Climate Assessment of Becker Industrial Coatings 2012 Summary

Becker Industrial Coatings (Beckers) has carried out the assessment of its carbon emissions for 2012. The Swedish consultant bureau 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 (based on the international standard GHG, Greenhouse Gas Protocol).

There has been a considerable improvement of data quality since 2010 and 2011. We judge that the data quality in 2012 has reached such a level that Beckers now should take the next step in its climate work.

Total emissions for Beckers during 2012 amounted to 73 172 tonnes of carbon dioxide equivalents (tCO2e), which is a decrease of 355 tCO2e compared to 2011. The source with the highest emissions is inbound third-party deliveries, which represents 30 percent of the total emission, followed by outbound third-party deliveries (29 percent).

Background and Purpose

Beckers has decided to calculate its greenhouse gas emissions. The purpose of starting to measure climate data is to have information about the company's carbon footprint and to improve the data collection process. U&We has been appointed to carry out the carbon calculations using the web-based tool Our Impacts. The calculations were carried out during the spring of 2013 and are based on emissions data from 2012.

Participants

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

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

Methodology

Standard

The standard used is the Greenhouse Gas Protocol (GHG Protocol), an international standard developed by the World Resources Institute and the World Business Council for Sustainable Development.

According to the GHG Protocol a company accounts for emissions from all operations over which it has control. Control can be defined in either financial or operational terms.

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.

Data

Data has been collected from the following organisational units and has been accumulated to represent Beckers:

Americas: Chicago and Fontana

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

Greater China: Guangzhou, Shanghai, Tianjin

Europe & Africa: Head quarters in Berlin, Caleppio Italy, Dormagen Germany, Montbrison & Feignies France, Liverpool UK, Märsta Sweden, Tarnow Poland and Johannesburg South Africa.

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.

Total Emissions

In 2011 the total emissions for Beckers' 17 business units were 73 527 tonnes of CO_2e. This is the second year of assessment and compared to last year's reporting the data quality is higher. We have therefore chosen not to compare 2010 and 2011, as the differences are rather a result of improved data quality than a result of reduction initiatives. We judge that the quality of 2011 year's data has reached an appropriate level and can be used as a baseline for future comparisons and for setting reduction goals.

Table 1. Total Emissions Beckers 2012 and 2011

Beckers	2012	2011
Emissions, tCO_2e	73 172	73 527

Emissions by Activity

When emissions are divided by activity for Beckers, we get the following picture for 2012:

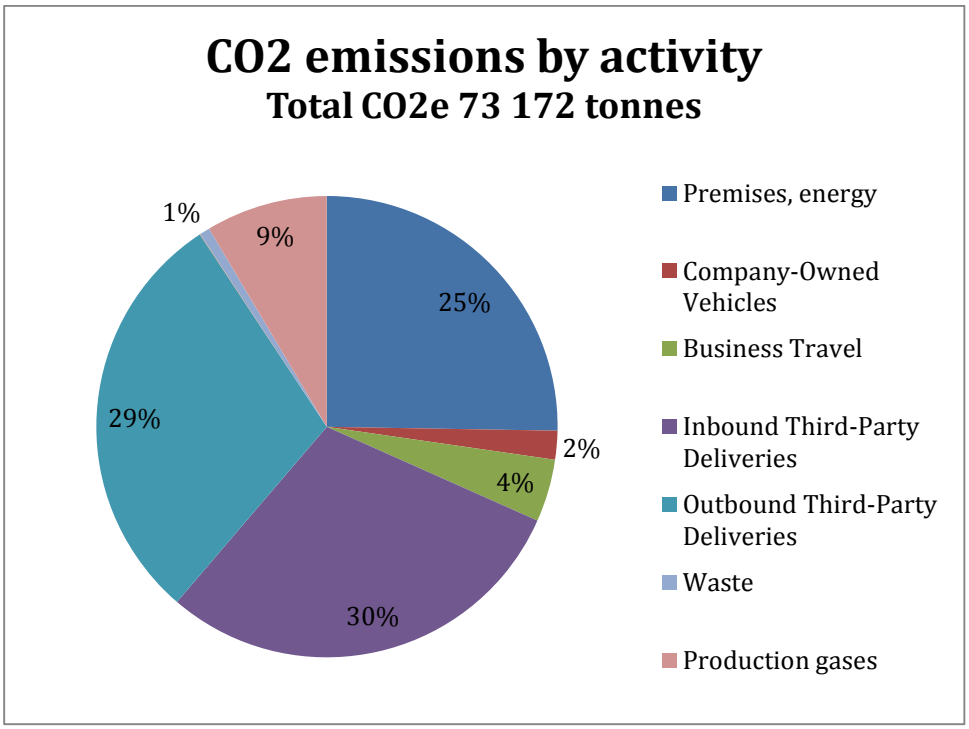

Chart1. CO_2 emissions by activity

The emissions are highest for inbound (30 percent) and outbound deliveries (29 percent), which belong to scope 3 (see figure 2). In this years assessment we have improved the data collection of inbound deliveries to higher accuracy. (Productions gases are VOC, Volatile Organic Compounds, emissions.)
Our method of climate assessment is to include the last transportation from supplier to the sites for inbound third-party deliveries. This method excludes the earlier steps from the production of raw material and intermediaries and is hence most likely an underestimation, compared to total impact, but is a feasible way of gathering accurate data on deliveries.

Table 2. tonnes reported VOC/ kt product for the Geographical Regions

Business Region	t VOC/kt product (metric tonnes)	t CO_2e from VOC/t VOC
Americas	4.24	10.00
SAPME	4.64	10.83
Greater China	3.29	10.00
E&A	5.16	9.76

Table 2 shows that E&A reports the most VOC, but the lowest CO2e while Greater China reports the lowest volumes. The differences between region averages are moderate but the range of reported VOC emissions between single sites is wide. Whether these differences are due to differences in production or differences in measurements or reporting is an open question, and need further investigation and measurements. The range is smaller than the previous year.

Emissions from VOC were divided by tonnes of VOC to see if there were differences between emissions in the geographical areas. As shown in table 2 the geographical units have values within the same range.

The total emissions of Beckers have been divided into the three scopes categorised by the GHG Protocol and are shown below:

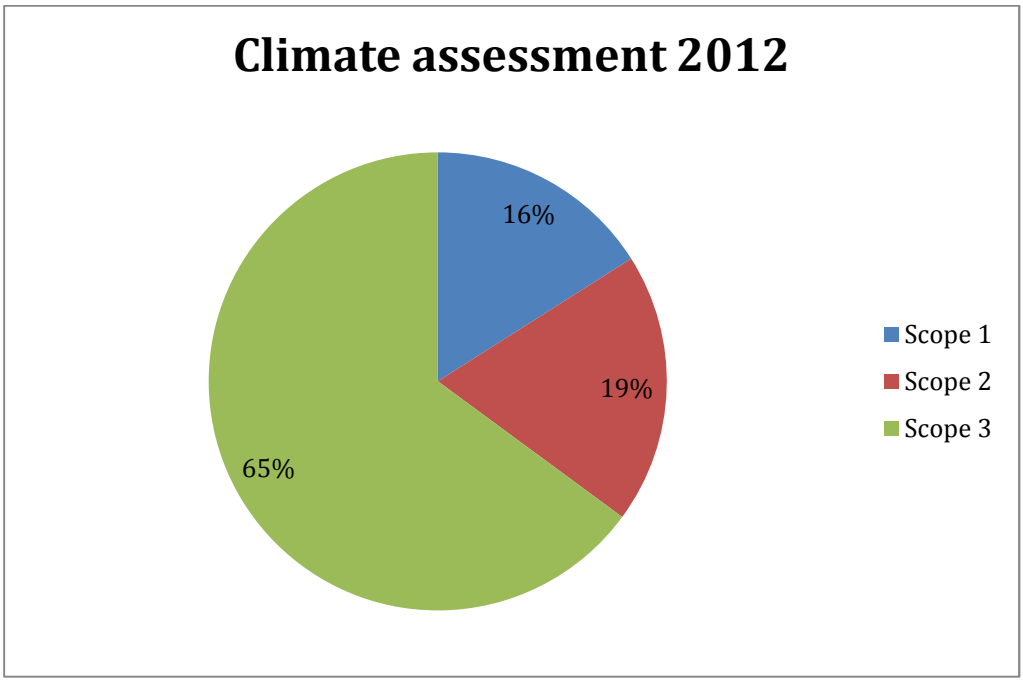

Chart 2. CO_2 emissions by scope

The majority of emissions stances from scope 3, followed by scope 2 and scope 1. The pattern is a likely picture, as it is common that the largest portion of the total carbon footprint for companies constitutes of scope 3 emissions. Inbound and outbound third-party deliveries constitute the major emission source in scope 3 and premises the majority of emissions in scope 1.

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 2012 include: products (volume produced in metric tonnes), full time employee (FTE) and total sales (KSEK).

Table 2. Emissions/Key Performance Indicator

KPI	2012 (2011 in brackets)
t CO_2e /FTE	44 (44)
t CO_2e /Total Sales MSEK	16 (20)
t C02e/Products (volume in metric tonnes)	0.5 (0.6)

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. 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.

Regarding fuel for Outbound and Inbound Third Party Deliveries and Company Owned Vehicles, from 2012 emissions 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 20 percent on these activity areas, and is allocated in scope 3.