grey are not included in the Haga scope.

Total emissions have **increased by 5%** compared with the year of 2008. Had the emission factor for residual mix electricity remained constant at the 2008 level, Statoil's emissions – both in total and for the Haga scope – would have **decreased by 16%**.



### Analysis and comments:

Statoil's climate calculations include carbon emissions from energy consumption at service stations, depots and offices, from business travel and from transportation of fuel.

Statoil's emissions within the Haga scope have increased by 41% since the base year of 2008. If total emissions – which also include, among other things, the franchise-run operations and outsourced goods transportation – are included, the emissions have increased by 5%. These emissions are however influenced by the fact that the emission factor for residual mix purchased electricity has increased by 84%. Had the emission factor for residual mix electricity remained constant at the 2008 level, Statoil's emissions – both in total and for the Haga scope – would have decreased by 16%.

Energy use, which covers both own operations and franchise operations, has decreased by 32%.

Emissions from business travel have decreased by 17% since 2008. This reduction is a result of fewer flights as well as training in eco-driving for those driving company vehicles. Emissions decreased by 5% between 2012 and 2013.

Emissions from goods transportation have decreased by around 51% since 2008 and by 25% compared with 2012. This is partly because Statoil has obtained information concerning the fuel mix used by external contractors, giving it a more accurate picture of the share of renewable fuel in the diesel consumed. With effect from 2012 there has been no transportation using own vehicles.

As part of its climate work Statoil has chosen to carbon offset emissions from company cars, corresponding to 1,005 tonnes of CO<sub>2</sub>, using European emissions allowances or reduction units in projects



**Stena Recycling** is part of the Stena Metall Group. The group includes another four companies with operations in Sweden. These companies form part of the greenhouse gas emissions disclosure, in order to illustrate all the group's climate actions. Stena Metall is an international group that collects, processes and recycles metals, paper, plastics, electronic waste and hazardous waste. The group also includes production of aluminium from recycled raw materials, deliveries of steel products, financial operations and global trading in steel, metals and oil. The Swedish business employs 1,800 people and has turnover of around SEK 11,025 million. The group has 240 facilities in total, of which 100 are in Sweden.

[www.stenarecycling.se](http://www.stenarecycling.se)

## Innovative recycling







### Climate targets

The Stena Metall Group's Swedish business has an overall target of a 40% reduction in climate impact by 2020 compared with 2008.

### How will the target be achieved?

The group is investing major resources in technology development projects in order to increase the share of waste that can be recycled into usable materials rather than being recycled into energy or going to landfill. In the fragmentation facilities – plants that separate materials in order to obtain purer fractions – waste residues arise that consist primarily of plastics, rubber and textiles from interior car parts. Using new technology, today a number of these plastics can be separated out and the materials recycled. Along with its partners, solutions have also been developed for recycling other waste into energy instead of going to landfill. Today this waste is replacing coal at a number of cement furnaces. Another example is investigating how the group can use existing landfills as a mine and using new knowledge to recycle materials that could not previously be recycled. Systematic work on transport optimisation and energy efficiency measures are also important in reaching the climate target.

### CLIMATE MEASURES

#### THAT ENHANCE PROFITABILITY

#### Smart logistics solutions

**ACTION:** A special transport vehicle has been ordered for Halmstad, allowing 42 tonnes to be transported at a time. The unit has been specially adapted to the type of operations and the tractor has one of the most energy efficient engines there is.

**EMISSIONS REDUCTION:** This solution means 1,000 fewer transports a year, or around 18,000 fewer kilometres, providing improvements in both CO<sub>2</sub> emissions and noise.

#### COST SAVING/PAYBACK PERIOD:

This is a continuous measure for transport optimisation.

### THE PAST YEAR

Since 2012 the group has electrified more than 85% of all rail transport that was previously diesel powered. In 2013 material was transported by rail with an environmental impact of 214 tonnes CO<sub>2</sub>. If the same amount had been transported by road, the environmental impact would have been 10,000 tonnes CO<sub>2</sub>. The aim is to replace road transportation with rail wherever possible.

### FUTURE INVESTMENTS

In 2014 priority is being given to the following measures:

- Continued investments in technology development projects to increase the fraction recycled.
- Continued work on transport optimisation.
- Continued work on energy efficiency.
- Drawing up new group-wide environmental targets.

## STENA METALL GROUP

| Emissions from operations (tonnes CO <sub>2</sub> ) <sup>1</sup>                        | 2008<br>Base year | 2010          | 2011           | 2012           | 2013           | Share 2013   | Change<br>2008-2013 | GHG<br>Scope 3 |
|---|-------------------|---------------|----------------|----------------|----------------|--------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |               |                |                |                |              |                     |                |
| Business travel   | 48                | 410           | 799            | 2,016          | 2,172          | 1 %          | 4424 %              |                |
| Heating   | 13,326            | 6,508         | 9,676          | 12,097         | 14,583         | 9 %          | 9 %                 |                |
| Own transportation  | 40,572            | 9,862         | 6,597          | 5,342          | 11,440         | 7 %          | -72 %               |                |
| Machinery   | 22,801            | 32,463        | 44,906         | 45,066         | 11,146         | 7 %          | -51 %               |                |
| <b>Scope 2</b>  |                   |               |                |                |                |              |                     |                |
| Purchased energy <sup>1</sup>   | 8,985             | 11,188        | 26,079         | 20,802         | 18,088         | 11 %         | 101 %               |                |
| <b>Scope 3</b>  |                   |               |                |                |                |              |                     |                |
| Business travel <sup>2</sup>  | 1,104             | 1,296         | 1 680          | 984            | 381            | 0 %          | -65 %               | 6              |
| <b>TOTAL excluding origin-labelling</b>   | <b>86,836</b>     | <b>61,726</b> | <b>89,737</b>  | <b>86,306</b>  | <b>57,809</b>  |              | <b>-33 %</b>        |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | 0                 | -232          | -3,178         | -2,645         | -243           |              | -                   |                |
| <b>TOTAL Hagascope</b>  | <b>86,836</b>     | <b>61,494</b> | <b>86,559</b>  | <b>83,661</b>  | <b>57,567</b>  | <b>36 %</b>  | <b>-34 %</b>        |                |
| Outsourced transportation <sup>3</sup>  | 32,993            | 28,696        | 56,294         | 63,290         | 56,439         | 35 %         | 71 %                | 4              |
| Leased machinery  | 0                 | 0             | 0              | 0              | 43,324         | 27 %         | -                   |                |
| Production and distribution of energy and vehicle fuels <sup>4</sup>                    | 9,064             | 9,751         | 11,016         | 12,155         | 4,699          | 3 %          | -48 %               | 3              |
| - of which fuel for business travel   | 7                 | 108           | 251            | 468            | 496            | 0 %          | 7459 %              |                |
| - of which fuel for own transportation and machinery                                    | 6,303             | 7,189         | 9,980          | 10,820         | 3,285          | 2 %          | -48 %               |                |
| - of which fuel for energy production   | 2,754             | 2,454         | 785            | 867            | 918            | 1 %          | -67 %               |                |
| <b>TOTAL (excl. carbon offset)</b>  | <b>128,892</b>    | <b>99,941</b> | <b>153,868</b> | <b>159,106</b> | <b>162,028</b> | <b>100 %</b> | <b>26 %</b>         |                |
| Carbon offset   | 0                 | 0             | 0              |                |                |              | -                   |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>128,892</b>    | <b>99,941</b> | <b>153,868</b> | <b>159,106</b> | <b>162,028</b> | <b>100 %</b> | <b>26 %</b>         |                |

| Haga Initiative key indicators           | 2008<br>Base year | 2010  | 2011  | 2012  | 2013  | Change 2008-2013 | Unit                                       |
|--|-------------------|-------|-------|-------|-------|------------------|--|
| Emissions per unit of collected material | 0.047             | 0.041 | 0.056 | 0.058 | 0.063 | 23 %             | tonnes CO <sub>2</sub> e/<br>tonne product |

1. Refers to emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total" includes contracts for origin-labelled electricity.

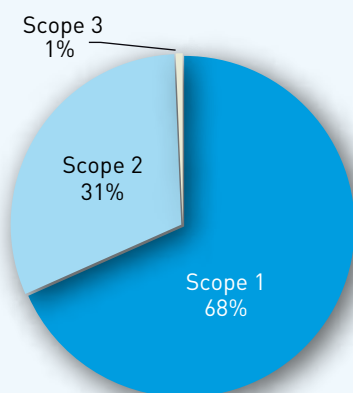
2. Refers to hotels and goods transport by road and water (Stena Stål), rail, road and

air (Stena Metall), goods transport by road (Stena Technoworld), goods transport by road, rail and water (Stena Recycling).

3. Refers to transportation outsourced to third parties.

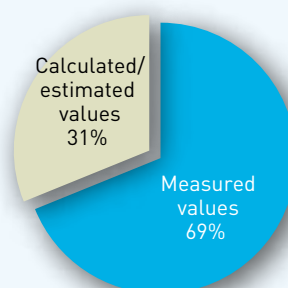
4. Refers to fuels consumed in scope 1 and scope 2.

**Emissions breakdown by scope included in the Haga scope in 2013**



↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013.

**Breakdown of results based on type of activity data 2013**

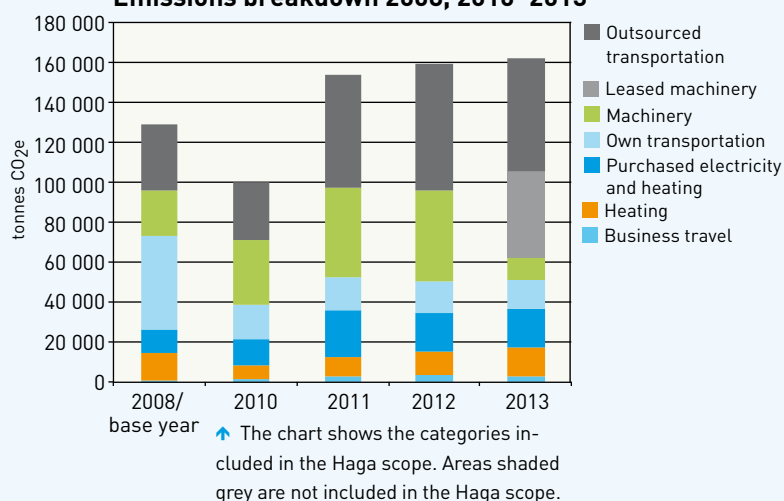


↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 69% of total emissions were calculated based on measured activity data.

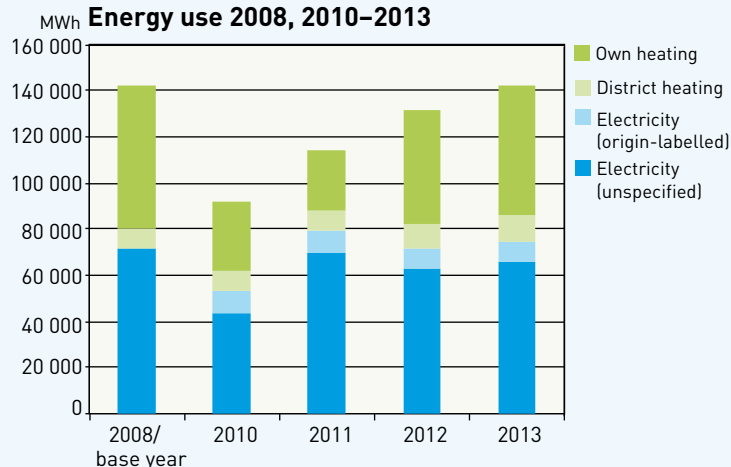
#### Organisational boundaries

The Stena Metall group's Swedish operations, i.e. Stena Stål AB, Stena Oil AB, Stena Aluminium AB, Stena Technoworld AB and Stena Recycling AB.

Emissions breakdown 2008, 2010–2013



Energy use 2008, 2010–2013



### Analysis and comments:

The climate impact of the Stena Metall Group's Swedish operations is greatest among outsourced transportation in scope 3, which represents 35% of total emissions in 2013. Almost as high are emissions from machinery (own and leased) at 34%, of which own machinery accounts for 7% in scope 1 and leased machinery for 27% in scope 3. Compared with last year, a greater share of emissions from machinery are now in scope 3 because more machinery is being leased rather than owned by the group itself. Emissions from production of purchased electricity and heating in scope 2 account for 11% of total emissions.


Within the confines of the Haga scope the group has decreased its emissions by 34% since the base year of 2008, while total emissions have increased in the same period by 26%. The reason for the substantial decrease in emissions within the Haga scope, particularly compared with last year, is that emissions for machinery are now reported in scope 3 rather than in scope 1 and therefore are no longer included in the Haga scope. Within the Haga scope 68% of emissions were from scope 1, 31% from scope 2 and 1% from scope 3.

In the area of energy, the Stena Metall Group's Swedish operations increased their energy use by around 35% between 2010 and 2013, mainly because energy use for heating has increased substantially since 2010.

Emissions from heating and from purchased electricity and heating have increased by 33% between the base year of 2008 and 2013. One of the reasons for this is that the emission factors used to calculate the emissions change from year to year. This is particularly obvious in the case of the emission factors for electricity. These change each year due to changes in the production of electricity, imports and exports and the deduction of origin-labelled electricity. Between 2008 and 2013 the emission factor for non-origin labelled electricity increased by around 121%. This is partly because the fossil element of the Nordic electricity mix has increased somewhat, and partly because the share of electricity purchased as origin-labelled renewable electricity on the Nordic market has increased considerably. This latter factor means that the residual mix (the electricity purchased as unspecified electricity) now has an even higher fossil element, and thus higher emissions per kilowatt hour. The 12% of the electricity purchased that was purchased as origin-labelled electricity in 2013 is not affected by these changes.

The Stena Metall Group's Swedish operations are constantly improving their reporting work, which has increased the scope and accuracy of the emissions reported. The environmental benefit of recycling far exceeds the subsidiary Stena Recycling's own emissions. Emissions for Stena Recycling's operations in 2013 were around 80,000 tonnes CO<sub>2</sub>. Since Stena Recycling processes materials that are used in new products, the company has saved around 4 million tonnes of CO<sub>2</sub> compared with if virgin materials were needed.





**Sveaskog's** core business is forestry and sales of sawlogs, pulpwood and biofuel for use in the production of wood products, paper, packaging and energy. Sveaskog is Sweden's largest forest owner with customers all over the country and annual turnover of SEK 6.1 billion. The company has operations on 3 million hectares and employs 700 people as well as a large number of contractors all over the country. Sveaskog takes long-term responsibility for the forests as a complex ecosystem housing man, animals and plants. With its renewable raw material Sveaskog contributes to successful industries in Sweden and a more sustainable world.

[www.sveaskog.se](http://www.sveaskog.se)

Our climate  
contribution is a  
renewable raw material



**SVEASKOG**





FOTO: LEIF ÖSTER / SVEASKOG

## Climate targets

Sveaskog's target is at least a 30% reduction in carbon dioxide emissions between 2010 and 2020 relative to the volume of wood raw material supplied. Taking 2005 as a base year, the target is to achieve a 40% reduction in total carbon dioxide emissions by 2020.

## How will the targets be achieved?

Most of Sveaskog's carbon dioxide emissions derive from timber transportation and forestry machinery. The target reduction in emissions by 2020 is to be achieved through reduced consumption/efficiency measures, increased use of renewable fuels and an increased share of timber transportation by rail.

Work is under way to increase energy efficiency through training in more efficient driving, increased capacity utilisation for consignments and exchanging timber with other forest owners. The use of renewable fuels in heavy goods vehicles and forestry machinery has been greatly limited by availability, distribution and operational disruptions during the winter. Here Sveaskog expects developments that will allow substantially greater investment in renewable alternative fuels over the coming 2–3 years. The choice of mode of transport for the timber is another key factor in achieving the emissions target, with Sveaskog increasingly endeavouring to prioritise rail transport for both environmental and cost reasons.

## CLIMATE MEASURES

### THAT ENHANCE PROFITABILITY

#### Efficiency measures in Sveaskog's plant nursery operations

**ACTION:** Switching to biofuel heating and modern boilers at two of Sveaskog's plant nurseries have result in large energy savings.

**EMISSIONS REDUCTION:** A 50% reduction in carbon dioxide emissions, corresponding to around 600 tonnes of CO<sub>2</sub>.

**COST SAVING:** Boiler replacement at the two plant nurseries will result in an annual saving equivalent to 200 litres of heating oil.

## THE PAST YEAR

In 2013 Sveaskog took the following measures, among other things:

- Prioritising of biofuel from fuel suppliers for forestry machinery and evaluation of the effects of the use of RME at various times of year.
- New monitoring model for transport contractors has begun to be implemented
- Switching to biofuel heating at two of Sveaskog's eight plant nurseries.

## SATSNINGAR FRAMÖVER

In 2014 priority is being given to the following measures:

- Increased share of renewable fuels in company machinery and vehicles.
- Encouraging own contractors to increase the share of renewable fuels.
- Increasingly seeking to reduce carbon dioxide emissions when choosing timber transports and purchasing resources.
- Continued energy efficiency measures at the plant nurseries.

## SVEASKOG

| Emissions from operations (tonnes CO <sub>2</sub> e)                                    | 2005<br>Base year | 2010           | 2013           | Share of<br>total in 2013 | Change<br>2005-2013 | GHG<br>Scope 3 |
|---|-------------------|----------------|----------------|---------------------------|---------------------|----------------|
| <b>Scope 1</b>  |                   |                |                |                           |                     |                |
| Business travel <sup>1</sup>  | 13,380            | 3,436          | 1,073          | 0,7 %                     | -92 %               |                |
| Energy <sup>2</sup>   | 5,084             | 5,084          | 3,644          | 2,5 %                     | -28 %               |                |
| Own machinery   | 12,303            | 9,861          | 7,827          | 5,4 %                     | -36 %               |                |
| <b>Scope 2</b>  |                   |                |                |                           |                     |                |
| Purchased energy <sup>3</sup>   | 776               | 3,376          | 2,387          | 0,1 %                     | 208 %               |                |
| <b>Scope 3</b>  |                   |                |                |                           |                     |                |
| Business travel <sup>4</sup>  | 643               | 638            | 698            | 0,5 %                     | 9 %                 | 6              |
| <b>TOTAL excluding origin-labelling</b>   | <b>32,185</b>     | <b>22,394</b>  | <b>15,630</b>  | <b>-51 %</b>              | <b>-51 %</b>        |                |
| Reduction through purchase of origin-labelled renewable electricity or district heating | 0                 | - 272          | -2,299         | -                         | -                   |                |
| <b>TOTAL Haga scope</b>   | <b>32,185</b>     | <b>22,123</b>  | <b>13,331</b>  | <b>9,1 %</b>              | <b>-60 %</b>        |                |
| Outsourced transportation   | 109,631           | 81,034         | 81,081         | 55,4 %                    | -26 %               | 4              |
| Leased machinery  | 53,576            | 45,308         | 49,447         | 33,8 %                    | -8 %                | 8              |
| Production and distribution of energy and vehicle fuels <sup>4</sup>                    | 8,542             | 2,919          | 2,366          | 1,6 %                     | -72 %               | 3              |
| - of which fuel for business travel   | 5,575             | 587            | 235            | 0,2 %                     | -96 %               |                |
| - of which fuel for energy production   | 751               | 574            | 577            | 0,4 %                     | -23 %               |                |
| - of which fuel for own transportation and machinery                                    | 2,216             | 1,758          | 1,554          | 1,1 %                     | -30 %               |                |
| <b>TOTAL (excl. carbon offset)</b>  | <b>203,934</b>    | <b>151,384</b> | <b>146,225</b> | <b>100 %</b>              | <b>-28 %</b>        |                |
| Carbon offset   | 0                 | 0              | 0              | 0,0 %                     | -                   |                |
| <b>TOTAL (incl. carbon offset)</b>  | <b>203,934</b>    | <b>151,384</b> | <b>146,225</b> | <b>100 %</b>              | <b>-28 %</b>        |                |

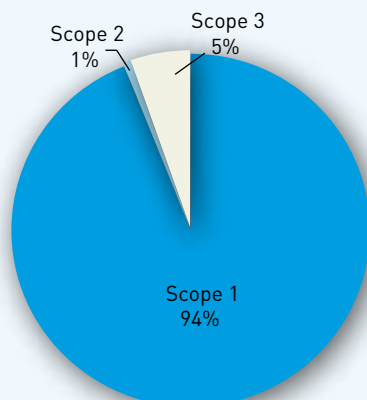
| Haga Initiative key indicators                           | 2005 Base year | 2010   | 2013   | Change<br>2005-2013 | Unit  |
|--|----------------|--------|--------|---------------------|---|
| Emissions per unit of wood raw material supplied (total) | 18.532         | 13.435 | 13.531 | -27 %               | tonnes CO <sub>2</sub> e/<br>km <sup>3</sup> s.u.b. |

1. Company cars, cars used for company business and leased cars.  
2. Heating in own boilers.

3. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total" includes contracts for origin-labelled electricity.

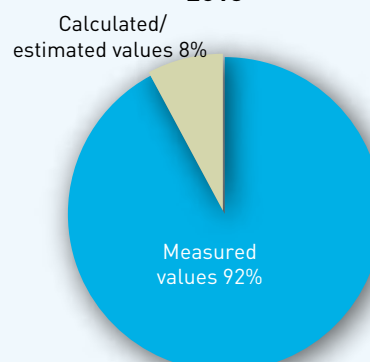
4. Air and rail travel.  
5. Refers to fuels consumed in scope 1 and scope 2.

**Emissions breakdown by scope included in the Haga scope in 2013**

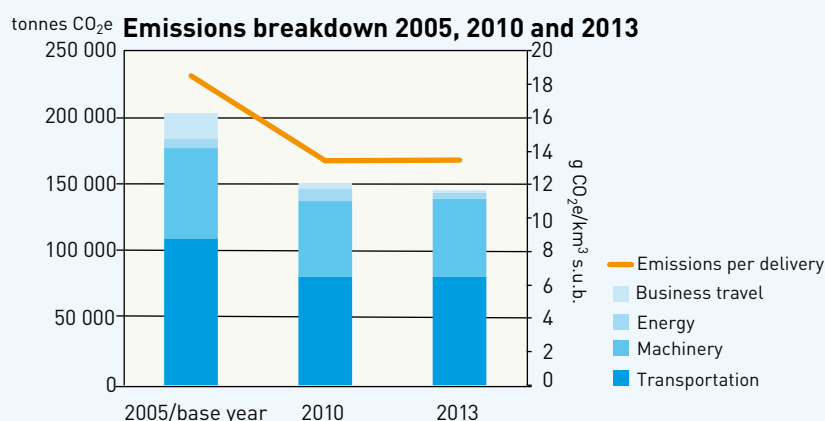


↑ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013.

**Breakdown of results based on type of activity data 2013**



↑ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 92% of total emissions were calculated based on measured activity data.



### Analysis and comments:

Sveaskog's greenhouse gas emissions are dominated by transportation (54%) and machinery (40%).

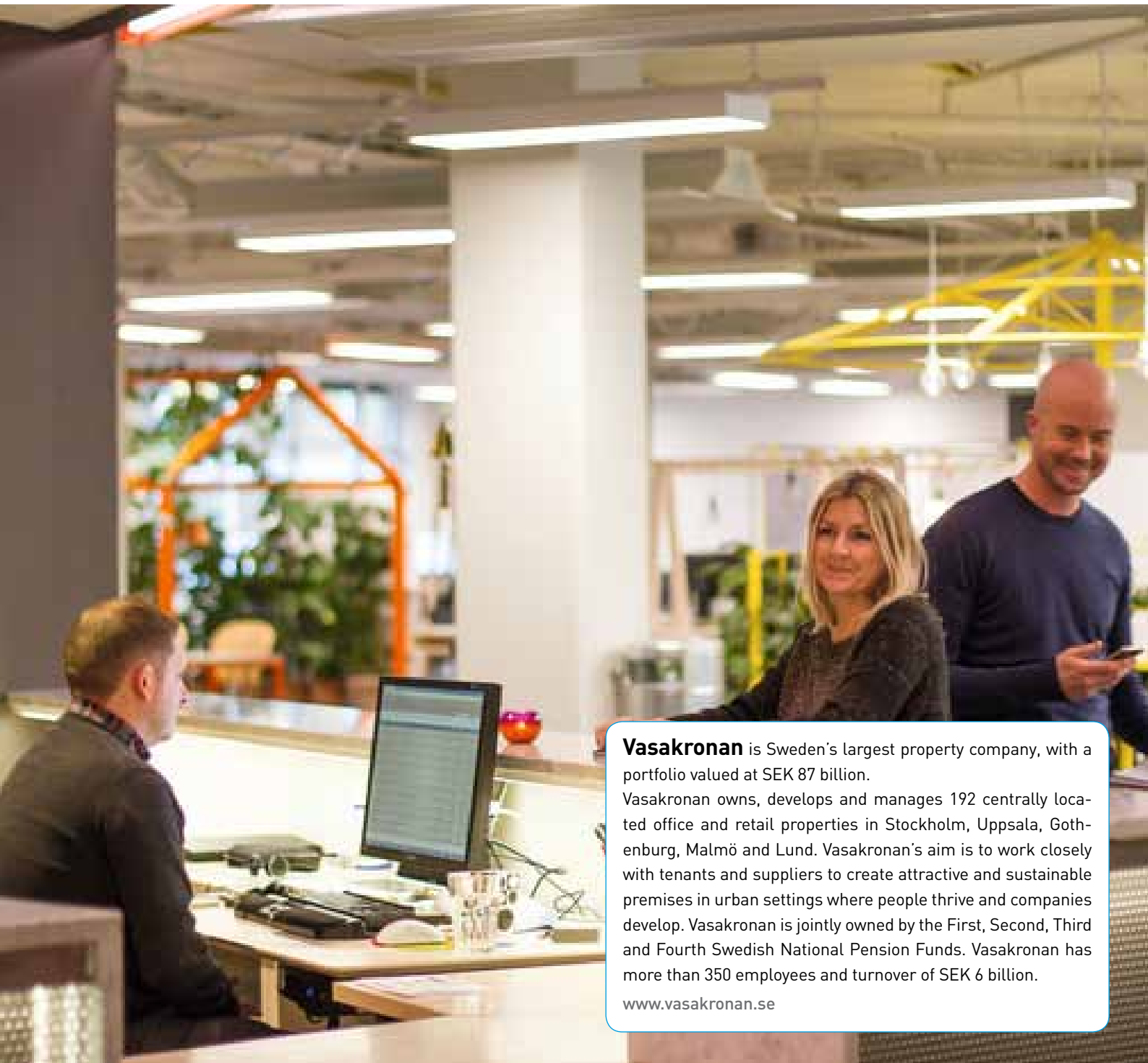
Since the base year of 2005 emissions have reduced within all areas: transportation -26%, machinery -14%, energy -35% and business travel -90%.

Transport by water accounts for the largest reduction in transportation, but transportation by road is also decreasing, resulting in a 26% reduction in emissions. The decrease in transportation by water is due to reduced import volumes.

Fuel consumption for machinery has decreased. In addition, renewable fuels have been introduced in both high-mix and low-mix forms, together resulting in a 14% decrease in emissions.

Total electricity and heating requirements have increased by 10%. However, as the share of renewable fuels for heating has increased from 21% to 55% and the share of origin-labelled renewable electricity has increased from 0% to nearly 97%, emissions for energy have decreased by 35%.

The substantial reduction in emissions from business travel in the past decade is mainly due to a substantial decrease for company cars following the retirement of older vehicles and modernisation of the fleet.



**Vasakronan** is Sweden's largest property company, with a portfolio valued at SEK 87 billion.

Vasakronan owns, develops and manages 192 centrally located office and retail properties in Stockholm, Uppsala, Gothenburg, Malmö and Lund. Vasakronan's aim is to work closely with tenants and suppliers to create attractive and sustainable premises in urban settings where people thrive and companies develop. Vasakronan is jointly owned by the First, Second, Third and Fourth Swedish National Pension Funds. Vasakronan has more than 350 employees and turnover of SEK 6 billion.

[www.vasakronan.se](http://www.vasakronan.se)

Welcome to a  
better landlord

VASAKRONAN





The Garnisonen neighbourhood in Stockholm.

## Climate targets

Vasakronan's target is for the business not to contribute to global warming; in other words, to be carbon neutral. The calculations include emissions in scope 1 and 2, as well as business travel, commuting and the production and distribution of energy and vehicle fuels in scope 3. The base year is 2006 and the target is to achieve zero emissions by 2020.

## How will the targets be achieved?

The biggest source of emissions is energy use in the properties, and consequently it is of great importance that these are reduced. Reduced energy use and switching to carbon neutral energy has resulted in Vasakronan reducing its carbon emissions by more than 97% since 2006. The remaining emissions come from, among other things, travel and transportation, leakage of refrigerants and from the extraction and transportation of energy raw materials by energy suppliers.

Since 2008 the company has offset its remaining emissions and is thus carbon neutral. Although the company has already become carbon neutral, it is working systematically to reduce energy use and actual emissions further. Among other things, this is being done by reducing fossil fuel dependence in its own vehicle fleet, reducing travel by replacing travel with video conferencing when possible and through the installation of solar panels on the buildings.

## CLIMATE MEASURES

### THAT ENHANCE PROFITABILITY

## Energy efficiency measures in the Garnisonen neighbourhood in Stockholm

The Garnisonen neighbourhood is Sweden's largest continuous office space, where many of the premises were built in the 1970s. From 2011 to 2013 an extensive energy efficiency project was implemented which has resulted in annual energy use reducing by around 3,500 MWh. This corresponds to a cost saving of around SEK 3 million per year.

## THE PAST YEAR

In 2013 the following measures were taken, among other things:

- Energy use was reduced by a further 5%.
- Solar panels were installed on two properties.
- Food waste collection from restaurant and office tenants was extended to additional properties.

## FUTURE INVESTMENTS

In 2014 priority is being given to the following measures:

- Continued energy investments in existing properties with the aim of reducing total energy use by 6%.
- Installation of solar panels on a further 10 buildings.
- Reporting of climate impact of waste in scope 3.

## VASAKRONAN

| Emissions from operations (tonnes CO <sub>2</sub> e) <sup>1</sup>  | 2010          | 2011          | 2012          | 2013          | Share of total in 2013 <sup>12</sup> | Change 2010-2013 <sup>1</sup> | GHG Scope 3 |
|--|---------------|---------------|---------------|---------------|--------------------------------------|-------------------------------|-------------|
| <b>Scope 1</b>   |               |               |               |               |                                      |                               |             |
| Business travel  | 40            | 59            | 65            | 36            | 1 %                                  | -12 %                         |             |
| Own heating <sup>2</sup>   | 99            | 27            | 32            | 19            | 0 %                                  | -81 %                         |             |
| Refrigerants <sup>3</sup>  | 874           | 874           | 874           | 944           | 24 %                                 | 8 %                           |             |
| <b>Scope 2</b>   |               |               |               |               |                                      |                               |             |
| Purchased energy <sup>4</sup>  | 64,276        | 79,958        | 58,985        | 50,215        | 3 %                                  | -22 %                         |             |
| <b>Scope 3</b>   |               |               |               |               |                                      |                               |             |
| Business travel <sup>5</sup>   | 158           | 70            | 132           | 130           | 3 %                                  | -17 %                         | 6           |
| <b>TOTAL excluding origin-labelling</b>  | <b>65,447</b> | <b>80,988</b> | <b>60,087</b> | <b>51,344</b> |                                      | <b>-22 %</b>                  |             |
| Reduction through purchase of origin-labelled electricity <sup>6</sup>                                     | -46,408       | -60,704       | -40,390       | -31,992       |                                      | -31 %                         |             |
| Reduction through purchase of origin-labelled renewable district heating and district cooling <sup>7</sup> | -3,801        | -9,390        | -6,654        | -6,082        |                                      | 60 %                          |             |
| <b>TOTAL Haga scope</b>  | <b>15,238</b> | <b>10,894</b> | <b>13,043</b> | <b>13,270</b> |                                      | <b>-13 %</b>                  |             |
| Production and distribution of energy and vehicle fuels <sup>8</sup>                                       | 2,460         | 1,692         | 2,613         | 2,447         | 63 %                                 | -1 %                          | 3           |
| - of which fuel for business travel  | 44            | 0             | 15            | 9             | 0 %                                  | -79 %                         |             |
| - of which fuel for purchased energy   | 2,416         | 1,692         | 2,598         | 2,438         | 63 %                                 | 1 %                           |             |
| Commuting  | 206           | 193           | 240           | 221           | 6 %                                  | 7 %                           | 7           |
| <b>TOTAL (excl. carbon offset)</b>   | <b>17,904</b> | <b>12,779</b> | <b>15,896</b> | <b>15,938</b> |                                      | <b>-11 %</b>                  |             |
| Reduction through purchase of carbon offset district heating and district cooling <sup>9</sup>             | -12,084       | -8,370        | -11,430       | -12,040       |                                      | 0 %                           |             |
| <b>TOTAL (excl. own carbon offset)</b>   | <b>5,821</b>  | <b>4,410</b>  | <b>4,466</b>  | <b>3,898</b>  | <b>100 %</b>                         | <b>-33 %</b>                  |             |
| Own carbon offset <sup>10</sup>  | -2,066        | -3,536        | -4,466        | -3,898        |                                      |                               |             |
| <b>TOTAL</b>   | <b>3 755</b>  | <b>874</b>    | <b>0</b>      | <b>0</b>      |                                      |                               |             |

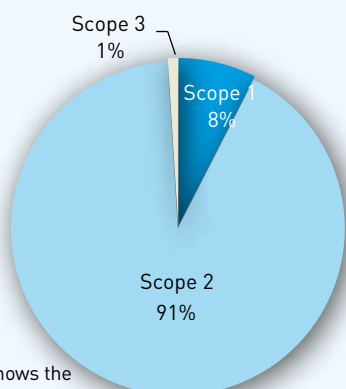
| Haga Initiative key indicators  | 2010 | 2011 | 2012 | 2013 | Change 2010-2013 | Unit                                |
|---|------|------|------|------|------------------|-------------------------------------|
| Emissions per unit of turnover (after carbon offset) <sup>11</sup>      | 0.0  | 0.0  | 0.0  | 0.0  | -                | tonnes CO <sub>2</sub> e/ SEK m     |
| Emissions per unit of rentable area (after carbon offset) <sup>12</sup> | 0.0  | 0.0  | 0.0  | 0.0  | -                | kg CO <sub>2</sub> e/m <sup>2</sup> |

1. Vasakronan's climate target has a base year of 2006, with significant reductions having been implemented during the period 2007–2009.
2. Local heating of premises leased out by Vasakronan.
3. Leakage from heat pumps/cooling machinery in premises leased out by Vasakronan. The leakage was calculated for the first time for 2012, but has been assumed to be the same for 2010 and 2011 as for 2012.
4. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total"

- includes contracts for origin-labelled electricity, district heating and carbon offset supplies.
5. Air, rail and taxi travel and hotels. Differences may be due to differences in data from travel agencies.
6. Vasakronan buys origin-labelled renewable property electricity. In certain cases, however, unspecified electricity supply contracts may apply for a transitional period, for empty premises or in other circumstances. Vasakronan therefore takes this into account in its calculations. Unspecified electricity supplies have been taken into account in the emissions disclosures for 2011 onwards.
7. Contracts with district heating and district cooling

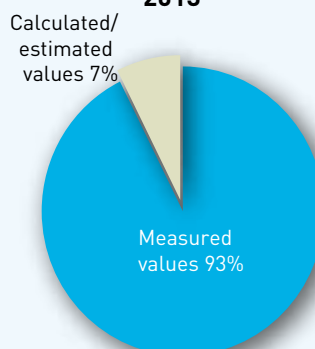
- suppliers for earmarking renewable production.
8. Refers to fuels consumed in scope 1 and scope 2.
9. Contract with district heating and district cooling supplier to carbon offset the emissions caused by the supplies in CDM projects, among other things.
10. For the remaining emissions Vasakronan carbon offsets in Gold Standard certified CDM projects.
11. Vasakronan is a carbon neutral company, which is why its key indicators are 0 based on the methodology and scope used at the time.
12. In relation to total emissions before own carbon offset.

**Emissions breakdown by scope included in the Haga scope in 2013**

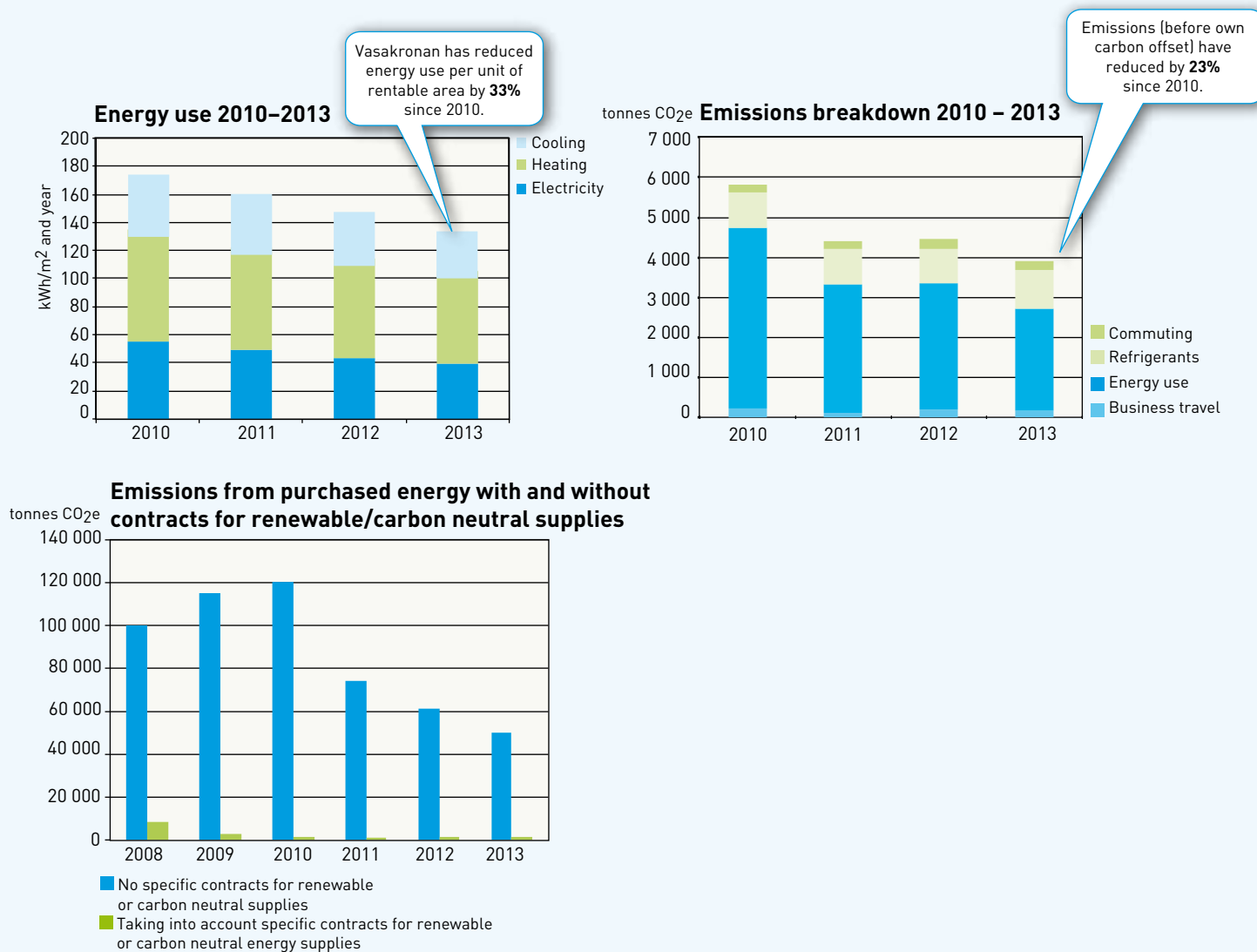


➤ The diagram shows the breakdown of emissions by scope included in the Haga scope in 2013.

**Breakdown of results based on type of activity data 2013**



➤ The diagram shows what proportion of the results of the emissions calculations is based on measured activity data and on assumed and calculated activity data respectively. In the 2013 calculations, 93% of total emissions were calculated based on measured activity data.



### Analysis and comments:

Since 2010 Vasakronan has reduced its emissions by 33%. Vasakronan's base year is 2006 and a significant reduction was achieved during the period 2007–2009.

Vasakronan's calculations include emissions from the production of electricity, heating and cooling in Vasakronan's properties, refrigerants, business travel and commuting.

All except a few of the properties are supplied with district heating, and in most cases also district cooling. Property electricity purchased is origin-labelled and consists of 75% hydroelectric power, 15% wind power and 10% bioenergy, with the exception of properties that were taken over during the year and which still have unexpired electricity contracts.

The reduction in emissions is mainly due to substantially reduced emissions for energy use (-43%) resulting partly from reduced energy use (around 23% less per unit of rentable area) and partly from the fact that contracts for renewable or carbon offset district heating and district cooling have been further increased.

The reduction in emissions from commuting since 2012 is likely to be due to Vasakronan having moved to new premises at the end of 2012 which have even better public transport links.

The reason why all emissions were carbon offset in 2012 and 2013, but not in 2010 and 2011, is because Vasakronan is constantly developing its reporting. Refrigerant leakage was included in the calculation for the first time in 2012, which is why the 2011 carbon offset did not cover refrigerants. The 2010 carbon offset covered only emissions of carbon dioxide and did not include refrigerants or the production and distribution of fuel, and did not take into account unspecified electricity contracts.

## ANNEX 1: CALCULATION SPECIFICATION FOR ACTIVITY DATA

**I Most of this greenhouse gas emissions disclosure uses an operational approach in accordance with the GHG Protocol. This means that the important thing is not who owns and thus has 'financial control' over the source of the emissions, but rather the crucial factor is who has operational control over it. Where company cars are concerned, for example, this means that all company cars (leased cars, owned cars and car allowances to staff) are included in scope 1, while journeys in which staff are only passengers are instead placed in scope 3 (e.g. taxi, air, rail and bus travel).**

**The companies' other assumptions and approaches are detailed below.**

### Axfood

A majority of the shops are heated either directly using electricity or indirectly through heat recovery from electrically powered refrigerators and freezers. The climate impact of this electricity consumption is included in the calculation of the climate impact for electricity. However, a number of shops are heated using district heating, the cost of this being included in the lease for the shop. Axfood is working to produce a method for calculating these emissions as well.

All calculated transportation of goods relates to own transportation by road.

Emissions of carbon dioxide from air travel are calculated by a travel agency; this agency only reports emissions of CO<sub>2</sub>.

Calculation of emissions from company cars is based on measured distances travelled and an assumed fuel consumption per kilometre.

In this report Axfood's emissions are calculated in accordance with the Haga Initiative's calculation method. This calculation method differs somewhat from the method used to calculate emissions as reported in Axfood's sustainability reports. The main differences are as follows:

- Axfood reports CO<sub>2</sub> in its sustainability report and CO<sub>2</sub> equivalents (all greenhouse gas emission converted into CO<sub>2</sub>) in the Haga Initiative's greenhouse gas emissions disclosure.
- The emissions reported in this disclosure include emissions from a life cycle perspective, while the emissions reported in the sustainability report include emissions from combustion/production.

FA key indicator of emissions per tonne of goods transported is being reported for the first time in 2013. Previously, the key indicator in the greenhouse gas emissions disclosure was emissions per unit of revenue and per employee. Axfood has decided to change its key indicators in order

to communicate the same key figures for the business in its greenhouse gas emissions disclosure as in documents such as its sustainability report.

### Coca-Cola Enterprises Sverige

In its own operations the company purchases origin-labelled renewable electricity, emissions from which are calculated based on emission factors that include upstream emissions and emissions during the construction and demolition of plant. Electricity consumption in customers' refrigerators is assumed to be unspecified, and consequently the emission factor for the Nordic residual mix has been taken from the Swedish Energy Markets Inspectorate for 2012. Electricity consumption and refrigerant leakage in customers' refrigerators have been calculated based on estimated consumption and leakage for one refrigerator multiplied by the number of refrigerators.

### Fortum Värme

Emissions of carbon dioxide, methane and nitrous oxide in Fortum Värme's facilities have been calculated based on fuel volumes and the Swedish Environmental Protection Agency's official emission factors, with the exception of those facilities that carry out their own measurement of methane and/or nitrous oxide. Leakage of refrigerants is calculated by weighing the heat pumps once a year along with information on the quantity replenished, except in those cases where the heat pumps are equipped with continual measurement of leakage.

In the case of CO<sub>2</sub> in production, the emission factor for unspecified electricity is taken from Swedenergy's guidance on origin labelling for 2012.

Emissions for imported district heating are, for the largest volumes, based on information from the supplier on CO<sub>2</sub> emissions in production and are then in-

creased by standard amounts for leakage of other greenhouse gases and emissions upstream. Other volumes are calculated based on an average of Sweden's district heating supplies.

Transportation of fuels, additives and ash is calculated based on information on average distances per fuel, fuel volumes per fuel and transport vehicles. Emission factors for the transport vehicles are taken from the Swedish Transport and Environment Network (Nätverket för Transporter och Miljön, NTM).

Emission factors for upstream production of fuel etc. are taken from the Miljöfaktabok för bränslen (Environmental Facts About Fuels) published by IVL Swedish Environmental Research Institute and the schedule published by Värmemarknadskommittén (the Committee on the Heating Market).

### JM

*District heating use during production:*

Calculated using a standard amount/schedule based on reported use of district heating from building projects concluded in 2011. The amount was extrapolated upward based on the total number of apartments in production.

*District heating in properties owned by JM:*

Calculated from information on the rentable insured area, as well as a standard amount for district heating use in premises and homes respectively.

*Electricity use during production:*

Calculated using a standard amount based on reported use of electricity from building projects concluded during the year. The amount was extrapolated upward based on the total number of apartments in production.

*Property electricity in properties owned by JM:*

Calculated from information on the rentable insured area, as well as a standard amount for electricity use.



*Operating electricity in leased premises:*

Estimated based on standard amounts.

*Air travel:*

Based on statistics from the BCD travel agency, weighted in accordance with recorded expenditure on air travel in JM's business system (in order to include self-booked travel).

*Transportation:*

Calculated from standard amount arrived at as a result of logistics study of actual workplaces. Refers to transportation generated at the production stage.

*Machinery:*

U<sup>Calculated</sup> using a standard amount based on data from a reference project from JM's environmental investigation in 2000 into fuel consumption by machinery during building production. The amount was extrapolated upward based on the number of apartments in production.

*Commuting:*

Commuting by private cars to and from building sites for which a mileage allowance was paid (statistics from JM's HR department). Assumed to be petrol vehicles.

*Heating and property electricity in newly built homes during the first two years:*

*Key data provided by each completed housing project (calculated energy requirement and heating system). The calculations use conversion factors for the residual mix, and for district heating, each supplier's conversion factor.*

**Lantmännen**

Emissions from transportation of goods have been taken primarily from the freight company and secondarily calculated based on assumptions concerning heavy vehicle models based on NTM's emission factors. For 2009 and 2011 business travel per employee has been assumed to be the same as in 2012.

**Löfbergs**

The average distance transported and type of vehicle from grower to export port has been estimated for each grower country.

With effect from 2012 packaging volumes are calculated based on quantities actually purchased. Previously the packaging materials were calculated based on reporting to the Packaging and Newspaper Collection Service (Förpacknings- och Tidningsinsamlingen AB, FTI) and then extrapolated upward in proportion to the

volume of coffee sold that is not included in reporting to FTI. Emissions for 2005 and 2011 were calculated using the old method. For comparability, however, 2005 and 2011 have been extrapolated upward based on the difference between emissions from the new method and the old method for 2012. In addition to emissions for the production of packaging, estimated emissions for outsourced transportation are also affected because they are based on the volumes of packaging. With effect from 2012 the figures include Viborg in Denmark in addition to the facility in Karlstad. The 2012 greenhouse gas emissions disclosure was calculated using the old method and included only Karlstad.

Emissions for growing of coffee have been adjusted for all years since new studies that have added further parts of the life cycle are now used as a basis for the calculations. Coffee and shade plants in the plantation generally provide a significant carbon sink. However, this has not been included in the calculation of greenhouse gas emissions from coffee growing.

**McDonald's Sverige**

McDonald's Sverige has 217 restaurants that are open all year round and 9 so-called satellites that are only open periodically. There are measured values for most of the restaurants. For those restaurants that do not have measured values, the energy use, refrigerant leakage and waste generation have been assumed to be the same as the average value per restaurant for those restaurants that have measured values. These restaurants are assumed not to have contracts for origin-labelled electricity.

For air travel, company cars and waste, emission factors in accordance with McDonald's European calculations have been used. In all cases the emission factors are on the high side compared with the emission factors that would have been used based on the Haga Initiative's calculation manual.

**HK Scan**

Emissions from disposal of packaging waste by end consumers have been calculated based on Scan's statistics for 2012 based on the amount of packaging material that goes to the end consumer and on the Packaging and Newspaper Collection Service's (FTI) recycling results for card-

board, plastic and metal packaging for 2013.

**Stena Metall**

Air travel calculations for Stena were carried out by the company's travel agency Via Travel and therefore do not use the Haga Initiative's calculation method.

The transport calculations for Technoworld's transportation are based on data from contractors and Green Cargo's calculation tool EcoTransit.

Calculations of goods transportation for 2008 were not generally carried out according to the Haga Initiative's methods.

**Statoil Fuel & Retail**

Emissions from air travel were calculated by Statoil's travel agency. Emission quantities for carbon offsets have in some cases been calculated using different emission factors to those used in the calculations for business travel and transportation of goods.

**Sveaskog**

Fuel consumption in company vehicles is based on typical vehicles established by Sveaskog.

Fuel consumption in machinery for forest maintenance has been calculated based on standard amounts per litre/hectare from Skogforsk (the Forestry Research Institute of Sweden).

For 2005 consumption of energy and air and rail travel have been assumed to be the same as in 2010.

**Vasakronan**

Information for air travel, rail travel and hotel stays has been obtained from a travel agency.

Emissions from taxi travel have been calculated based on cost.

Emissions from operating vehicles have been calculated based on fuel costs, while emissions from company cars and own cars used for business purposes have been calculated based on distance travelled.

The climate impact of commuting has been calculated based on a staff survey with a response rate of around 95%.

Refrigerant leakage has been calculated based on reported replenished quantities. For energy use Vasakronan has chosen to use the "financial control" approach, which means that purchased energy consumed by its tenants is reported as scope 2.

## ANNEX 2: BIOGENIC EMISSIONS

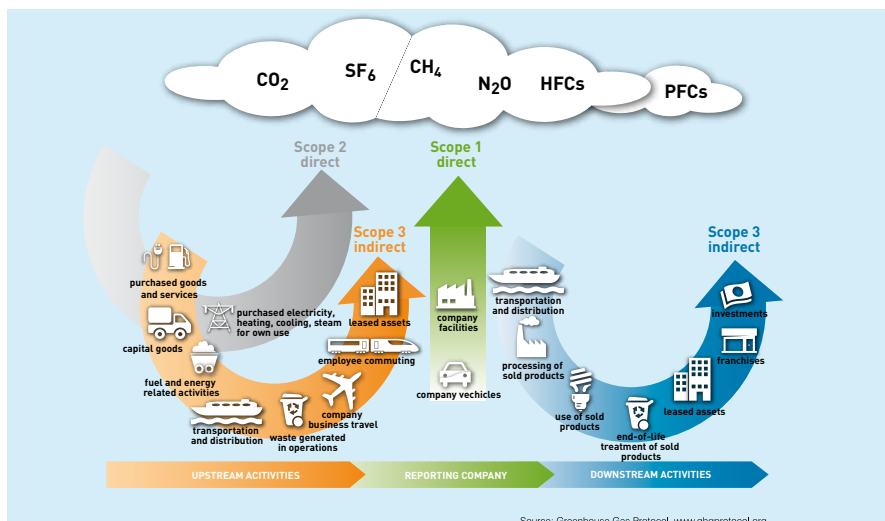
Biogenic emissions arise when biofuel is used for heating, district heating production and transportation. The combustion in air of fuel containing carbon results in the formation of carbon dioxide, regardless of whether the fuel is fossil or renewable. In the medium to long term, however, only emissions from fossil fuels contribute to the greenhouse effect, because biofuels absorb just as much carbon dioxide during their growth as is released on combustion. Carbon dioxide emissions from combustion of biofuels are known as biogenic carbon dioxide emissions. Under the GHG Protocol and in national climate reporting biogenic carbon dioxide emissions must be reported in parallel with emissions from fossil fuels.

The table below shows the companies' biogenic carbon dioxide emissions in parallel with those from fossil fuels in scope 1.


| Breakdown of biogenic and fossil CO <sub>2</sub> emissions in scope 1 | Biogenic CO <sub>2</sub> emissions in scope 1 (thousand tonnes) | Fossil CO <sub>2</sub> emissions in scope 1 (thousand tonnes) |
|---|---|---|
| Axfood  | 0,00  | 10.81   |
| Coca Cola Enterprises Sverige   | 1.14  | 2.12  |
| Fortum Värme  | 1.617.02  | 921.37  |
| HKScan  | 0.00  | 15.09   |
| JM  | 0.65  | 5.02  |
| Lantmännen  | 209.87  | 25.44   |
| Löfbergs  | 0.01  | 2.34  |
| McDonald's Sverige  | 0.00  | 0.21  |
| Statoil Fuel & Retail Sverige   | 0.05  | 1.68  |
| Stena Metall  | 0.22  | 39.06   |
| Sveaskog  | 6.48  | 12.29   |
| Vasakronan  | 0.37  | 0.05  |

## ANNEX 3: CALCULATION SPECIFICATION FOR ACTIVITY DATA

In recent years the market has demanded clearer categorisation of emissions in scope 3. The organisation behind the GHG Protocol therefore produced the new Corporate Value Chain standard in 2012, which provides companies with guidance on how to disclose emissions for the entire value chain, both upstream and downstream. This has resulted in scope 3 being broadened to include 15 categories, with categories 1-8 referring to upstream emissions and categories 9-15 referring to downstream emissions. These categories are summarised in the table below.



| Category   | Description  |
|--|--|
| <b>Upstream</b>  |  |
| 1. Purchased goods and services  | Extraction, production and transportation of goods and services purchased or acquired by the reporting company in the reporting year, not otherwise included in Categories 2–8.  |
| 2. Capital goods   | Extraction, production and transportation of capital goods purchased or acquired by the reporting company in the reporting year, e.g. machinery.   |
| 3. Fuel and energy related activities (not included in scope 1 or scope 2) | Extraction, production, and transportation of fuels consumed by the company directly or through the electricity, district heating or district cooling purchased in the reporting year.   |
| 4. Upstream transportation and distribution                                | Transport och distribution av produkter och råvaror köpta av det rapporterade företaget under rapporteringsåret (fordon och faciliteter som inte ägs eller kontrolleras av det rapporterade företaget)   |
| 5. Waste generated in operations   | Disposal and treatment of waste generated in the reporting company's operations in the reporting year (in facilities not owned or controlled by the reporting company).  |
| 6. Business travel   | Transportation of employees for business-related activities during the reporting year (in vehicles not owned or controlled by the reporting company).  |
| 7. Employee commuting  | Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or controlled by the reporting company).  |
| 8. Upstream leased assets  | Operation of assets leased by the reporting company (lessee) in the reporting year and not included in scope 1 and scope 2 – reported by lessee.   |
| <b>Downstream</b>  |  |
| 9. Downstream transportation and distribution                              | Transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer, including retail and storage (in vehicles and facilities not owned or controlled by the reporting company). |
| 10. Processing of sold products  | Processing of intermediate products sold in the reporting year by subcontractors (e.g. manufacturers).   |
| 11. Use of sold products   | End use of goods and services sold by the reporting company in the reporting year.   |
| 12. End-of-life treatment of sold products                                 | Waste disposal and treatment of products sold by the reporting company in the reporting year.  |
| 13. Downstream leased assets   | Operation of assets owned by the reporting company and leased to other entities in the reporting year, not included in scope 1 and scope 2 – reported by lessor.   |
| 14. Franchises   | Operation of franchises in the reporting year, not included in scope 1 and scope 2 – reported by franchisor.   |
| 15. Investments  | Operation of investments (including equity and debt investments and project finance) in the reporting year, not included in scope 1 or scope 2.  |

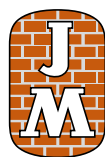


THE HAGA INITIATIVE is a partnership between leading companies in various sectors who take climate change seriously.

axfood

*Coca-Cola Enterprises Sverige AB*

 Fortum



Lantmännen





  
**SVEASKOG**

**HKSCAN**



**STATOIL**

 **STENA**  
Innovative recycling

**VASAKRONAN**