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PREFACE BY THE CEOS

Ever since the launch of the Haga Initiative nine years ago, we have issued annual greenhouse gas emission reports. We have been transparent about what we disclose, how we disclose and why we disclose. We also take pride in explicitly stating what we are not yet in a position to report on. When we have received feed-back, we have strived to improve until the next year's report-transparency remaining our guiding principle. However, being transparent in sharing information is not enough. Our challenge is to not report solely on what happens behind the gates, i.e. emissions which are directly owned by the company, but also on emissions occurring throughout the supply chain, as well as at the end-use phase. For some of the companies in the Haga Initiative this is more of a challenge than for others. Regardless, for investors it is crucial to have an overview of emissions along the full value chain.

Reporting on our emissions allows us to prioritise, so that the right measures are taken at the right time. In addition, we want to give a fair picture of our activities, inter alia to investors and customers. Based on this GHG emissions disclosure report, external stakeholders will be able to assess whether the companies' products cause considerable emissions, whether there is a risk for assets to become stranded, or whether the companies risk facing high costs for their emissions due to policy measures in a near future. We also notice an increasing interest for our emissions' profiles and more requests for information, for example about our value-chain related emissions.

We are approaching 2020, the year when our first target is to be fulfilled. This GHG disclosure report is the third and last to track our progress towards our goal of reducing our climate impact by 40 per cent by 2020. The member companies in the Haga Initiative are from now on setting climate targets that are aligned with the 1.5 degree-target, and working continuously to influence their value chains, towards zero emissions by 2030. Progress towards these new targets will be duly monitored.

We note that a considerable portion of the transition is profitable for us as companies. We can see that it strengthens our brands, helps us attract the right employees and reduce our costs. Having said that, we face areas where we have difficulties cutting emissions.

In order for us to succeed, we need more and better policies. We need long-term policy measures in Sweden as well as in the EU. Most of us struggle to reduce transport-related emissions, something which indicates that Sweden needs to adopt clear, firm policies so as to enable a scale-up of electrification, to spur domestic production of biofuels, and to ensure more efficient transport systems. We want to succeed in reducing our companies' emissions. Empowered by supporting policy frameworks, we and others can thrive in cutting our emissions, and through investment in carbon sinks we can reach our targets and contribute to Sweden reaching its goals. So, let us aim for Sweden having a transport fleet fully independent of fossil energy by 2030. This would be the first important step towards showing the world that we can succeed in transforming Sweden into a net-zero emissions economy by 2045.

Lars Andersson,

Director Nordics Nouryon

Klas Balkov CEO Axfood

Thomas Kelly CEO McDonald's Sverige

Jens Henriksson CEO Folksam

Anders Egelrud CEO Stockholm Exergi

Petter Holland CEO Preem

Sofia Hyléen Toresson CEO HKScan Sverige

Johan Skoglund

CEO JM

Lars Appelqvist CEO Löfbergs

CEO Lantmännen

Sofie Eliasson Morsink CEO Coca-Cola

European Partners Sverige

Oxformh

Ulf Troedsson CEO Siemens

Kristofer Sundsgård CEO Stena Recycling

Per-Olof Wedin CEO Sveaskog

EXECUTIVE SUMMARY

The member companies of The Haga Initiative are transitioning to climate neutrality faster than expected. In 2018, 10 out of 14 of the member companies have reached their target of reducing greenhouse gas emissions by 40 percent. That is two years faster than planned. The mutual effort of the companies in The Haga Initiative have reduced the companies' own carbon emissions, scope 1, by 762 000 tonnes, since the measurements started. In comparison, Sweden's yearly net carbon emission is 53 000 000 tonnes.

Over time the emission trend of The Haga Initiative has been very positive, with lower emissions every year. However, 2018 broke the trend. The net greenhouse gas emission in 2018 were about six percent higher than in 2017. This equals an extra 193 000 tonnes of carbon dioxide. Six of the fourteen member companies increased their own reported emissions within scope 1, which is concerning. In the executive summary, the CEOs of the member companies state that, in order to succeed with greenhouse gas emissions reduction, they need support from politics in terms of stricter laws and regulations.

The 2018 increment in greenhouse gas emission can primarily be explained by increased need for transportation, following increase in production, but is also a result of limited access to high blend biofuels. The weather conditions of 2018 also impacted the greenhouse gas emissions for several companies in the Haga Initiative.

On the positive side, several companies report implementation of stricter business travel policies. Through this effort they have managed to reduce their air travel and instead convert to travel free meetings and fossil free means of business transportation. Several companies have also implemented plug-in hybrids as the only acceptable type of company car.

In summary, the member companies of the Haga Initiative are on the right track compared to the baseline year chosen by each company. The members 2030 target will require a transition faster than stated by Carbon Law. According to Carbon Law a 50 percent reduction of greenhouse gas emissions is needed every decade, for the world to stand a chance at limiting global warming to a 1.5-degree increase, and net zero carbon dioxide emissions by 2030.

Another interesting result from the Greenhouse Gas Emissions Disclosure 2018, is a clear decoupling effect. As the emissions kept decreasing over the years, the business profit kept increasing. This is a clear sign that The Haga Initiative's vision – a profitable business sector without climate impact – is possible.

In the Greenhouse Gas Emissions Disclosure 2018, the member companies of The Haga Initiative disclose information about their scope 3 emissions, upstream and downstream the supply chain, as well as their efforts to reduce those emissions. This inclusion of scope 3 is part of the new, more ambitious business strategy for the Haga Initiative. Since the Haga Initiative in total have reached its target of 40 percent greenhouse gas reduction, the member companies now strive to reach the net zero emission target in scope 1 by 2030. Within that time frame, all purchased energy in scope 2 should be renewable or recycled and the emissions in scope 3 are to be mapped out, identified and reduced.



THE HAGA INITIATIVE'S GREENHOUSE GAS EMISSIONS DISCLOSURE

The Haga Initiative's vision is a profitable business sector without climate impact. The companies realise that climate effort is profitable and want to inspire other companies to do the same.

The Haga Initiative wants to show opportunities to reduce climate impact and at the same time work actively on creating the right conditions for the business sector to contribute. Business has a central role to play when it comes to acting against climate change, they are well positioned to drive development in the right direction. Companies can be innovative and bring about rapid changes.

An initial step in the right direction is knowing the company's status by calculating its greenhouse gas emissions. The next step is to create a climate strategy containing targets on how to reduce climate impact. In addition to calculating and continuously reporting the yearly emissions, each company also report its most important actions taken in 2018 which resulted in reduced climate impact. To update the world on the company's climate impact is an important act to create customer demand towards climate-smart products and goods, as well as to show other companies that climate issues are an important part of corporate responsibility.

When the Haga Initiative was founded in 2010, climate targets were set to reduce emission by at least 40 percent by 2020 compared to a post-1990 base year of their choice. The member companies' climate targets cover the Haga scope as a minimum. The Haga scope is defined as emissions in scope 1, scope 2 and business travel in scope 3. Many of the companies have reached, or are on track to reach, the target for 2020. When the target was set, it was ambitious but the progression to reduce emissions has been much faster than many expected.

ABOUT THE HAGA INITIATIVE

The Haga Initiative consists of fourteen member companies: Axfood, Coca-Cola European Partners Sverige, Folksam, HKScan Sweden, JM, Lantmännen, Löfbergs, McDonald's Sverige, Nouryon, Preem, Siemens, Stena Recycling, Stockholm Exergi and Sveaskog.

The member companies of the Haga Initiative make the following commitments:

- A committed CEO/ management that takes active climate responsibility.
- 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 to reduce CO₂e emissions by at least 40 percent by 2020 or an equivalent level of ambition.
- Net zero emissions within own operations by 2030.

When the climate target was set for 2020, the full scope 3 standard (Corporate Value Chain Accounting and Reporting Standard) did not yet exist. Today, there is an increasing focus on greenhouse gas emissions throughout the supply chain: upstream and downstream. According to Greenhouse Gas Protocol, more than 70 percent of total emissions for an average company are in scope 3. For the companies in the Haga Initiative as well as for other companies, continuously accounting for and reporting on the significant emissions in scope 3 is a major challenge. Companies in the Haga Initiative recognise the importance of more comprehensive reporting and thus greater transparency for ensuring a fair description of the companies' total environmental impact.

During the spring of 2017, the Haga Initiative therefore set new targets by 2030. At that time the Cross-Party Committee on Environmental Objectives presented a climate law proposal to the government, with net zero emissions through 2045, of which 85 percent of the emissions reductions occur within Swedish borders. The Haga initiative's target is to reduce the emissions to net zero emissions by 2030 in scope 1, purchased energy in scope 2 should be renewable or recycled and emissions in scope 3 are to be mapped out, identified and reduced.

In this disclosure, the targets for 2020 are reported. As an initial step to monitor the targets for 2030, we have chosen to report the most significant emissions in scope 3 which are not covered by the present climate target.

THE HAGA INITIATIVE AND GHG

The Haga Initiative currently follows the GHG Protocol, allowing members to choose whether to set absolute or relative targets. The first alternative reflects the company's absolute emissions in tonnes CO₂e. However, the companies in the network all operate in growing markets, which in many cases makes relative objectives the more appropriate option. In some cases, greater absolute emission figures for a company can even mean that total emissions for its products are lower i.e. because of increased materials recycling or a switch to rail transportation and district heating. In the emissions disclosures, the companies present their targets, outline the measures they have taken and plan to take to achieve their targets, and the progress they have made so far towards meeting these targets. The members can choose absolute or relative targets to achieve at least 40 percent reduction until 2020.

GREENHOUSE GAS PROTOCOL

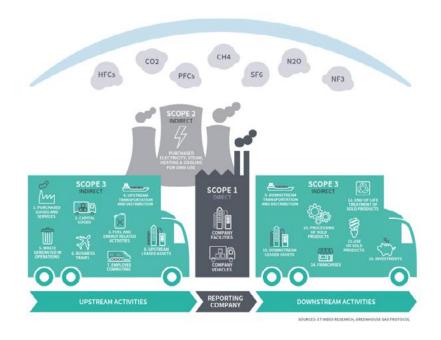
The GHG Protocol is the international accounting standard that is most frequently used by nations and companies as a calculation tool for understanding, quantifying and managing emissions of greenhouse gases. For more than ten years, the GHG Protocol has been working in partnership with the World Resources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

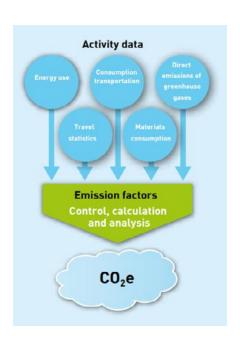
The Haga Initiative's calculation method describes the methodology used by the Haga Initiative for the emission sources that are relevant to the calculation of climate impact. The scope or scopes in the GHG Protocol to which the emissions belong are detailed in each description. Emissions are classified as either scope 1 (direct emissions), scope 2 (indirect emissions from purchased energy) or scope 3 (other indirect emissions). Click here to read more about the calculation method.



COMPANY REPORTS ACCORDING TO THE GHG PROTOCOL

In the 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 the climate targets they have set and how they intend to achieve these targets. The Haga Initiative has two target years; 2020 and 2030. In this greenhouse gas emissions disclosure, the targets are reported by 2020. The scope of the target is described as "Haga scope", see box.

Each year, the Haga Initiative aims to become more transparent and more consistent in its reporting. As part of this, emissions in each company's disclosure table have been broken down into the three scopes set out in the GHG Protocol. Emissions in scope 3, which are generated 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).



External factors affecting emissions

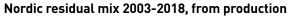
The calculation of emissions is based on activity data such as energy use and fuel consumption. These figures are then converted into emissions of greenhouse gases (CO_2e) using emission factors for each emissions source.

Sometimes a company's emissions may increase even though it has made its operations more efficient. How is that possible?

Companies can do a lot to influence their consumption of resources, but sometimes there are external factors that cause emissions to rise despite the company's efficiencies. For example, a cold winter may force district heating companies to use fossil fuels for 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 vary from year to year because of changes in production. In fuel, different combinations of renewables are resulting in decreasing emission levels.

Companies can use different types of electricity: origin-labelled or unspecified electricity. For 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 the Nordic residual mix is used, see chart below. Since 2014, emissions from purchased energy should be reported where no distinction is made between origin-labelled and unspecified electricity, see Appendix 2.





HAGA SCOPE FOR THE 2020 TARGET

The Haga scope is defined as emissions under scope 1, 2 and business travel under scope 3. The member companies have climate targets that encompass or exceed the Haga scope.

RESULTS: GREENHOUSE GAS DISCLOSURE 2018

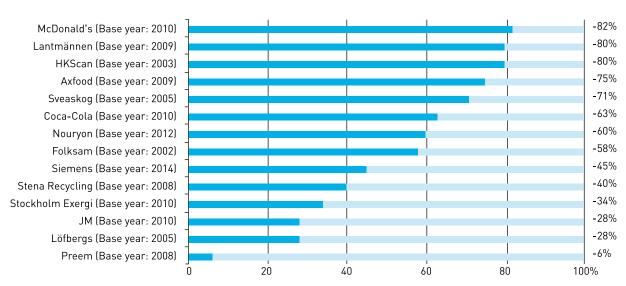
The Haga Initiative's total emission reductions in 2018 are presented below in absolute terms compared with the selected base years. The companies in the Haga Initiative are diverse. Some have their major emissions in scope 1 and others in scope 2 and 3. This means that their power to affect emissions differ. Emissions in scope 1 (Direct GHG) are emissions from sources that companies own or control. Emissions in scope 2 (Energy indirect GHG) are emissions that occur when a company purchases electricity or district heating. Emissions in scope 3 (Other indirect GHG) are divided into 15 categories and are those that arise upstream and downstream in the value chain.

Many of the companies in the Haga Initiative are in growing markets, which makes it appropriate for some companies to set relative instead of absolute emission targets. It can therefore be difficult to compare the companies with each other. Many of the companies have set both relative and absolute targets for emission reductions. More information about the companies' own goals can be found on the respective company page.

Emisssions reduction Haga scope

The Haga scope covers emissions in scope 1, 2 and business travel in scope 3. All companies have reduced their emissions and 10 out of 14 companies have already reached the target of reducing emissions by 40 percent by 2020 compared to their base year. In total, the companies have reduced emissions in the Haga scope by 27 percent compared to the respective base year, equivalent to more than 1.3 million tonnes $\rm CO_2e$. There are four companies that contribute to the largest emission reductions in the Haga scope, measured in tonnes $\rm CO_3e$; Stockholm Exergi, Nouryon, Preem and Lantmännen.

Percental change of absolute emissions in the Haga scope - 2018 compared to base year



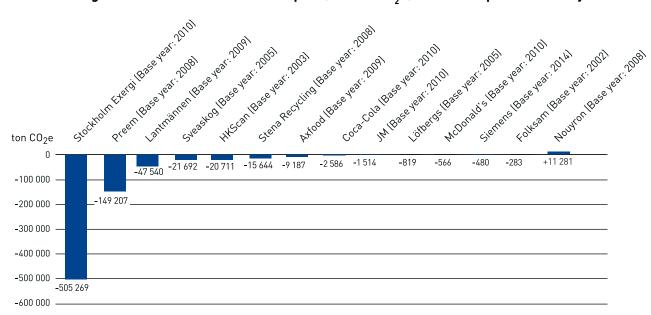
↑ The graph shows the change of companies' emissions in the Haga scope in 2018 compared to the selected base year. Changes in emissions are reported in absolute figures.

Emissions reduction in scope 1

Compared to 2017, the Haga Initiative's emissions in scope 1 have increased with 6 percent, equivalent to 193 000 tonnes of CO_2e . 6 out of 14 companies increase their emissions in scope 1 during 2018. The reason behind the total increase of The Haga Initiative is emission increases from the member companies Preem, Stockholm Exergi and Nouryon. Axfood and Sveaskog also report increased emissions in scope 1. The reasons behind the increased emissions is described in each company's profile below.

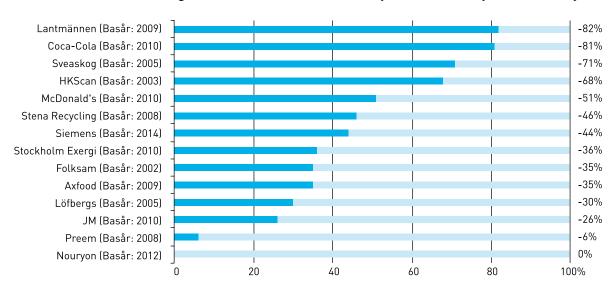
Compared to the selected base years, the companies' emissions in scope 1 have decreased by 19 percent, equivalent to 762 000 tonnes of CO_2e . The companies contributing to the largest emissions reduction (in tonnes CO_2e) are Stockholm Exergi, followed by Preem and Lantmännen.

Change of absolute emissions in Scope 1 (tonnes CO,e) - 2018 compared to base year



↑ The graph shows the change of companies' emissions in scope 1 in 2018 compared to the selected base year. Changes in emissions are reported in absolute figures in tonnes of CO₂e.

Percental change of absolute emissions in Scope 1 - 2018 compared to base year



↑ The graph shows the change of companies' emissions in scope 1 in 2018 compared to the selected base year. Changes in emissions are reported in absolute figures.

Emissions reduction scope 2

Emissions in scope 2 are emissions arising from the production of purchased electricity or district heating. By purchasing guarentees of origin, companies can reduce their emissions from this category. How the emissions in scope 2 has been calculated is reported in Appendix 2.

Significant emissions in scope 3

A company's emissions may be associated with emissions that are outside Haga scope, which arises upstream and downstream in the value chain. In 2018 The Haga Initiative has initiated a broader way reporting, where these emissions are to be are to be mapped out, identified and reduced. Several of the member companies have for years been reporting scope 3 emissions. This reporting is based on companies' own analysis of what emissions they consider most significant as well as what strategies they have adopted to mitigate these emissions.

In the 2018 greenhouse gas disclosure, only the 2020 target is reported. This means that it is still up to each company to choose if they want to disclose their emissions. As a first step towards implementing the new 2030-targets of The Haga Initiative, we report the companies most probinent emissions in scope 3. This reporting is based on companies' own analysis of what emissions they consider most significant as well as what strategies they have adopted to mitigate these emissions. The report is therefore a qualitative analysis of emissions and are not quantified in this disclosure.

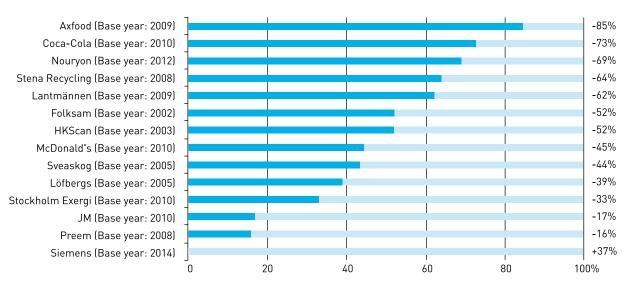
SWEDEN'S NATIONAL EMISSIONS

The Swedish Environmental Protection Agency reports Sweden's national emissions per emission source. Statistics Sweden reports Swedish companies' emissions within and outside Sweden's borders and reports emissions per industry. SCB's calculation method is based on assumptions, which simplified comprise the total emissions by Sweden's national emissions and emissions caused by the fuel stored in Sweden for international transports.

- The Swedish Environmental Protection Agency
- SCB

As can be seen in the table on the next page, emissions primarily from purchased goods and services account for the largest emissions in scope 3, according to the companies themselves. The companies' power to influence varies in different categories and the companies can therefore affect their scope 3 emissions in different ways. For instance, some strategies mentioned by the companies to decrease scope 3 emissions are cooperation with suppliers, increase the number of climate friendly alternatives and to increase the efficiency of purchased goods or services.

Change of relative emissions (key indicators) - 2018 compared to base year



↑ The graph shows the changes in the companies' relative emissions 2018 compared to chosen base year. The companies monitor different key indicators due to their different activities. Company specific key indicators are shown under respecitve company report.

	The largest category of emissions in scope 3 that quantitatively is reported in this disclosure (category according to GHG Protocol)	The largest category of emissions in scope 3 that is NOT quantitatively reported in this disclosure (category according to GHG Protocol)	Strategies to manage emissions in scope 3
Axfood	Business travel (6)	Production from agriculture (1)	Reduce food waste, expand offering of vegetarian products, work with packaging and material (e.g. plastics).
Coca-Cola European Partners Sverige	Refrigeration of beverage on customer premises (10)	Production of ingredients and packaging [1]	Climate target for scope 3, increased share of recycled material, sustainable production of raw materials.
Folksam	Electricity from wind power with Guarantee of Origin (3)	Investments (15)	Ethical investment criteria, corporate governance. During 2018 the target of MSEK 25 of investments in green obligations was reached.
HKScan Sweden	Purchased transports (4, 9)	Production of meat (1)	Cooperation with service suppliers and farmers (e.g. regarding feed composition). One example is "Environmental prize" to animal suppliers and responsibly produced soy in the animal feed.
JM	Leased machinery (8)	Production of construction materials (1)	Renewable fuels, efficient material use, prevent generation of waste, create circular material flows, identify and test climate efficient construction materials.
Lantmännen	Purchased goods transport (4, 9)	Production of grains and other raw materials (1)	Mapping of potentials for decreased environmental impact, cooperation with farmers and customers, new concepts of cultivation, new technologies in production.
Löfbergs	Cultivation of coffee (1)		Development projects for small-scale coffee farmers (concernes 80 000 small-scale coffee farmers), increased the share coffee from certified farms (today the entire selection has at least one certification).
McDonald's Sverige	Waste disposal (5, 12)	Production of meat (1)	Increase share of alternative proteins, global cooperation for improved sustainability within beef production, work towards phasing out plastics in packaging.
Nouryon	Business travel (6)	Production of purchased raw materials (1)	Alternative raw materials, resource productivity, collaborations with customers and suppliers, new technology etc.
Preem	Use of sold products (vehicle fuel) (11)	Production of purchased (raw) materials and services (1)	Increase the share of sold renewable vehicle fuels.
Siemens	Production and distribution of energy and vehicle fuels (3)	Production of purchased products (1)	Global effort together with key suppliers to decrease emissions from purchased goods.
Stena Recycling	Purchased transports (4, 9)	Customers' transport of waste to the facilities (4, 9)	Procurement demands on biofuels, vehicle performance and transport optimization.
Stockholm Exergi	Production and distribution of energy and vehicle fuels (3)		Shift of fuel transportation from road to rail. During 2018, 260 000 tonnes of biofuel was transported by train to Värtaverket.
Sveaskog	Purchased timber transport with truck [4, 9]		Encourage the use of renewable vehicle fuels.

[↑] This table is a compilation of the largest emission categories in scope 3, that are reported or not reported in this disclosure, along with adopted strategies as stated by the companies themselves.

DECOUPLING OF THE HAGA INITIATIVE

Sweden has managed to decouple GDP growth from greenhouse gas emissions. Between 1990 and 2018, emissions in Sweden have reduced by 26 percent, while GDP has increased by 82 percent¹. Similarly, the companies in the Haga Initiative have managed to reduce emissions while maintaining or increasing turnover.

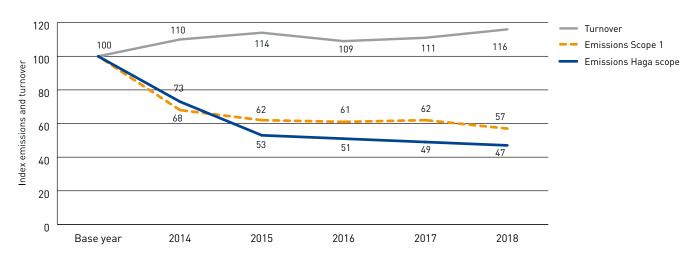
The summary in the chart shows that companies increased their turnover by an average of 16 percent since their respective base years, while emissions fell by an average of 56 percent (Haga scope) or 43 percent (in scope 1). The figures for average emission reduction should not be confused with the companies' aggregate emission reduction, which is 27 percent in Haga scope, or 19 percent in the in scope 1.

There are obviously major individual differences behind the figures - some companies have made significant reductions in emissions and increased turnover considerably while others experienced subdued turnover or lower emission reductions.

Turnover does not tell the entire story of business economic development. In some cases, the change is due to new acquisitions or spin-offs, which, of course, affect both sales and greenhouse gas emissions. Changes and results reported in the chart below could also be caused by the different business models of the companies of The Haga Initiative. Different business models will cause one company to have most of its emissions within the Haga scope, while another company will report most of its emissions within the supply chain. In the supply chain it is harder to access correct data than if emissions are due to the company's own activity. Although turnover is stable, one should be aware that it says relatively little about companies' profits and market development. What we can note is that in relation to base years, emissions have declined and sales increased.

1 Source: SCB. https://www.scb.se/hitta-statistik/statistik-efter-amne/nationalrakenskaper/nationalrakenskaper/nationalrakenskaper-kvartals-och-arsberakningar/pong/tabell-och-diagram/tabeller/bnp-kvartal/

Decoupling of the Haga Initiative



↑ The Haga initative's reduced emissions and increased turnover. The numbers presented in the figure are the average of each company's indexed emissions and turnover (for Folksam's share, premium income has been used instead of turnover). The indexation has been made so that companies with high emissions and high turnover should not have a higher influence over the numbers than those with lower emissions / turnover.

CARBON LAW

On March 23, 2017, Johan Rockström, at the Stockholm Resilience Centre, together with several international researchers published the article "A Roadmap for Rapid Decarbonization" in the journal Science, which translates the Paris Agreement into a roadmap for decreased emissions needed to keep global warming between 1.5 and 2 degrees. The authors call it Carbon Law.

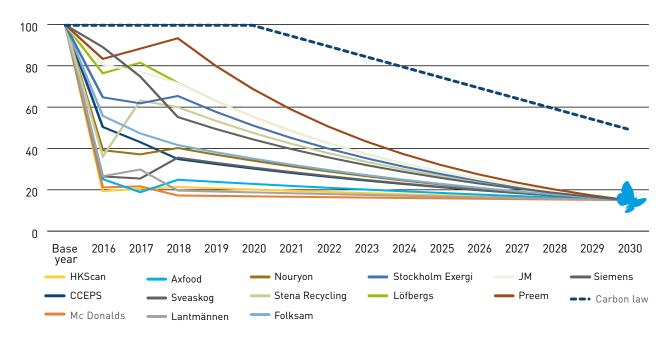
Carbon Law is a roadmap that follows a simple rule of thumb: halving emissions every decade.

The roadmap requires bending the global curve of CO_2 emissions by 2020 and reaching net-zero emissions by 2050. An important advantage of Carbon Law as a tool is that it can be applied in many contexts: for individuals, households, businesses, nations as well as for the world. Therefore, the Haga Initiative has chosen to report its emissions in relation to Carbon Law. With that, we hope to inspire other companies to do the same.

Carbon Law clearly demonstrate what is required of the companies. Halving emissions every decade requires a rate of reduction of approximately seven percent each year from 2020. For the companies in the Haga Initiative to reach the target, an annual average reduction rate of 10.5 percent was required in 2016. In 2017 the required reduction rate was 11 percent. From this year's level, an average reduction rate of 12 percent is required to reach the target by 2030.

CARBON LAW IN THE HAGA SCOPE

The Haga Initiative's target of 85 percent reduction to 2030 refer to scope 1. The graph below illustrates the trajectory if the corresponding decrease is made in the Haga scope. Scope 1 emissions account for 96 percent of the total emissions in the Haga scope, and for the average company, scope 1 corresponds to more than 70 percent of the emissions in the Haga scope.



↑ The Haga Initiative's target of 85 percent reduction to 2030 refer to scope 1. The graph below illustrates the trajectory if the corresponding decrease is made in the Haga scope. Scope 1 emissions account for 97 percent of the total emissions in the Haga scope, and for the average company, scope 1 corresponds to about 70 percent of the emissions in the Haga scope.

AXFOOD



Axfood

Climate targets

Axfood is set to be climate neutral in the group's own activities by 2020 and to reduce its own climate impact by 75 percent (base year 2009). Until 2018, the climate impact from own activities had decreased by 79 percent. Moreover, Axfood has further targets for reduced climate impact. For more information, please see www.axfood.se.

- In 2018, Axfood took a decision to halve food waste by 2025. Since the base year of 2015, food waste has decreased by approximately 15 percent, inter alia through new systems for optimized purchase and delivery, smart packaging and collaboration with charity organisations.
- Axfood refrains from using HVO-fuel in which palm oil has been used as feedstock, and is transitioning to a
 diversified fleet with several different types of trucks and fuels. During 2018, Axfood purchased five trucks
 fuelled by liquefied gas. A decision was furthermore made that no single type of vehicle will constitute more
 than half of the company's fleet by 2025.
- A continued modernisation to move away from climate impacting refrigerants in the stores.

Emissions (tonnes CO ₂ e)	Base year 2009	2017	2018	Share of total 2018	Change 2009-2018
Scope 1					
Business travel ¹	851	430	420	2 %	-51 %
Own transport	10 531	4 321	10 557	45 %	0 %
Refrigerants ²	15 212	6 429	6 429	27 %	-58 %
Scope 2					
Purchased energy ³	61 647	96 812	88 770	17 %	-93 %
Scope 3					
Business travel ⁴	770	658	773	3 %	0 %
TOTAL excl. reduction through energy	89 011	108 649	106 949		20 %
with Guarantee of Origin					
Reduction through purchase of rene-	0	-91 847	-84 754		-
wable electricity or district heating with					
Guarantee of Origin ⁵					
TOTAL Haga scope	89 011	16 802	22 195	94 %	-79 %
Production and distribution of energy and	14 008	2 706	1 391	6 %	-90 %
vehicle fuels ⁶					
TOTAL (excl. Carbon offset)	103 019	19 509	23 586	100 %	-77 %
Carbon offset ⁷	0	-623	-741		-
TOTAL (incl. Carbon offset)	103 019	18 886	22 845		-78 %

Key indicators	Base year 2009	2017	2018	Change 2009-2018	Unit
Emissions per revenue (MSEK) exlcluding carbon offset	3,182	0,424	0,422	-87 %	tonnes CO ₂ e/MSEK
Emissions per employee excluding carbon offset	15,1	1,970	1,984	-87 %	tonnes CO ₂ e/employee
Emissions per revenue (MSEK) including carbon offset	3,18	0,411	0,406	-87 %	tonnes CO ₂ e/MSEK
Emissions per employee including carbon offset	15,1	1,907	1,912	-87 %	tonnes CO ₂ e/employee
Emissions per tonne of transported goods	24,3	7,7	16,5	-32 %	kg CO ₂ /tonne goods
Energy use per sqm (total)	624	278	319	-49 %	kWh/m²

- As from 2014, company-owned cars are also included. 2014, the emissions amounted to 527 ton.
- Base year adjusted from 4147 ton, since a new monitoring system have been introduced. Intermediate years are not adjusted.
- 3. Emissions from production of purchased
- electricity, district heating or district cooling, assuming that all is unspecified (residual mix). Refers to energy use in retail stores and premises owned by Axfood. "Share of total 2018" and "Change 2009-2018" includes contracts for renewable energy with Guarantee of Origin.
- 4. Refers to business air travel, train and taxi
- journeys.
- Reduction of emissions for "Purchased energy" in scope 2.
- 6. Refers to fuels consumed in scope 1 and scope 2.
- 7. Refers to carbon offset of business air travel.

Axfood

Allocation of emissions 2009, 2014-2018



Analysis and comments

Axfood's emissions within the Haga scope have reduced by 75 percent since the base year of 2009. Compared to last year though, the emissions have increased by almost a third. This increase is mainly due to a doubled emission from own transportation in scope 1. The reason for this is that Axfood stopped using HVO biofuels containing palm oil.

The emissions from purchased energy in scope 2 has been reduced by 93 percent since base year. This is due to energy efficiency actions and to the fact that most of the company's electricity is purchased as origin-labelled. A reduction in company office space by 16 percent is the main reason that emissions in scope 2 were lower than in 2017.

Axfood carries out carbon offsetting to compensate for its air travel, equivalent to approximately three percent of its total emissions.

Energy saving actions like doors on refrigerants, LED-lamps and increased climate awareness in newly opened stores also had a positive effect on energy usage at Axfood. But the heat wave during the summer of 2018 required extra cooling in stores which led to an increase in energy intensity.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

In the daily consumer goods sector, the biggest climate footprint occurs in the early stage of the supply chain in the agriculture systems with the farmers, from rice fields to dairy farms. A company like Axfood sells thousands of different products produced on more than one farm. The complexity of the supply chain makes it impossible to calculate the climate impact of all the emissions that occur on all farms. However, you can still work actively with the climate impact from food. Focusing on reducing food waste, improving customer offering of vegetarian products, highlighting climate-smart alternative and sustainabilitycertified goods. Development of e-commerce means both opportunities and risks in terms of climate impact. Here, if you succeed in logistics, emissions from customer transport (scope 3) can decrease more than the company's emissions increase (scope 1). However, there is also a risk that emissions will increase more in scope 1 than they decrease in scope 3.

CCEPS





Climate target

Coca Cola European Partners Sverige (CCEPS) aims to reduce carbon emissions from beverages by a third and reduce absolute carbon dioxide emissions from its core activity by 50 percent (base year 2010). Carbon dioxide emissions from beverages have decreased by 25 percent and emissions from the core activity have decreased by 43 percent since 2010. In addition, the targets have been approved as "Science Based Targets".

- CCEPS continued to increase the share of renewable fuels in its own distribution as well as in subcontracted transportation. The firm's own distribution has during the year been transferred to subcontracted carriers.
- The energy use per litre of produced beverage has decreased by 20 percent since 2010, due to investment in energy efficient equipment as well as to behavioural change. All the energy used as input at the production facility in Jordbro comes from renewable sources.
- CCEPS collaborates with its suppliers of refrigerators and purchases relatively more energy efficient models of refrigerators. In this area, energy consumption has decreased by 45 percent since the base year, 2010.

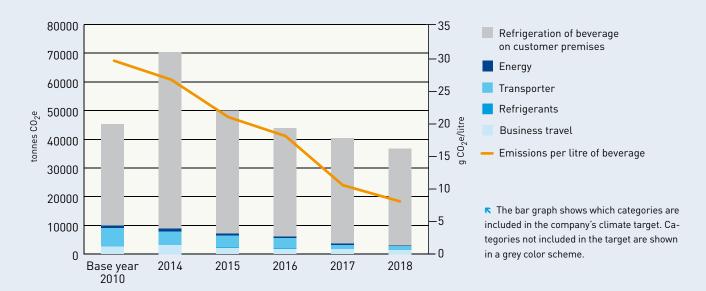
Emissions (tonnes CO ₂ e)	Base year 2010	2017	2018	Share of total 2018	Change 2010-2018
Scope 1					<u> </u>
Business travel ¹	1 852	463	510	17 %	-72 %
Refrigerants	41	76	86	3 %	112 %
Own transports	1 300	63	11	0 %	-99 %
Scope 2					
Purchased energy ²	4 840	7 175	6 683	2 %	-91 %
Scope 3					
Business travel ³	262	897	827	27 %	215 %
TOTAL excl. reduction through	8 296	8 674	8 117		-2 %
energy with Guarantee of Origin					
Reduction through purchase of renewable	-4 298	-6 949	-6 634		54 %
electricity or district heating					
with Guarantee of Origin ⁴					
TOTAL Haga scope	3 998	1 725	1 483	48 %	-63 %
Purchased goods transport ⁵	4 620	1 171	979	32 %	-79 %
Production and distribution of	1 285	775	598	20 %	-53 %
energy and vehicle fuels ⁶					
- whereof vehicle fuels for business travel	459	340	275	9 %	-40 %
- whereof vehicle fuels for own transport	470	150	52	2 %	-89 %
- whereof vehicle fuels for energy production	356	285	271	9 %	-24 %
TOTAL Climate target	9 903	3 671	3 060	100 %	-69 %
Refrigeration of beverages	35 357	36 777	33 755		-5 %
on customer premises ⁷					
TOTAL (excl. Carbon offset)	45 259	40 448	36 815		-19 %

Key indicators	Base year 2010	2017	2018	Change 2010-2018	Unit
Emissions per revenue ⁸	3,374	0,995	0,779	-77 %	tonne CO ₂ e/MSEK
Emissions per litre of beverage ⁸	29,737	10,601	8,103	-73 %	g CO ₂ e/litre
Emissions per revenue ⁹	15,421	10,961	9,377	-39 %	tonne CO ₂ e/MSEK
Emissions per litre of beverage ⁹	135,914	116,806	97,483	-28 %	g CO ₂ e/litre

- 1. Leasing- and rental cars.
- Emissions from production of purchased electricity, district heating or district cooling, assuming that all is unspecified (residual mix). In "Share of total 2018" and "Change 2010-2018" is Guarantee of Origin included.
- 3. Refers to business air travel, train and taxi
- journeys.
- Reduction of emissions for "Purchased energy" in scope 2.
- Refers to goods transport purchased from external forwarding agent.
- 6. Refers to fuels consumed in scope 1 and scope 2.
- 7. The electricity consumption by refrigerators is
- calculated by using conservative estimates (all electricity is assumed to be residual mix).
- 8. Operations within the company. Does not include refrigerators at customers. The key indicator refers to emissions within CCEPS climate goal
- Operations within the company as well as leakage of refrigerants at customers



Allocation of emissions 2010, 2014-2018



Analysis and comments

Last year CCEPS changed base year from 2007 to 2010. This is the same base year as the group globally. Compared to the new base year CCEPS decreased its emissions in the Haga scope by 63 percent, that is an extra 14 percent reduction compared to last year.

In previous years, own transportation has been a significant cause of emissions in scope 1, but a shift towards biofuel and an increase in purchased transportation has now reduced these emissions by 99 percent compared to the base year.

Emissions from purchased transportation has decreased by 79 percent since 2010, due to higher usage of renewable diesel and because of adjustment in transportation logistics. Part of the transportation is now performed by the clients of CCEPS. Emissions from client transportation is not accounted for in this disclosure.

In the extended greenhouse gas emission disclosure, CCEPS also chose to include emissions caused by fridges in stores, such as electricity consumption and leakage from cold media in these fridges. These emissions account for 92 percent of the company's estimated emissions of 2018, and they have decreased by 5 percent compared to the base year.

The company has increased its production since the base year while reducing its emissions, thus the emissions in relation to production and turnover have decreased. Key performance indicators for emissions in own operations per produced liter of beverage have decreased by 77 percent and emissions relative to turnover have decreased by 73 percent since 2010.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

The most significant emissions in CCEPS scope 3 occurs in the production of the beverage's ingredients and its packaging, which are not included in CCEPS Sweden's disclosure for the Haga Initiative. However, the company has the possibility to influence these emissions and works centrally on an overall sustainability strategy. The sustainability strategy encompasses targets for reducing emissions in scope 3, examples of actions include increased share of recycled materials in packaging and sustainable production of ingredients and raw materials.

FOLKSAM





Climate targets

Folksam has a target of net-zero emissions from its own activity by 2030.

- During the course of the year, Folksam has introduced new travel directives. Emissions stemming from travel by air and rail decreased by 17 percent, probably due to the revised travel guidelines.
- All electricity consumed at the headquarters, in the facilities where electricity is not included in the lease, as well as all electricity purchased to premises owned by Folksam carry the label "Bra Miljöval"
- All the governing boards of the Folksam corporations adopted a revised sustainability policy, in which climate is a priority target area.

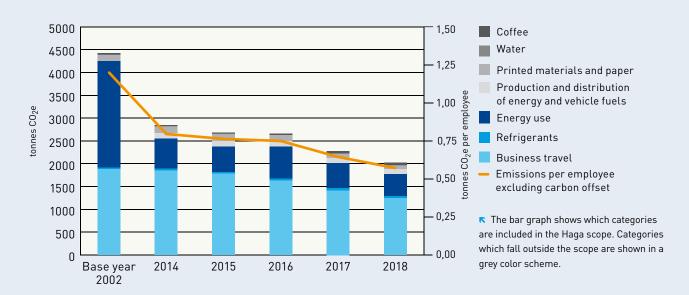
Emissions (tonnes CO ₂ e)	Base year 2002	2017	2018	Share of total 2018	Change 2002-2018
Scope 1					
Business travel ¹	773	484	487	24 %	-37 %
Own transports	-	-	-		
Refrigerants ²	43	55	46	2 %	7 %
Scope 2					
Energy ³	2 324	3 209	2 989	24 %	29 %
Scope 3					
Business travel ⁴	1 105	929	755	37 %	-32 %
TOTAL excl. reduction through energy with	4 245	4 677	4 277		
Guarantee of Origin					
Reduction through purchase of renewable electricity or district heating with Guarantee of Origin	0	-2 665	-2 506		
TOTAL Haga scope	4 245	2 012	1 771	88 %	-58 %
Production and distribution of energy and vehicle fuels ^{5, 6}	0	115	115	6 %	
Printed materials and paper	141	95	75	4 %	-47 %
Water	2	3	3	0 %	50 %
Coffee ⁷	43	48	58	3 %	35 %
TOTAL (excl. Carbon offset)	4 431	2 273	2 022	100 %	-54 %
Carbon offfset ⁸	0	-2 248	-2 022	-100 %	
TOTAL (incl. Carbon offset)	4 431	25	0	0 %	

Key indicators	Base year 2002	2017	2018	Change 2002-2018	Unit
Emissions per employee excluding carbon offset	1,20	0,645	0,572	-52 %	tonnes CO ₂ e/employee
Emissions per employee including carbon offset	1,20	0,000	0,000	-100 %	tonnes CO ₂ e/employee

- 1. Leasing- and employee cars.
- 2. Relates only to head quarter. Leakage for 2018 has been calculated as the average between 2014 and 2018.
- 3. Measured value for the head quarter, estimated values for other offices. "Share of total 2018" includes contracts for renewable energy with Guarantee of Origin.
- 4. Flight, taxi and train travels.
- $5. \ {\tt Only \ upstream \ emissions \ from \ wind \ power.}$
- 6. A change of method was made during 2017, which implies an adjusted allocation between the emissions in scope 2 and scope 3 for purchased renewable electricity. Historical emissions have been adjusted to reflect the change of method.
- 7. During 2018 the emission factor for coffee changed, which is the cause for increased emissions from this category. The historical emissions have been adjusted to reflect the change in method. This change also implicate that the total emissions (excluding and excluding Carbon offset) have changed.
- 8. Carbon offset for 2017 represents the calculated total emissions for 2017 years disclosure. Due to changes in the calculation method for coffee, emissions of 25 tonnes of CO₂e remains after Carbon offset.

Folksam

Allocation of emissions 2002, 2014-2018



Analysis and comments

Folksam's emissions within the Haga scope have decreased by 12 percent between 2017 and 2018, and by 58 percent since the base year 2002. The total climate footprint has dropped by 11 percent since last year and by 54 percent between 2002 and 2018.

The main source of Folksam's emissions is business travel (61 percent), which include leasing cars, the employee's car journeys as well as air and rail travel. Efforts to decrease air travel in 2018 had an impact, causing emissions from air travel to drop by 12 percent since 2017.

Purchased energy (scope 2) represent 24 percent of the total emissions. All electricity purchased to Tullgården, the sales and field offices as well as Förenade Liv is origin-labelled with a Bra Miljöval-label. Total energy consumption decreased by almost seven percent between 2014 and 2018. Since 2014, electricity consumption has decreased by nearly six percent and heat consumption has decreased by about nine percent over the same period.

Folksam offset its carbon footprint, thus achieving net-zero carbon emissions. In 2018 Folksam adjusted the method for calculating emissions from coffee consumption, which increased these emissions slightly. The offset of carbon footprint made in 2017 was based on the 2017 greenhouse gas emission disclosure. That explains the remaining 25 tonnes of CO_2 in the chart.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Emissions from the businesses that Folksam invests in is the company's most significant emission in scope 3. These emissions are not included in the report to the Haga Initiative. Folksam is a large institutional owner and an active asset manager who influence companies in which they have equity shares through ethical investment criteria and corporate governance. In 2018, Folksam achieved its goal of having invested 25 billion in green treasury bonds, and in addition, the company focused on real estate energy efficiency.

HKSCAN





Climate targets

HKScan Sweden has a target to reduce climate emissions by as much as 95 percent by 2030, compared with the base year 2003. The target is set in absolute terms and includes emissions in scope 1, scope 2 as well as business travel, purchased site transport as well as production and distribution of energy and vehicle fuel in scope 3. The target moreover commits HKScan to produce bases and formulate strategies for action to reduce emissions from the primary meat production in scope 3.

- New resealable, materials efficient packaging for Mamma Scan Meatballs, which saves 30 tonnes of plastic per year. Moreover, in order to be able to recycle all plastics, black plastic packaging is to be replaced during 2019.
- Systematic efforts and improved waste management have reduced the amount of incinerable waste by 23
 percent since 2016.
- Launch of a major investment in the slaughter line in Kristianstad, estimated to halve the consumption of liquid gas and to reduce water consumption by approximately 85 000 m³ on an annual basis.

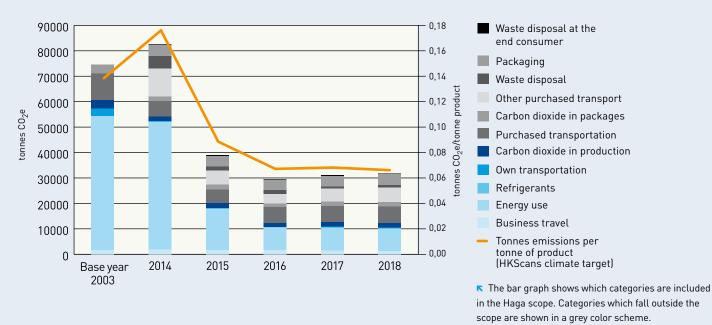
Emissions (tonnes CO,e)	Base year 2003	2017	2018	Share of total 2018	Change 2003-2018
Scope 1					<u> </u>
Business travel ¹	1 596	929	835	3 %	-48 %
Heating	22 334	6 425	6 412	20 %	-71 %
Refrigerants	0	390	370	1 %	-
Own transports ²	2 965	128	115	0 %	-96 %
CO ₂ in production ³	3 347	1 765	1 799	6 %	-46 %
Scope 2					
Purchased energy ⁴	24 619	26 170	24 546	4 %	-95 %
Scope 3					
Business travel ⁵	0	384	320	1 %	-
TOTAL excluding reduction through energy with Guarantee of Origin	54 861	36 191	34 397		-37 %
Reduction through purchase of renewable electricity or district heating with Guarantee of Origin ⁶	0	-24 943	-23 228		-
TOTAL Haga scope	54 861	11 248	11 169	35 %	-80 %
Production and distribution of energy and vehicle fuels 7	5 747	1 367	1 105	3 %	-81 %
- whereof fuels for business travel	110	183	171	1 %	56 %
- whereof fuels for own transport	0	36	25	0 %	-
- whereof fuels for purchased energy	5 637	1 148	909	3 %	-84 %
Purchased transports ⁸	10 516	6 375	6 380	20 %	-39 %
TOTAL HKScan's climate target	71 123	18 990	18 654	59 %	-74 %
CO ₂ in packaging ³	3 347	1 765	1 799	6 %	-46 %
Other purchased transports ⁸	0	5 006	5 779	18 %	-
Waste disposal ⁹	0	970	834	3 %	-
Packaging ¹⁰	0	4 074	4 334	14 %	-
End consumer's disposal of packaging waste ¹¹	0	197	201	1 %	-
TOTAL (excl. Carbon offset)	74 470	31 002	31 599	100 %	-58 %

Key indicators	Base year 2003	2017	2018	Change 2003-2018	Unit
Emissions per ton produced product (HKScan's climate	0,139	0,069	0,067	-52 %	tonnes CO ₂ e/ton product
target)					

- 1. Refers only to cars.
- 2 Refers to transports within the facilities.
- 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).
- Emissions from production of purchased electricity, district heating or district cooling, assuming that all is unspecified (residual mix). In
- "Share of total 2018" and "Change 2003-2018" is Guarantee of Origin included.
- Refers to business air travel, rail travel and hotels.
 Category 6 in scope 3.
- Reduction of emissions for "Purchased energy" in scope 2.
- Refers to fuels consumed in scope 1 and scope 2.
 Also includes purchased electricity for processes outside HKScan's operations.
- 8. Refers to transfer of animals between farms and
- refrigerated transports.
- Refers to waste disposal (to landfill, materials recycling and production of biogas). Calculated from 2012 onwards.
- 10. Emissions from the production of packaging materials. Calculated from 2012 onwards.
- Refers to emissions caused by waste disposal by the consumer. Calculated from 2012 onwards.

HKSCIN

Allocation of emissions 2003, 2014-2018



Analysis and comments

HKScan's emissions within the Haga scope have been reduced by 80 percent since the base year of 2003 and by 1 percent since last year, despite an emission increase by 7 percent in scope 2. The emission increase in scope 2 is mainly due to a vast increase of the emission factor for steam produced in Linköping. In addition to this, some of the total emissions have been transferred from scope 3, production and distribution of fuel, to scope 2. This is due to HKScans choice to switch from pure hydroelectric power to a mix of this and bio-based electricity. This change increased $\rm CO_2e$ emissions in scope 2 by 100 tonnes from 2017 to 2018, but at the same time decreased the emissions in scope 3 by 200 tonnes. Since the base year, emissions in scope 2 have dropped by 95 percent, mainly due to the company's use of origin-labelled, renewable energy.

HKScans own climate targets, including production and distribution of fuel and animal transports, is in line with the previous year. Since base year, the carbon footprint within the climate target of HKScan, have decreased by 74 percent. This reduction has mainly been achieved by HKScan buying origin-labelled hydroelectricity for all its electricity needs from 2015, and from increasing the use of renewable fuels in production.

Emissions outside the climate target of HKScan has increased by 8 percent since last year. This increase is due to an increase in purchased transports. At HKScan transports account for 39 percent of the company's total climate impact. These emissions increased marginally since last year, mainly because of increased production.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Emissions from primary production of meat represent the most significant source of emission in HKScan scope 3. Rearing cattle, in particular, causes significant emissions of greenhouse gases, especially methane. However grazing cattle is required to preserve biodiversity and carbon retention the farmlands, and to maintain the open agricultural landscapes. The tradition of keeping cattle provides valuable ecosystem services and is a part of nature's circle. HKScan work together with their suppliers to reduce greenhouse gas emissions. An example of this is that parts of the soya used in animal feed is replaced with local protein feed, such as field beans, rapeseed and by-products from the food industry, and all soya used in feed is RTRS or Pro Terra certified.

JM





Climate target s

JM has a target to reduce emissions with a climate impact to close to zero by 2030. The objective is divided into sub-targets which cover own emissions from transport of personnel and energy use (at least 85 percent below the base year of 2010), as well as indirect emissions from machinery, goods transports, construction material, the energy performance of buildings, and the climate footprint of residents. Energy use in development properties is not included in the target. This is because energy measures are implemented as soon as there is an opportunity to develop the property. Regarding emissions occurring during the stage of production of building materials and the running of the buildings, the vision of close to zero applies to the part of the climate impact that JM is able to influence.

- During the year, priority has been given to mark all new housing with the eco-label "Svanen". The labelling implies that JM from 2018 onwards builds housing with even lower environmental- and climate impacts, for example by requiring lower levels of energy use than stipulated by current applicable rules. During 2018, the calculated energy need in new housing was down to 56 kWh/m², A_{temp} (excluding household- and operational electricity).
- JM has also taken part in the Fossil Free Sweden Initiative's development of roadmaps for the concrete industry as well as the construction industry, which were presented to the government in April 2018. During the course of the year, the dialogue with suppliers continued in order to reduce the climate impact of concrete.
- A waste minimization project, intended to reduce climate impact from material use, is continuing in 2019.

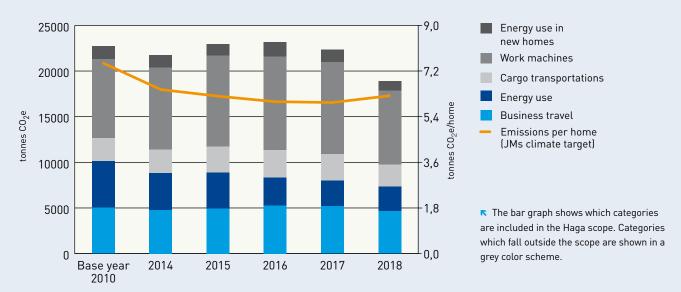
Emissions (tonnes CO,e)	Base year 2010	2017	2018	Share of total 2018	Change 2010-2018
Scope 1					
Business travel ¹	3 970	3 849	3 416	18 %	-14 %
Heating	1 785	926	825	4 %	-54 %
Scope 2					
Purchased energy ²	9 608	12 291	10 616	8 %	-42 %
Scope 3					
Business travel ³	357	494	493	3 %	38 %
TOTAL excl. reduction through energy with	15 720	17 559	15 350	81 %	-2 %
Guarantee of Origin					
Reduction through purchase of renewable electri-	-7065	-10 864	-9 134		
city or district heating with Guarantee of Origin ⁴					
TOTAL Haga scope	8 656	6 696	6 216	33 %	-28 %
Purchased transport	2 487	2 902	2 366	13 %	-5 %
Leased machinery	8 663	10 026	8 105	43 %	-6 %
Production and distribution of energy	1 485	1 335	1 160	6 %	-22 %
and vehicle fuels ⁵					
- whereof fuels for business travel	692	848	733	4 %	6 %
- whereof fuels for production of energy	793	487	427	2 %	-46 %
Energy use in new homes (first 2 years of use)	1 437	1 382	1 037	5 %	-28 %
TOTAL (excl. Carbon offset)	22 728	22 341	18 883	100 %	-17 %
Carbon offset ⁶	-359	-409	-458		28 %
TOTAL (incl. Carbon offset)	22 369	21 931	18 425	98 %	-18 %

Key indicators	Base year 2010	2017	2018	Change 2010-2018	Unit
Emissions per home ⁷	7,5	6,0	6,2	-17 %	tonnes CO ₂ e/home

- Car journeys in vehicles controlled by JM.
- 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 (residu-
- al mix). In "Share of total" is Guarantee of Origin included.
- Refers to air, taxi, bus and train travel and hotels.
 Reduction of emissions for "Purchased energy" in Scope
- . Refers to fuels consumed in scope 1 and scope 2. These correspond to upstream emissions from
- the fuel (production of the fuel) and energy use in newly built properties in their first two years
- 6. JM applies carbon offset for air travels.
- Excluding energy use in new homes the first two years.



Allocation of emissions 2010, 2014-2018



Analysis and comments

Emissions within the Haga scope have reduced by 28 percent since 2010. The Haga scope accounts for a third of all emissions. JM has increased the purchase of origin marked electricity and heating which have decreased the emissions. Without this activity, the emissions would still be in line with base year. Emissions per home produced have increased since 2017, but decreased compared to base year by 17 percent.

Both emissions from business travel and heating within scope 1 have reduced since 2010, however emissions from business travel in scope 3, mostly air travel, have increased since base year. increased one percent since 2016. Emissions from purchased energy are almost consistent with last year, however compared to base year they have dropped by 42 percent.

In addition to the business travel included in the Haga scope, JM also includes other emissions in scope 3. Among these, emissions from outsourced transportation and machinery has dropped by 18 and 19 percent respectively, compared to last year. JM's greatest climate impact is from leased machinery, therefor this decrease in scope 3 is of great importance.

Production and distribution of fuels have decreased by 22 since base year. 12 percent of this decrease happened this past year.

JM disclose emissions from energy consumption in new properties during the first two years. These emissions have dropped by 25 percent since base year 2010. JM has chosen to carbon-offset emissions from air travel.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Emissions from the manufacture of building materials are not included in JM's disclosure and account for a major part of scope 3 emissions. JM has some possibility to influence this and as a major material user JM identifies the product types in production that have a major climate impact and are continuously working towards climateefficient solutions. JM operates several initiatives internally to reduce climate impact from materials by streamlining material use, reducing the build-up of building waste and creating more circular material flows. Tests are being conducted to see if the use of carbon dioxide-reduced concrete can be used in the housing production. Houses are continuously evolving towards better energy performance - reducing energy demand and climate impact during the building operation and maintenance.

LANTMÄNNEN





Climate targets

- A reduction of emissions from production by 40 percent relative to revenue by 2020, from 2015 levels
- By 2020, enhance energy efficiency by 3 percent per year in relation to production volumes.
- Reduce emissions from purchased transports with 70 percent by 2030, per own value added, with 2009 as base year.

- Continued efforts towards enhanced energy efficiency and phasing out of fossil fuels. An additional four plants have been converted during the year and all natural gas in the Swedish plants has been replaced by biogas.
- Efforts towards developing the climate data of feed material and to consider these while optimizing feed have been fruitful. Lantmännen's feed line for cattle have demonstrated a reduced climate impact by up to 30 percent compared to previous lines, with the same pricing and feed effectiveness.

Emissions (tonnes CO ₂ e)	Base year 2009	2017	2018	Share of total 2018	Change 2009-2018
Scope 1					
Business travel	4 508	4 020	3 755	4 %	-17 %
Heating	53 637	19 724	6 850	6 %	-87 %
Scope 2					
Inköpt energi ¹	100 138	162 062	151 454	17 %	-82 %
Scope 3					
Purchased energy ²	2 893	3 179	2 878	3 %	-1 %
TOTAL excl. reduction through energy with Guaran-	161 177	188 986	164 937		
tee of Origin					
Reduction through purchase of renewable electricity	0	-140 791	-133 223		
or district heating with Guarantee of Origin ³					
TOTAL Haga scope	161 177	48 195	31 714	30 %	-80 %
Purchased goods transport ⁴	79 867	96 125	65 472	62 %	-18 %
Production and distribution of energy and vehicle	32 993	11 715	9 137	9 %	-72 %
fuels ⁵					
- whereof fuels for business travel	953	850	867	1 %	-9 %
- whereof fuels for production of energy	32 040	10 865	8 270	8 %	-74 %
TOTAL (excl. Carbon offset)	274 037	156 035	106 323	100 %	-61 %

Key indicators	Base year 2009	2017	2018	Change 2009-2018	Unit
Emissions per unit of revenue	14,2	8,5	5,4	-62 %	tonnes CO ₂ e/MSEK

^{1.} Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). The emission factor for residual mix increased by around 150 percent between 2009 and 2014.

^{2.} Refers to business air travel and rail journeys.

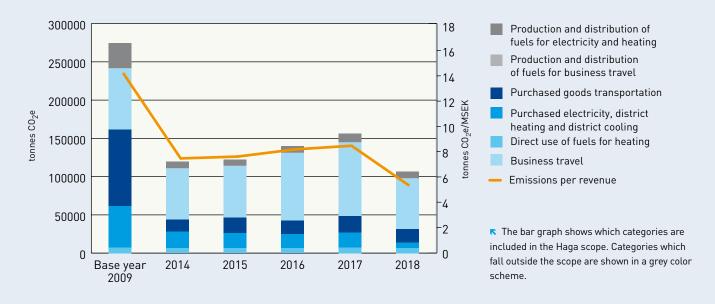
^{3.} Reduction of emissions for "Purchased energy" in scope 2.

^{4.} Refers to goods transportation provided by external contractors.

^{5.} Refers to fuels consumed in scope 1 and scope 2.



Allocation of emissions 2009, 2014-2018



Analysis and comments

Lantmännen's total climate impact has reduced by 61 percent compared to base year 2009. The last few years have meant an increase in emissions, but this year Lantmännen disclose record low emission compared to base year. Emissions have dropped by 32 percent compared to 2017. The decrease is mainly due to an increased use of biofuels for purchased transportation and to switching from fossil gas to biogas in owned energy production. Another reason is a 75 percent decrease in use of oil for heating and drying crop. This is due to the 2017 heat wave which resulted in far less crop than usual.

In the Haga Scope, emissions in 2018 have decreased by 80 percent compared to base year 2009. Lantmännens chosen benchmark indicator, emissions per turnover, dropped by 62 percent since base year and by 37 percent since 2017. This is due to decreased emissions and increased turnover.

Lantmännen's largest reported climate impact of 2018 is in scope 3. Emissions for purchased freight transport account for 62 percent of total emissions. These emissions dropped by 32 percent since last year, thus contributing to a substantial overall decrease in climate impact. Since 2018 the freight transport emissions are calculated on tonnes per kilometer, instead of cost. This decrease is mainly due to increase us of biodiesel for trucks, now accounting for 60 percent of the diesel fuel mix.

Emissions from purchased energy in scope 2 dropped by 14 percent since last year, and by 82 percent since base year. Mainly due to origin labelling of almost all purchased energy.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Lantmännen's reported scope 3 emissions include the purchased freight transports, business travel and production of purchased energy and fuels. In 2018 the purchased freight transports represented a significant part of the reported emissions. Emissions from growing grain and other ingredients are not included in Lantmännen's disclosure, it is however an important focus area in Lantmännen's sustainability work. For example, with development of new cultivation concepts with lower climate impact and R&D work for increased sustainability throughout the value chain from field to fork.

LÖFBERGS





Climate targets

Löfbergs' climate target is to reduce greenhouse its own carbon dioxide emissions by 40 percent between 2005 and 2020. The target is related to the volume of coffee produced and covers emissions and energy use in own production and business travel. An important part of the climate target is that production is to be fossil free by 2020. Moreover, by 2030, Löfbergs' packaging will consist exclusively of renewable or recycled material.

- Begins to use more climate efficient packaging. Parts of the fossil-based plastics are being replaced by a plant-based alternative. This reduces the climate impact of the packaging by more than 30 percent.
- Produces a new car-policy which paves the way for plug-in hybrid electric vehicles. By 2020, all new company cars are to be rechargeable or fuelled by biogas.
- Increases the blend of renewable propane at roasting to 30 percent, which contributes to a reduction of the climate impact.

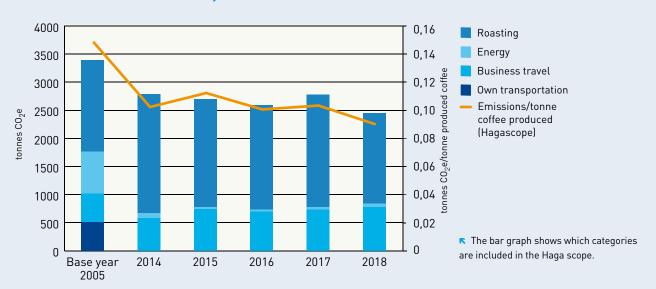
Emissions (tonnes CO ₂ e) ¹	Base year 2005	2017	2018	Share of total 2018	Change 2005-2018
Scope 1					, i
Roasting	1 623	2 000	1 613	1 %	-1 %
Energy	295	0	0	0 %	-100 %
Business travel ²	265	260	263	0 %	-1 %
Own transports	511	0	0	0 %	-100 %
Scope 2					
Purchased energy	459	1 906	1 808	0 %	-88 %
Scope 3					
Business travel ³	236	470	515	0 %	118 %
TOTAL excl. reduction through energy with Guarantee	3 390	4 636	4 199	3 %	24 %
of Origin					
Reduction through purchase of renewable electricity or	0	-1 856	-1 751		-
district heating with Guarantee of Origin ⁴					
Reduction through purchase of biojet fuel through Fly	0	-11	-9		
Green Fund⁵					
TOTAL Haga scope	3 390	2 769	2 439	2 %	-28 %
Production and distribution of energy and vehicle fuels ⁶	375	371	386	0 %	3 %
Purchased transports ⁷	6 825	9 515	10 077	7 %	48 %
Packaging ⁸	2 836	2 946	2 803	2 %	-1 %
Coffee cultivation ⁹	122 873	125 454	126 983	89 %	3 %
TOTAL (excl. Carbon offset)	136 299	141 055	142 689	100 %	5 %
Air travel ¹⁰	0	0	0		
"Sustainable business" - carbon offset coffee ¹¹	0	-895	-968		
TOTAL (incl. Carbon offset)	136 299	140 160	141 721	99 %	4 %

Key indicators	Base year 2005	2017	2018	Change 2005-2018	Unit
Emissions per tonne coffe produced (Haga scope)	0,149	0,104	0,091	-39%	tonnes CO ₂ e/tonne coffe produced
Emissions per tonne coffe produced (total)	5,994	5,267	5,277	-12%	tonnes CO ₂ e/tonne coffe produced
Emissions per tonne purchased raw coffe (Haga	0,130	0,087	0,075	-42%	tonnes CO2e/tonne purchased raw
scope)					coffee
Emissions per tonne purchased raw coffe (total)	5,211	4,424	4,363	-16%	tonnes CO2e/tonne purchased raw
					coffee

- Löfbergs' disclosure covers its Swedish operations as well as its production site in Viborg, Denmark.
 The disclosure of Viborg all parts except for business travel are included in the reporting.
- Refers to leased vehicles and employee's vehicles in service.
- 3. Refers to air, rail and taxi travel and hotels.
- Reduction of emissions for "Purchased energy" in Scope 2.
- 5. Reduced emissions from air travel through Fly
- Green Fund, which implies a higher share of biojet fuel. During 2016 and 2017, 100 percent of the funding paid for biojet fuel. 2018, 75 percent was allocated to biojet fuel and the remainging 25 percent funded research develoment.
- 6. Refers to fuels consumed in scope 1 and scope 2.
- Refers to transportation of green coffee beans from grower to factory, transportation of packaging materials and distribution. The calculation method for transportation of packaging has changed.
- Extraction of raw material and production of packaging. The increased emissions in 2013 and 2014 are mainly due to the change in calculation method with effect from 2012 and the inclusion of the plant in Viborg.
- 9. Coffee cultivation, including associated processes.
- 10. All carbon offset is carried out through CDM Gold standard projects 2013-2016.
- All carbon offset is carried out through CDM Gold standard projects 2013-2017.



Allocation of emissions 2005, 2014-2018



Analysis and comments

Löfbergs' include the climate impact of the coffee cultivation that it purchases, not adjusted for the carbon sinks provided by the coffee plantations and their shade plants, hence they are reporting on the most significant emissions in the value chain. Within the Haga scope, the roasting of coffee represents the largest source of emissions; accounting for 1.1 percent. From 2017, Löfbergs purchase a BioMix where the bio propane part increased to 30 percent in 2018. This change reduced $\mathrm{CO}_2\mathrm{e}$ emissions by 379 tonnes in 2018. Combined with the transition from natural gas to biogas in the Viborg coffee roasting facility, the decrease sums up to 435 tonnes – a 19 percent reduction of $\mathrm{CO}_2\mathrm{e}$ emissions compared to if only fossil fuels had been used in the roasting process.

The impact on the climate of coffee cultivation is largely unchanged compared to the base year of 2005, even though production has risen by 18 percent. The reason is that a large proportion of the coffee is certified with lower emissions during cultivation. In relative terms, emissions per tonne produced coffee have dropped by twelve percent since 2005, and per tonne purchased raw coffee by 16 percent. Emissions from electricity and heating have reduced substantially, partly thanks to the use of district heating rather than oil-fired systems, and partly to the fact that electricity consumption in Sweden and Denmark is purchased as origin-labelled wind power.

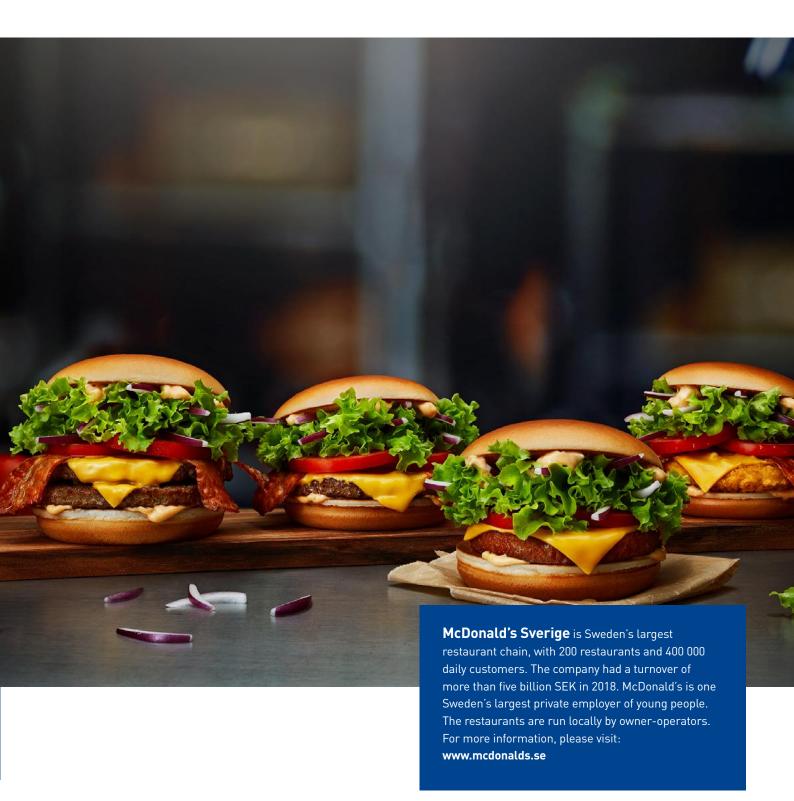
For own and purchased transports, the emissions have increased since base year by about 37 percent. This is mainly due to the increase in production but also due to increased emissions from shipments of packaging and manufactured products. During the base year 2005, Löfbergs still had its own distribution, while all transports are now purchased.

Emissions from business travel have risen 60 percent since 2005 due to increased air travel. In 2016, they began to support Fly Green Fund (instead of carbon offsetting), where 75 percent of the effort goes to the purchase of biofuel and 25 percent to research development.

MOST SIGNIFICANT EMIS-SIONS IN SCOPE 3

Coffee cultivation is the main cause of emissions in scope 3. Löfbergs does not have its own plantations, but nonetheless is working in various ways to reduce the climate impact of the plantations. For example, through various development projects. In Coffee & Climate, 80 000 small-scale coffee cultivators have been given education and the tools to meet climate change. Löfberg also work on increasing demand and access to coffee from certified farms. The proportion of certified coffee keep increasing. Today all of Löfbergs' coffee has at least one type of certification.

McDONALD'S





Climate targets

McDonald's Sverige has a target of a 40 percent reduction in carbon dioxide emissions by 2020 relative to the number of customers, from the base year of 2010. The Haga Initiative's 2020-target was fulfilled in 2016. In addition, there is a target to reach 95 percent renewable fuel for deliveries of input to the restaurants by 2020. In line with other member companies in the Haga Initiative, McDonald's has adopted a target of fossil free operations by 2030, and that McDonald's operations have emissions close to zero by 2030.

- McDonald's has increased the number of quick chargers for plug-in electric vehicles near its restaurants, and in 2018 enough electricity was transmitted to drive more than 1 365 000 kilometres, an increase of 59 percent compared to 2017.
- During the year, the offer of vegetarian options was developed so that Mc Donald's customers now can chose the source of protein in campaign-burgers. McDonald's ambition is that 50 per cent of purchased protein is to be vegetarian, chicken or fish by 2020. In 2018, that share was 42 percent.
- McDonald's has begun the work to phase out packaging made of plastic. During 2018 a new McFlurry-cup without a plastic lid was launched, and milkshakes are now served in paper cups rather than plastic.

Emissions (tonnes CO ₂ e)	Base year 2010	2017	2018	Share of total 2018	Change 2010-2018
Scope 1					
Business travel ¹	251	132	122	1 %	-51 %
Refrigerants	861	785	424	5 %	-51 %
Scope 2					
Purchased energy ²	33 834	35 120	32 231	8 %	-91 %
Scope 3					
Business travel ³	427	292	325	4 %	-24 %
TOTAL excl. reduction through energy	35 373	36 330	33 102		
with Guarantee of Origin					
Reduction through purchase of renewable electri-	-26 695	-34 444	-31 554		
city or district heating with Guarantee of Origin ⁴					
SUMMA hagascope	8 678	1 885	1 548	19 %	-82 %
Waste disposal	6 078	5 304	5 758	70 %	-5 %
Production and distribution of energy	3 061	952	886	11 %	-71 %
and vehicle fuels ⁵					
- of which fuels for business travel	23	12	11		-51 %
- of which fuels for energy prodcution	3 038	940	874		-71 %
TOTAL McDonald's Sverige's climate target	17 817	8 141	8 191	100%	-54%
Logistics ⁶	3 144	1 226	1 105		-65 %

Key indicators	Base year 2010	2017	2018	Change 2010-2018	Unit
Emissions per customer visit (climate target)	215,4	117,1	119,3	-45 %	g CO ₂ e/customer
Emissions per month of operation (climate target)	6,5	3,3	3,4	-47 %	tonnes CO ₂ e/month
Energy use per customer visit	1,6	1,6	1,6	-5 %	kWh/customer

 $^{1. \ {\}sf Refers\ only\ to\ company\ cars}.$

^{2.} Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total 2018" includes contracts for renewable energy with Guarantee of Origin.

^{3.} Refers to business air travel, train and taxi journeys.

^{4.} Reduction of emissions for "Purchased energy" in scope 2.

^{5.} Refers to fuels consumed in scope 1 and scope 2.

^{6.} From 2015, the consumption of diesel from the sub-suppliers of the distribution supplier HAVI is included.



Allocation of emissions 2010, 2014-2018



Analysis and comments

McDonald's Sweden has reduced its emissions in the Haga scope by 82 percent since the base year 2010. The Haga scope includes about 19 percent of the total calculated emissions. The largest sources of emissions come from waste management, accounting for about 70 percent this year.

The company has also set its own climate target where waste management and production and distribution of energy and vehicle fuels are included. Within its emission target, the company has more than halved (54 percent) its emissions compared to the base year (2010) but remain the same as last year. Emissions per customer visit, however, has increased by about two percent since last year, but decreased by 45 percent since the base year.

Emissions from business travel and waste management increased by five and nine percent respectively in 2018 compared with last year. However, compared with base years, they have decreased by 35 and five percent, respectively.

Since 2017 the company no longer purchases any unspecified electricity, but all purchased electricity is labelled with Good Environmental Choice (Bra Miljöval) or origin-labelled renewable electricity. This has, together with about two percent lower energy consumption, contributed to the reduction of purchased electricity and district heating (scope 2) by 91 percent since the base year. The emissions from refrigerants have decreased 46 percent compared to 2017 and by 51 percent compared to base year, thanks to the ongoing work to replace refrigeration and freezer systems with less harmful refrigerants.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

McDonald's most significant emission in scope 3 is purchased agricultural products. McDonald's was one of the initiators of the Global Round Table of Sustainable Beef, an organization that promotes sustainability in beef production around the world. In Sweden, McDonald's restaurant industry is the largest purchaser of Swedish beef and has cooperated with LRF for many years to increase the Swedish self-sufficiency of beef, currently about 45 percent. McDonald's Sweden is also working to constantly develop its menu with different protein options. Today more than 40 percent are chicken, vegetarian and fish protein. As the first restaurant company in the world McDonald's global has set climate targets by 2030 that has been approved by the Science Based Targets initiative (SBTi), which includes reductions of emissions in the supply chain.

NOURYON





The activities of Nouryon have been covered by climate targets since 2012, through the targets set by the group AkzoNobel to reduce emissions along the full value chain by 25 percent per tonne sold product by 2020. As a newly founded company, the firm is now developing its sustainability strategy and targets, which are expected to be completed during 2019. In its daily activity, Nouryon strives towards enhanced resource efficiency and reduced emissions of greenhouse gases through improved energy efficiency, an increased share of renewable energy, and bio-based raw material.

Actions taken in 2018

As a global company, Nouryon seeks to reduce its emissions as efficiently as possible, based on the firm's own situation. One example is the delivery of wind power according to a power purchase agreement with Wind Park Krammer, a wind power project in Holland that was launched in 2018.

In addition, there is work underway in Sweden to replace a few fossil-powered boilers by alternatives with lower emissions. A major energy savings project aiming to reduce steam has also been launched in the industry cluster of Stenungsund.

Emissions (tonnes CO ₂ e) ¹	Base year 2012	2017	2018	Share of total 2018	Change 2012-2018
Scope 1					
Production	163 094	157 343	174 375	98 %	7%
Scope 2					
Energy ²	275 870	340 283	310 130	1 %	-99%
Scope 3					
Business travel	4359	2963	2158	1 %	-50%
TOTAL excl. reduction through energy	443 322	500 589	486 663		
with Guarantee of Origin					
Reduction through purchase of renewable electricity	0	-335 514	-307 931		
or district heating with Guarantee of Origin					
TOTAL Haga scope	443 322	165 076	178 732	100 %	-60%
Produced amount of products in Sweden	585 263	736 537	763 793		31%

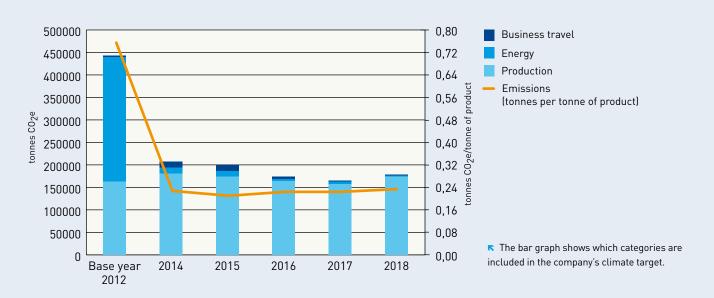
Key indicators	Base year 2012	2017	2018	Change 2012-2018	Unit
Emissions per produced product	0,76	0,22	0,23	-69 %	tonnes CO ₂ e/tonne product

^{1.} During 2018 AkzoNobel Specialty Chemicals has become Nouryon. Accordingly, the emissions for the base year (2012) and previous year have been adjusted to refelct Nouryon's organisation.

^{2.} Emissions from production of purchased electricity, district heating or district cooling, assuming that all is unspecified (residual mix). In "Share of total 2018" and "Change 2012-2018" is Guarantee of Origin included.

Nouryon

Allocation of emissions 2012, 2014-2018



Analysis and comments

Nouryon (formerly: AkzoNobel Specialty Chemicals) have decreased its emissions in the Haga scope by 60 percent since the base year (2012). However, since last year the emissions increased by eight percent. Emissions per produced product have decreased by 69 percent since base year and sustained at a relatively constant level since last year. In 2017 AkzoNobel sold its specialty chemicals business and this is now Nouryon. This change has been accounted for in this and earlier emission disclosures.

Of the categories included in the Haga scope, emissions in scope 1 represent the largest impact (98 percent). The scope 1 emissions have increased by 11 percent last year due to normal variations in processes and increased production.

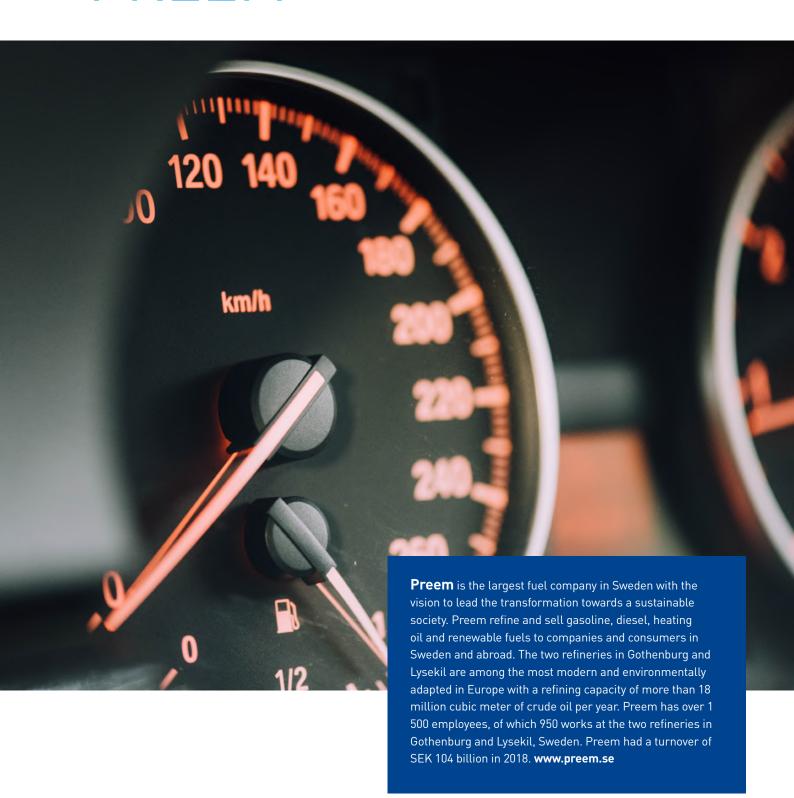
The most significant reduction in emission is in scope 2 where purchased electricity shifted towards origin-labelled electricity. Alongside a specific contract on steam, this sums up to a 99 percent emission reduction since base year 2012.

Since 2017 emission from business travel by air plane, dropped by a third. This is due to the separation from AkzoNobel and thus less travel. Air travel is the main cause of business travel carbon emission. Note: These numbers are based on the number of employees in Nouryon, since it is impossible to separate Nouryon and AkzoNobel air travels.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

More than 60 percent of the Nouryon greenhouse gas emissions are linked to the raw materials. The emissions from raw material therefore account for a significant part of Nouryons' sustainability efforts.

PREEM





The most important contribution by Preem to its clients and to the climate goals of society is to produce and sell fuel that reduce total emissions of carbon dioxide into the atmosphere. Therefore, our work focuses on gradually replacing fossil feedstock with renewable raw material, thereby increasing the share of fuels with a low climate impact. By 2020, Preem shall produce at least 3,000,000 m³ of renewable fuel, which is equivalent to Preem's total sales volume on the Swedish market today.

Actions taken in 2018

- Preem has made decisions regarding several new collaborations and investment in renewable production, i.a.:
 - » To build a new facility for producing raw tall diesel at the SunPine plant in Piteå, for the refinement to renewable diesel at Preem refinery in Gothenburg (in collaboration with Sveaskog and Södra)
 - » To build a new plant in Norway for production of renewable fuels from residues from the Norwegian forestry- and wood industry (together with Biozin AS)
 - » To explore the possibilities to build the world's first lignin plant at the Rottnero pulp mill in Söderhamn, which in time could produce 300,000-500,000 tons for further refinement to renewable fuel (together with RenFuel)
 - » Enable the production of renewable jet fuel (together with SAS).
- Preem, Chalmers and Norwegian SINTEF have conducted a feasibility study at the refinery in Lysekil regarding CCS, i.e. to capture carbon dioxide emissions from the atmosphere for storage. A full-scale plant would reduce emissions by 40 percent by 2025.

Emissions (tonnes CO ₂ e)	Base year 2008	2017	2018	Share of total 2018	Change 2008-2018
Scope 1					
Production ¹	2 310 306	2 045 087	2 161 083	96 %	-6 %
Business travel ²	299	310	315	0 %	6 %
Scope 2					
Purchased energy ³	79 670	234 847	232 941	0 %	-79 %
Scope 3					
Business travel ⁴	925	1 107	1 145	0 %	24 %
TOTAL excl. reduction through energy with	2 391 200	2 281 351	2 395 485		
Guarantee of Origin					
Reduction through purchase of renewable electricity or district heating with Guarantee of Origin ⁵	-78 649	-234 815	-232 727		
TOTAL Haga scope	2 312 551	2 046 536	2 162 758	96 %	-6 %
Purchased transports ⁶	172 118	79 700	94 774	4 %	-45 %
TOTAL (excl. Carbon offset)	2 484 669	2 126 236	2 257 532	100 %	-9 %
Use of sold products ⁷		46 962 858	50 083 099		

Key indicators	Base year 2008	2017	2018	Change 2008-2018	Unit
Emissions per revenue	25,93	27,06	21,78	-16 %	tonnes CO ₂ e/MSEK

- 1. Combustion in Preem's refineries.
- 2. Avser tjänsteresor gjorda med bilar körda av företagets anställda.
- 3. Emissions from production of purchased electricity, district heating or district cooling, assuming that all is unspecified (residual mix). Emission factors for 2008, 2016 and 2017 have been adjusted, in order to reflect the consumption of electricity from with Guarantee of Origin.
- 4. Refers to business air travel.
- 5. Reduction of emissions for "Purchased energy" in scope 2.
- ${\bf 6.}\ \ {\bf Refers}\ {\bf to}\ {\bf purchased}\ {\bf goods}\ {\bf transportation}\ {\bf by}\ {\bf truck}\ {\bf and}\ {\bf freighter}.$
- 7. Refers to use of Preem's sold products globally. Is not accounted for in total emissions and it is not possible to distinguish what share of those emissions derive from Sweden.



Allocation of emissions 2008, 2016-2018



Analysis and comments

Preem has reduced its emission in by 9 percent since base year 2008. This is mostly due to an emission reduction in the company's own refineries. Almost all emissions disclosed in the Haga scope derive from owned refineries, but the Haga scope also disclose purchased transportation.

Emissions from purchased transports have decreased by 45 percent since the base year, but increased by 19 percent since last year.

However, emissions within the Haga scope and purchased transportation accounts for just a small part of total emissions in the Preem value chain. Preem reduced its emission in the Haga scope by 6 percent since base year. However, last year the Haga scope emissions increased due to an increase in throughput.

The $\rm CO_2$ -efficiency in production turned out somewhat better in 2018 than 2017. This was in part due to a 29 percent increase in production of renewable fuels during 2018. In total this production sums up to 210 000 m³.

The key indicator emissions per SEK dropped by 16 percent since base year. The 2018 value was: 21,79 g $\rm CO_2$ e/SEK, a reduction by 30 percent compared to 2017. This is mainly due to variations in the price of crude oil.

Emissions from business travel increased both in scope 1 and 3, an increase by 19 percent compared to the year before. However, these emissions have little effect on emissions in total.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

With Preem's commitment to renewable fuels, emissions will decrease, which is of great importance in reducing Swedish emissions from transport.

This year Preem calculated climate impact from of emissions when customers use the company's fuels. The overall global emissions are 50 MTonnes $\rm CO_2e$. Emissions from sold fuels originate from cars, trucks and other vehicles that belong to the other member companies of the Haga Initiative. Emissions from users are 25 times the Preem fuel production, and it is by reducing this usage Preem can contribute to the climate transition.

An increase in production of renewable fuels could lead to elevated emissions within the Haga Scope, if these fuels generate more production emissions than fossil alternatives. However, these emissions during production, will lead to a lower emission when used by customers. This change is needed for society, including members of the Haga Initiative, to transition to biofuels and reach future climate targets.

Despite a future increase in the Haga Scope, the overall emissions of Preem will decrease over time.

SIEMENS





Siemens has set a target to reduce greenhouse gas emissions by 50 percent by 2020, compared to 2014 levels, and to achieve carbon neutral operations in scope 1 and 2 by 2030.

Actions taken in 2018

- Reduced carbon dioxide emissions from company cars and made investments in low-emission vehicles. In 2018,
 43 percent of all newly purchased company cars were plug-in hybrid electric vehicles.
- Strict travel restrictions were imposed in 2018. Instead, travel-free meetings were encouraged, as well as a greater focus on and implementation of digital tools for external client-meetings and maintenance work.

Solutions in Siemens' environmental portfolio enabled the company's clients on the global level to reduce carbon dioxide emissions by 609 million tonnes, equivalent to 11 times the total annual Swedish carbon dioxide emissions. Currently, these solutions include technologies in the area of energy efficiency and renewables. A next step, currently underway, is to also integrate the digital solutions offered by Siemens. In Sweden, through Siemens' energy efficiency solutions, the firm's clients could reduce their costs by 70.1 million Swedish crowns.

Emissions (tonnes CO ₂ e)	Base year 2014	2017	2018	Share of total 2018	Change 2014-2018
Scope 1					
Business travel	1 084	909	604	25 %	-44 %
Scope 2					
Purchased energy ¹	1 690	1 516	1 384	49 %	-18 %
Scope 3					
Business travel	1 552	809	613	25 %	-61 %
TOTAL excl. reduction through energy with Guarantee of Origin	4 326	3 242	2 601		
Reduction through purchase of renewable electricity or district heating with Guarantee of Origin	0	0	-208		
TOTAL Haga scope	4 326	3 242	2 393	99 %	-45 %
Production and distribution of energy and vehicle fuels ²	36	30	25	1 %	-32 %
TOTAL	4 362	3 272	2 417	100 %	-45 %

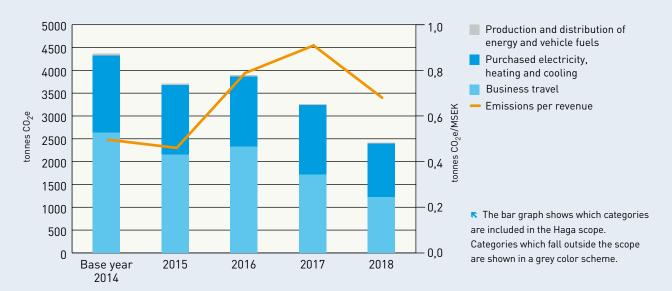
Key indicators	Base year 2014	2017	2018	Change 2014-2018	Unit
Emissions per revenue	0,50	0,91	0,68	37 %	tonnes CO2e/MSEK

^{1.} Emissions from production of purchased electridity, district heating or district cooling, assuming that all is unspecified (residual mix).

^{2.} Refers to fuels consumed in scope 1 and scope 2.

SIEMENS

Allocation of emissions 2014-2018



Analysis and comments

The climate impact of Siemens has dropped by 45 percent since base year 2014, and by 26 percent since last year. These reductions are partly due to a reorganization where Siemens' staff were organized into several smaller companies. Another reason for the emission reduction is the new travel restrictions implemented in 2018, more travel free meetings, and an increase in plug-in hybrids. These changes decreased impact from business travel by 29 percent.

In scope 2, Siemens increased purchase of origin labeled wind power. This effort lowered the climate impact of scope 2. In total, the emissions from purchased energy in scope 2 and business travel, are almost the same.

In 2016, 2017 and 2018 focus has been on measures for investments in low-emission vehicles and increased charging infrastructure for the company's fleet. During this period emissions from business travel in scope 1 have decreased by 47 percent

As part of a global restructuring of the Healthcare division, Siemens AB divested the Swedish Healthcare business to Siemens Healthcare AB. This resulted in an increase in emissions relative to sales in both 2016 and 2017 for Siemens AB. However, in 2018 the emissions relative to sales decreased by 25 percent. It is now lower than in 2016. This is due to a continuous decrease in emissions while turnover stayed the same as in 2017.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Siemens significant release in scope 3 comes from purchased products as well as the costumer use of Siemens products and services. Siemens monitors energy consumption and carbon dioxide emissions from a large part of the product portfolio.

Within the project "Carbon Emissions (a Suppliers", Siemens have developed a new financial model to better identify suppliers' climate impact and carbon dioxide emissions. In 2018, CO₂e emissions of more than 5000 suppliers were mapped. These suppliers contribute to almost 50 percent of Siemens' emissions in scope 3. Siemens work together with suppliers to identify key interventions and set up action plans to reduce emissions.

STENA RECYCLING





Stena Recycling has an overall target of a 40 percent reduction in climate impact by 2020 compared to 2008. This is a relative goal and is based on the quantity of materials collected.

Actions taken in 2018

- A deepened energy-mapping has been conducted during the year in a few select properties and production plants.
- Initiated a project regarding electrification of material processors and other machines.
- Started up a new recycling process for plastics, that accepts obsolete plastic film, and thereby contributes to increasing the share of recycled plastics.

Emissions (tonnes CO ₂ e)	Base year 2008	2017	2018	Share of total 2018	Change 2008-2018
Scope 1					
Business travel	834	1 506	1 323	3 %	59 %
Heating ¹	11 194	3 803	2 566	5 %	-77 %
Own transports	8 776	7 966	3 789	8 %	-57 %
Machinery	13 601	10 898	11 062	22 %	-19 %
Scope 2					
Purchased energy ²	7 869	21 830	25 118	14 %	-15 %
Scope 3					
Business travel ³	367	257	340	1 %	-7 %
TOTAL excl. reduction through energy	42 641	46 259	44 198		
with Guarantee of Origin					
Reduction through purchase of renewable electricity	0	-19 256	-18 467		
or district heating with Guarantee of Origin ⁴					
TOTAL Haga scope	42 641	27 004	25 731	52 %	-40 %
Purchased transport⁵	23 036	19 059	19 526	40 %	-15 %
Production and distribution of energy	5 959	5 686	3 965	8 %	-33 %
and vehicle fuels ⁶					
- whereof fuels for business travel	218	360	268	1 %	23 %
- whereof fuels for own transports	1 023	2 240	978	2 %	-4 %
- whereof fuels for own machinery	2 221	2 223	1 990	4 %	-10 %
- whereof fuels for energy production	2 510	863	<i>753</i>	2 %	-70 %
TOTAL (excl. Carbon offset)	71 636	51 749	49 247	100 %	-31 %

Key indicators	Base year 2008	2017	2018	Change 2008-2018	Unit
Emissions per unit of collected material	0,039	0,015	0,014	-64 %	tonnes CO ₂ e/ tonne collected material

- 1. Including LPG consumption for flame cutting.
- 2. Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total 2018" includes contracts for renewable energy with Guarantee of Origin.
- 3. Air and rail travel.
- 4. Reduction of emissions for "Purchased energy" in scope 2.
- 5. Refers to outward and intermediate transports.
- 6. Refers to fuels consumed in scope 1 and scope 2.



Allocation of emissions 2008, 2017-2018



Analysis and comments

Stena Recycling's emissions in the Haga scope have decreased by 40 percent since the base year 2008, and by 5 percent since last year. This decrease was possible despite a 7 percent increase in waste management in 2018.

Of the emissions, almost 50 percent are in scope 1 where emissions have fallen by 32 percent between 2008 and 2017. This is due to reduced oil consumption, reduced diesel consumption for machines and a shift from own transport to purchased transport.

Emissions in scope 2 have fallen by 15 percent since base year. This is mainly due to Stena Recycling's decision to purchase origin-labelled electricity from hydropower. The climate impact of Stena Recycling changed in 2017 following the merge with Stena Technoworld. This has lowered the amount of purchased origin-labelled energy and resulted in a 15 percent increase of emissions in scope 2, compared to last year. Stena is now updating the contracts for purchased energy in this new business area.

Climate impact in scope 1 have dropped by 46 percent compared to base year. This is due to reduced oil consumption, reduced diesel consumption for machines and a shift from own transport to purchased transport. The reported emissions for purchased transports are 40 percent of the emissions in 2018. The shift towards purchased transportation have reduced emissions in scope 1 but increased emissions in scope 3.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Emissions from Stena Recycling's customers' transports of waste to the facilities are not included in the emission disclosure and represent significant emissions in scope 3. Stena Recycling is aware of these emissions and is working to reduce them by setting environmental requirements when outsourcing, such as requirements of vehicle performance and transport optimization.

STOCKHOLM EXERGI





The target of Stockholm Exergi is to reduce emissions by 40 percent by 2020, compared to 2010 levels, through renewable energy, recycling, enhanced efficiency, and as a last resort carbon offsetting. By 2030, 100 percent of the production shall be based on recycled or renewable energy and during 2022 the use of coal shall be phased out.

Actions taken in 2018

- A process to obtain a permit for a new combined heat and power plant in Lövsta has been initiated, a precondition for a sustainable phase-out of coal. This implies that fossil-based CHP is replaced, and that the climate impact is reduced locally as well as throughout the whole energy system.
- Power control has been installed in 1,000 premises in which thermal inertia in the buildings is used to even out power peaks.
- During the year we have signed our first purchase agreement regarding collar cells and vehicle charging, supplemented by a system for smart metering.

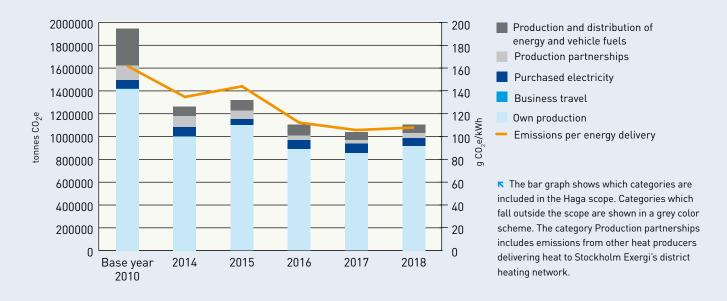
Emissions (tonnes CO ₂ e) ¹	Base year 2010	2017	2018	Share of total 2018	Change 2010-2018
Scope 1	1 418 507	848 088	913 238	83 %	-36 %
Production ¹	1 418 156	847 762	912 957	83 %	-36 %
- CO ₂ from burning of coal	624 340	437 480	461 020	42 %	-26 %
- CO ₂ from burning of oil	420 232	36 232	95 859	9 %	-77 %
- ${\it CO_2}$ from burning of fossil fuel fraction of municipal waste	210 756	321 236	303 737	28 %	44 %
- Other GHG related emissions ²	162 828	52 813	52 342	5 %	-68 %
Business travel ³	351	327	281	0 %	-20 %
Scope 2	77 982	85 206	67 389	6 %	-14 %
Purchased electricity ⁴	442 002	362 839	362 287		-18 %
Reduction through purchase of renewable electricity or district	-364 020	-277 634	-294 898		-19 %
heating with Guarantee of Origin ⁵					
Scope 3	448 990	99 630	120 044	11 %	-73 %
Business travel ⁶	176	181	179	0 %	2 %
TOTAL Haga scope	1 496 665	933 475	980 807	89 %	-34 %
Production by another district heating producer but supplied by	124 850	27 334	47 955	4 %	-62 %
Stockholm Exergi ⁷					
Production and distribution of energy and vehicle fuels ⁸	323 963	72 115	71 910	7 %	-78 %
- whereof vehicle fuels for business travel	75	73	57	0 %	-25 %
- whereof vehicle fuels for energy production	323 888	72 042	71 853	7 %	-78 %
TOTAL (excl. Carbon offset)	1 945 479	1 032 924	1 100 672	100 %	-43 %
Carbon offset	-7 797	-293 912	-351 160		
TOTAL (incl. Carbon offset)	1 937 682	739 012	749 513		-61 %

Key indicators	Base year 2010	2017	2018	Change 2010-2018	Unit
Emissions from production ⁹	158	102	105	-34 %	g CO₂e/kWh
Emissions per energy delivery before carbon offsetting ¹⁰	162	100	108	-33 %	g CO₂e/kWh
Emissions per energy delivery after carbon offsetting ¹¹	162	72	74	-55 %	g CO₂e/kWh

- 1. Emissions of CO $_{\! 2}$, methane, refrigerants and $\rm N_2O$ from Stockholm Exergi's own production
- 2. Tonnes $\rm CO_2e$ adjusted according to IPCC AR5 as from 2017.
- Refers to business car travel. Emissions in 2010 are assumed to be same as in 2014.
- Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total 2018" includes contracts for renewable energy with Guarantee of Origin.
- Reduction of emissions for "Purchased energy" in scope 2. Stockholm Exergi purchase electricity with Guarantee of Origin for its district heating and district cooling production.
- 6. Refers to business air travel. Emissions in 2010 are assumed to be same as in 2014.
- Emissions by actors other than Stockholm Exergi
 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.
- Production refers to extraction and processing of the fuels. In addition to distribution of the fuels, also transportation of additives and ashes.
- $\begin{tabular}{ll} \bf 9. & Total\ emissions\ from\ production\ of\ electricity,\ heating \\ & and\ cooling. \end{tabular}$
- Total emissions from scope 1, 2 and 3 for the total supply of district heating, electricity and district cooling before carbon offsetting.
- Total emissions from scope 1, 2 and 3 as above for the total supply of district heating, electricity and district cooling after carbon offsetting.



Allocation of emissions 2010, 2014-2018



Analysis and comments

The winter of 2018 mild and rainy weather in the Baltic region caused a deficiency in wood chips. Because of this Stockholm Exergi was forced to use other fuels to guarantee heating to customers. Biooil was used, but also fossil fuels, mainly oil. This caused an increase of CO2e by 8 percent compared to 2017. However, compared to 2015, when the new biofuel powerplant in Värtan was launched, the emissions have dropped by 16 percent.

To optimize production, there is a cooperation with nearby district heating producers, whose emissions are reported in this disclosure. These emissions, that also include the concept of open district heating, increased somewhat even though the open district heating for the first time reached production of 100 GWh.

In total, emissions have increased by seven percent compared with 2017 but decreased by 43 percent compared with the base year 2010.

Key figures "emissions from own production" and "total emissions per energy delivery" have increased by three and eight percent respectively compared with 2017, and 34 and 33 percent respectively compared to the base year 2010.

In the Haga scope, Stockholm Exergi reduced its emissions by 34 percent since the base year 2010.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Stockholm Exergi has for many years reported all significant greenhouse gas emissions.

Emissions from extraction, processing and transportation of the fuels to the plants account for around eight percent of emissions.

These are included in the disclosure in scope 3. Emissions from the extraction of fuels are relatively low, as a large proportion of the fuels are residues from the forest, industry and society.

SVEASKOG



业 SVEASKOG

Climate targets

The target of Sveaskog is to reduce carbon dioxide emissions by a minimum of 30 percent by 2020 compared to 2010 levels, relative to the volume of wood raw material supplied. With 2005 as the base year, the goal is to achieve a reduction of total carbon dioxide emissions by 40 percent by 2020.

Actions taken in 2018

- By exercising an active influence in purchase processes and in continuous internal training, achieve a larger share of renewable fuels within own disforestation teams
- Enhanced efficiency in transport logistics. Participation in development projects that allow heavier and longer vehicles will imply fewer transports and lower emissions. New forms of collaboration over greater geographical distances where timber swops with other actors can shorten distances for transport.
- Twelve new pellet-fired boilers at the nursery gardens in Vibytorp and Trekanten have reduced carbon dioxide emissions occurred for heating the green houses by over 90 percent.

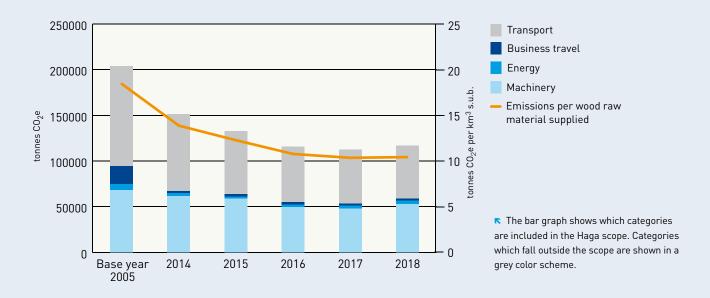
Emissions (tonnes CO ₂ e)	Base year 2005	2017	2018	Share of total 2018	Change 2005-2018
Scope 1					
Business travel ¹	13 380	1 585	1 817	2 %	-86 %
Energy ²	5 084	2 992	2 971	3 %	-42 %
Machinery	12 303	3 350	4 286	4 %	-65 %
Scope 2					
Purchased energy ³	776	5 867	5 714	0 %	-100 %
Scope 3					
Business travel ⁴	643	274	267	0 %	-58 %
TOTAL excl. reduction through energy with Guarantee of Origin	32 185	14 068	15 056		-53 %
Reduction through purchase of renewable electricity or district heating with Guarantee of Origin ⁵	0	-5 857	-5 712		
TOTAL Haga scope	32 185	8 211	9 344	8 %	-71 %
Purchased transports	109 631	59 127	57 937	50 %	-47 %
Leased machinery	53 576	42 564	46 478	40 %	-13 %
Production and distribution of energy and vehicle fuels ⁶	8 542	2 527	2 997	3 %	-65 %
- whereof fuels for business travel	5 575	323	328	0 %	-94 %
- whereof fuels for energy production	751	422	389	0 %	-48 %
- whereof fuels for own transport and machinery	2 216	1 782	2 280	2 %	3 %
TOTAL (excl. Carbon offset)	203 934	112 429	116 756	100 %	-43 %

Key indicators	Base year 2005	2017	2018	Change 2005-2018	Unit
Emissions per unit of wood raw material supplied (total)	18,532	10,394	10,469	-44 %	tonnes CO ₂ e/km³s.u.b.

- 1. Company cars, cars used for company business and leased cars.
- 2. Heating using own boilers.
- 3 Emissions from production of purchased electricity, district heating or district cooling assuming that all are unspecified (residual mix). "Share of total 2018" and "Change 2005- 2018" includes contracts for renewable energy with Guarantee of Origin.
- Air and rail travel
- 5. Reduction of emissions for "Purchased energy" in scope 2.
- 6. Refers to fuels consumed in scope 1 and scope 2.

业 SVEASKOG

Allocation of emissions 2005, 2014-2018



Analysis and comments

Emissions in the Haga scope have decreased by 74 percent since the base year 2005. In total the difference is smaller, emissions have decreased by 43 percent since the base year. This is due to the fact that a large part of Sveaskog's calculated emissions is found in scope 3, purchased transports and leased machinery.

Emissions from purchased transports dropped by 47 percent since base year and by two percent since 2017. This decrease is mainly due to increased use of renewable fuels and more efficient logistic. Emissions from leased machinery increased by nine percent since 2017, but dropped by 13 compared to base year 2005.

Emissions from own machinery decreased by more than 50 percent since 2005, but show an increase compared to 2017. This is partly due to implementation of reduction obligation. Earlier, Sveaskog purchased diesel with high concentration of renewable raw materials, but due to reduction obligation there has been a shortage of HVO free from palm oil. The past six months, this is led to a higher usage of fossil fuels, which effect the emissions from owned machinery in scope 3.

The key figure, emissions per delivered forest raw material (tonnes $\rm CO_2e/km^3$ s.u.b.), have showed a steady decrease since base year, but this positive trend was broken in 2018 when these emissions increased somewhat compared to last year. This is mainly due to higher $\rm CO_2e$ from owned and leased machinery. However, compared to base year the key figure decreased by 44 percent.

MOST SIGNIFICANT EMISSIONS IN SCOPE 3

Sveaskog's most significant emission in scope 3 derives from timber transportation by road and from forestry machinery.

These fall within scope 3 and are reported in the disclosure under purchased transports and under own or leased machinery and are included in the climate target. Sveaskog encourages the use of renewable fuels for leased machinery and purchased transports.

APPENDIX 1: BIOGENIC EMISSIONS

Biogenic carbon dioxide emissions arise when biofuel is used for heating, production and transportation. 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 carbon dioxide 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. In the GHG Protocol and in national climate reporting, biogenic carbon dioxide emissions must be reported separately from emissions from fossil fuels.

In the table below, the companies' biogenic carbon dioxide emissions are shown parallel to their fossil fuel emissions in scope 1. Note that only carbon dioxide emissions are reported, which is why the fossil CO_2 emissions in the table are not the same as the greenhouse gas emissions expressed in CO2e (carbon dioxide equivalents) in each company's disclosure.

Allocation of direct CO ₂ emissions between fossil (scope 1) and biogenic	Direct biogenic CO ₂ emissions (tonnes)	Fossil CO ₂ emissions in scope 1 (tonnes)
Axfood	5 113	17 406
Coca-Cola European Partners Sverige	343	607
Folksam	n/a	533
HKScan Sweden	856	9 531
JM	370	4 241
Lantmännen	76 689	10 605
Löfbergs	509	1 876
McDonald's Sverige	0	546
Nouryon	0	174 375
Preem	1,5	2 161 398
Siemens	0	604
Stena Recycling	2 172	18 740
Stockholm Exergi	1 746 214	913 519
Sveaskog	10 135	9 074

APPENDIX 2: SCOPE 2 EMISSIONS ACCORDING TO DIFFERENT CALCULATION METHODS

Under the GHG Protocol, scope 2 emissions can be calculated using one of the following methods:

- Market-based method, which distinguishes between with Guarantee of Origin purchased electricity, heating or cooling and unspecified supplies. A specific emission factor is used for with Guarantee of Origin products, while an emission factor for a residual mix is used for unspecified supplies.
- **Location-based method**, which uses one emission factor for everything supplied through the power, heating or cooling grid.

Under new guidelines in the GHG Protocol, the method chosen is to be declared and the emissions according to the method not chosen are to be reported separately. The Haga Initiative's greenhouse gas emissions disclosure uses the market-based method, which is also the method prescribed by Energimarknads-inspektionen (the Swedish Energy Markets Inspectorate). Scope 2 emissions according to each method are reported below.

	CO ₂ emissions in scope 2 "Location-based method" (tonnes)	CO ₂ emissions in scope 2 "Market-based method" (tonnes)
Axfood	17 681	4 016
Coca-Cola European Partners Sverige	1 361	49
Folksam	977	483
HKScan Sweden	6 297	1 723
JM	3 287	1 481
Lantmännen	36 040	18 231
Löfbergs	403	57
McDonald's Sverige	6 238	1
Nouryon	63 030	2 199
Preem	46 190	216
Siemens	242	1 015
Stena Recycling	5 771	6 651
Stockholm Exergi	71 618	67 389
Sveaskog	542	3

Axfood



Folksam

HKSCIN









Nouryon



SIEMENS





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THE HAGA INITIATIVE

A profitable business sector without climate impact.

