

# Climate Assessment of Beckers Group 2013

## Summary

Beckers Group has carried out an assessment of its carbon emissions for 2013.

U&We conducted the assessment using the web-based tool Our Impacts, and the assessment covers scope 1 and 2 and parts of scope 3.

The purpose of measuring climate data is to gather information about the company's carbon footprint: to get a basis for action in order to reduce emissions and to provide a baseline for future measurements. A baseline is a prerequisite to systematically work with reduction initiatives. Due to the on-going methodological development, a comparison between years is not fully adequate, but still gives a hint of the trends.

Total emissions for Beckers Group during 2013 amounted to 57 393 tonnes of carbon dioxide equivalents (t CO<sub>2</sub>e), which is a decrease of 6 048 t CO<sub>2</sub>e compared to 2012.

The sources with the highest emissions are premises (35 percent), and outbound and inbound third-party deliveries (25 percent and 20 percent respectively).

The methodology to collect and calculate inbound freight data has been adjusted for 2013 climate reporting. In order to improve comparability between years, and to be able to use 2012 as a base-year for comparisons, the adjusted method was also applied retroactively on the 2012 inbound delivery data. This has reduced the resulting emissions for inbound deliveries, and thus the overall 2012 emissions.

our impacts

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## Background and Purpose

Beckers Group has carried out assessments of its climate impact for a couple of years now. The first climate assessment was done for Beckers Industrial Coatings in Märsta, Sweden for 2008 by excel spreadsheet supported by the Swedish advisor U&We.

Nowadays the whole group with 20 entities around the world assess their climate impact using the web based tool Our Impacts, still with support from U&We.

Beckers Group has decided to calculate its greenhouse gas emissions on a yearly basis. The purpose of measuring climate data is to gather information about the company's carbon footprint: to get a basis for action in order to reduce emissions and to provide a baseline for future measurements. A baseline is a prerequisite to systematically work with reduction initiatives.

## Participants

Contact persons

- from Beckers Group: Ingela Nordin
- from U&We: Göran Wiklund, Katrin Dahlgren and Anna Larsson

Representatives from each business unit at Beckers have provided the emissions data.

Reporting sites:

**North America:** Chicago and Fontana

**SAPME (South Asia Pacific Middle East):** India, Malaysia, Vietnam, RAK/UAE and Bangladesh

**Greater China:** Guangzhou, Shanghai and Tianjin

**Europe & Africa:** Headquarters in Berlin, Caleppio/Italy, Dormagen/Germany, Montbrison & Feignies/France, Liverpool/UK, Märsta/Sweden, Tarnow/Poland, Johannesburg/South Africa and Lagos/Nigeria.

## Methodology

Beckers use the GHG (Greenhouse Gas) protocol as guideline.

GHG Protocol divides greenhouse gases into three scopes:

- Scope 1 – direct GHG emissions from sources that are owned by the company, for example, emissions from combustions in boilers, furnaces and vehicles.
- Scope 2 – indirect GHG emissions from purchased electricity, heating/cooling or steam consumed by the company

- Scope 3 – other indirect GHG emissions, which is an optional category.

We have decided to report on Scope 1 and 2 emissions and Scope 3 for Business Travel and inbound and outbound deliveries to and from our sites and the waste generated. Our scope 3 emissions can also emanate from upstream emissions for Scope 1 and 2 according to the tool used emission factors based on GHG protocol.

As everyone can understand it is very complex to declare transportation of goods. Generally speaking, emission assessments from transports can never be exact as they are complicated to calculate and there are many factors affecting the results. When choosing methodology, priority has now been given to getting overview and comparability between sites and years. That means a number of approximations have been made. During the years we have developed the method to measure, calculate and report in- and outbound transportation.

With the adjusted methodology all inbound freight data can now be organised in such a way that it is possible to report both whole vehicle road freight and shared vehicle road freight separately. In order to improve comparability between years, and to be able to use 2012 as a base-year for comparisons, the adjusted method was also applied retroactively on the 2012 inbound delivery data. This has reduced the resulting emissions for inbound deliveries, and thus the overall 2012 emissions. The difference is a reduction by 9 731 tonnes CO<sub>2</sub>e (or 13%), to the result earlier declared.

The big difference is based on the fact that shared vehicles are considered to bear higher laden than whole vehicles, based on assumptions of average vehicle load for the Defra/DECC emission factors who in turn are based upon the DfT (Department for Transport) annual surveys of UK road freight vehicles and loadings.

Defra/DECC emission factors and assumptions are an internationally accepted database also used in Our Impacts.

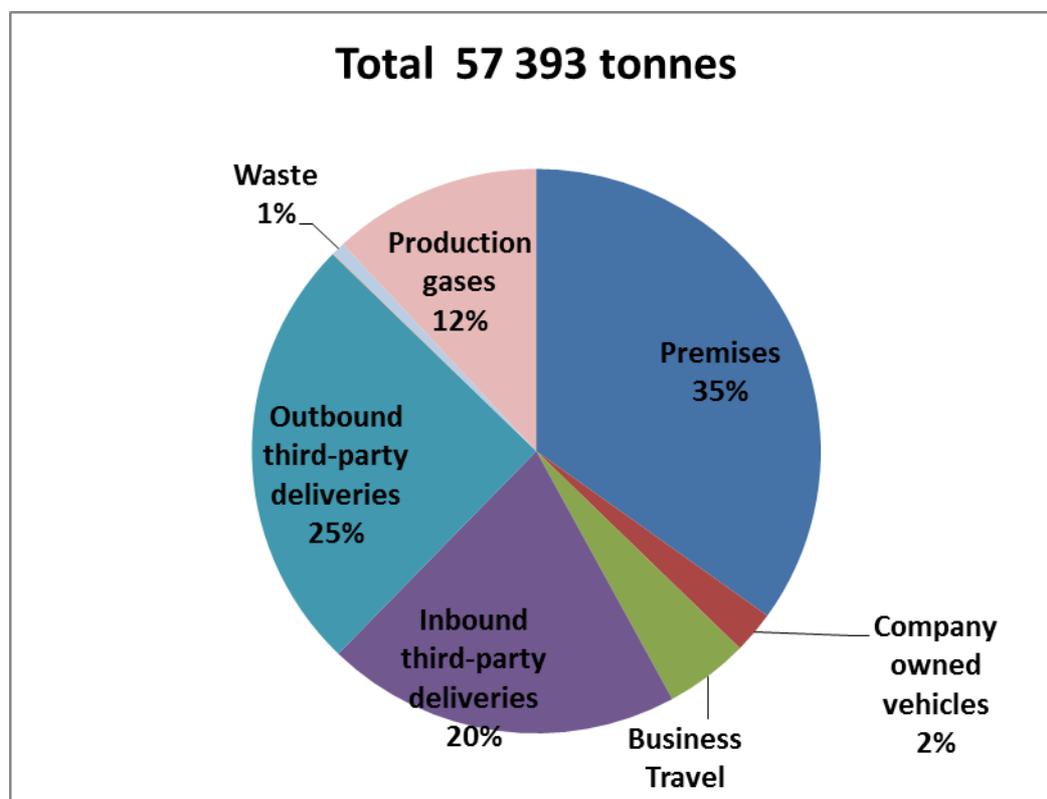
The data collection method we are now using is a good basis for the next step for Beckers Group, which is to develop a climate strategy, set reduction targets and to follow up on those targets.

## Results

The data below is extracted from the Our Impacts report for 2011 and the emissions data include scope 1, 2 and parts of scope 3.

For 2013 our total CO<sub>2</sub>e (Carbon dioxide equivalents) emissions was 57 393 tonnes compared with 63 441 tonnes 2012.

## Emissions by Activity



**Transportations** to and from our sites accounts for the biggest climate impact with 45% (59%). 2012 value in brackets.

Although we are finding ways to declare emissions in a consistent way to get higher data quality we realise that transportation still is an area where we have very little impact and control. One example of actions taken: In France there have been on-going activities during the year to move towards less climate impact from transportation using rail for deliveries to customer: 16 468 tonnekilometers compared to 0 last year.

**Energy** use at sites 35% (29%).

We have set targets on total energy use, meaning energy use for production as well as for heating and cooling as well. A cold winter can affect the total energy consumption, as can an increased production volume. That means that sites need to chase energy savings by e.g. insulation and smart energy control for all purposes. Many small actions add up to good result, shown e.g. in Poland during 2013 with a decrease by 13 percent compared to 2012.

**VOC** emissions at sites 12% (10%).

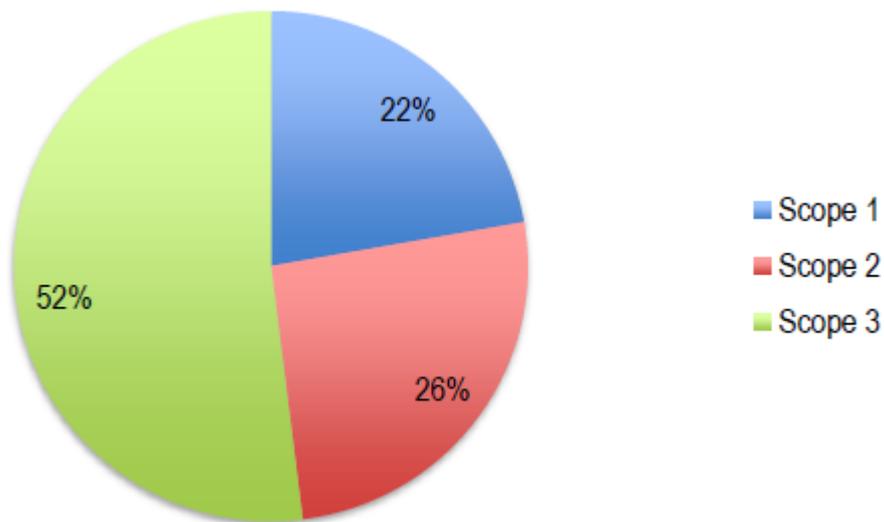
VOC (Volatile organic compounds, solvents) emissions from productions sites are measured. Counted as indicator based on produced volume the group decreased its VOC emissions. All sites now also report VOC emissions based on a calculation method by mass balances. This method requires a good knowledge of the VOC handling and processes using and emitting VOC. From that sites find out actions to lower the

emissions, and we foresee higher quality of reported data as well as improvements from awareness rising and improved actions.

**Business travel** 5% (5%).

In actual emissions of CO<sub>2</sub>e a decrease from 3213 to 2737 tonnes.

### Climate assessment 2013 by scope



## Emissions Intensity

Absolute numbers for emissions are not taking into account the fact that operations might grow or decrease, or that the extent of operations might differ between locations. In order to adjust for this a relative measurement (intensity measurement) has been applied. The emissions intensity has been measured using Key Performance Indicators (KPI). The KPIs for 2013 include: products (volume produced in metric tonnes), full time employee (FTE) and total sales (KSEK).

Table 1 Emissions/Key Performance Indicator

KPI	2012	2013	Lowest (2013)	Highest (2013)
t CO <sub>2</sub> e/FTE	38,7	32,6	10	59
t CO <sub>2</sub> e/Total sales MSEK <sup>1</sup>	14,2	12,5	3,6	39
t CO <sub>2</sub> e/Products (volume in metric tonnes)	0,47	0,40	0,15	1,4

## Emission Factors

Regarding emission factors in general, there is an on-going development regarding research on climate impact from different emission sources and on calculation methods etc. This means that emission factors will be updated regularly in order to be consistent with the current state of knowledge.

Emission factors for the same source (E.g. premises, deliveries) can vary based on regional differences and knowledge for the specific area or source,

The purpose of a climate assessment is to get a true picture of the climate impact from the assessed organisation, as true as it can be based on the most recent knowledge.

Ecometrica, who provides and maintains the database for Our Impacts, makes sure that the data within the database is constantly being reviewed and updated as new factors are made available. This means that calculated emissions change between years, not only in relation to changes in activities, but also in relation to changes in emission factors.

Regarding fuel for Outbound and Inbound Third Party Deliveries and Company Owned Vehicles, starting in 2012 emissions factors include so called upstream emissions, i.e. emissions created as a result of production and transportation of fuel. This wider scope for fuel emissions has resulted in higher emissions per fuel volume. Approximately, it



means an increase of 15-20 percent on these activity areas in relation to assessments preceding 2012, and is allocated in scope 3. The inclusion of scope 3 emissions from fuel is in line with the recommendations by GHG Protocol. However, the inclusion of scope 3 emissions from fuel and other energy sources is still under development. Scope 3 emissions from fuel from vehicles do not cover all of the reporting countries, as reliable scope 3 emissions factors are yet not available for all countries. Our Impacts and the supplier Ecometrica is working on including scope 3 emissions for all activities and countries.

The complexity of assessing the climate impact from the whole value chain is obvious. By methodology improvement and development of emission factors the whole picture is getting more and more complete.

It is Beckers aim to cover the whole value chain, cradle to grave aspect of our activities, in order to move towards our goal to become the most sustainable coatings company in the world.