Climate Assessment of Becker Industrial Coatings 2011 Summary

Becker Industrial Coatings (Beckers) has carried out an assessment of its carbon emissions for 2011. 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. The purpose of the assessment was to assess the emissions from 2011 to be able to provide a baseline for future measurements. A baseline is a prerequisite to systematically work with reduction initiatives.

Total emissions for Beckers during 2011 amounted to 73 527 tonnes of carbon dioxide equivalents (tCO_2e). The source with the highest emissions is inbound third-party deliveries, which represents 36 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 2012 and are based on emissions data from 2011.

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: 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

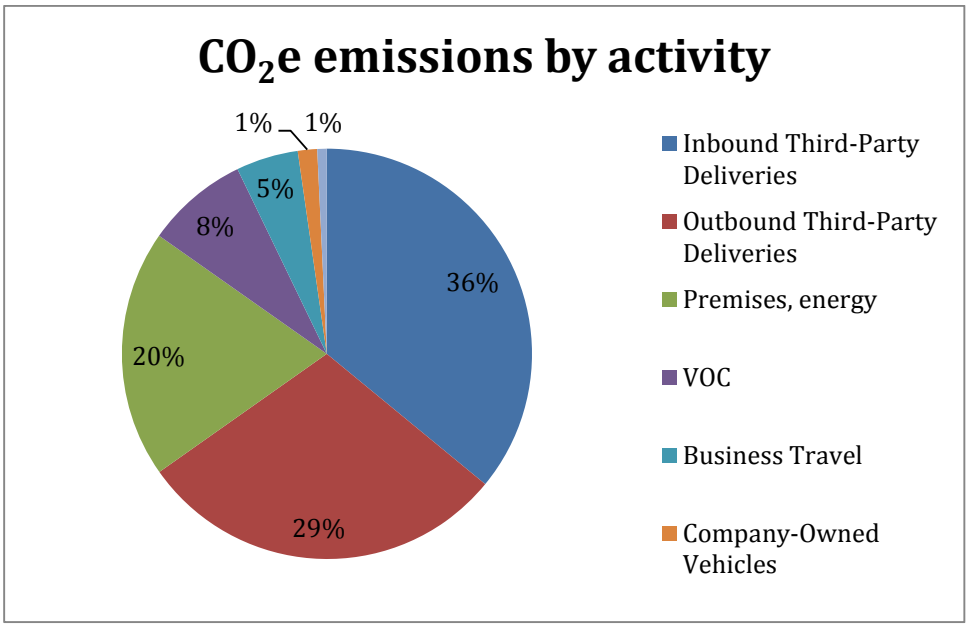
In 2011 the total emissions for Beckers' 17 business units were 73 527 tonnes of CO_2e. This is the second year of assessment and compared to last year's reporting the data quality is higher. We have therefore chosen not to compare 2010 and 2011, as the differences are rather a result of improved data 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 2011

Beckers	2011
Emissions, tCO_2e	73 527

Emissions by Activity

When emissions are divided by activity for Beckers, we get the following picture for 2011:



It illustrates that the emissions are highest for inbound (36 percent) and outbound deliveries (29 percent), which belong to scope 3 (see table 3). This is a likely picture,

as it is common that the largest portion of the total carbon footprint for companies constitutes of scope 3 emissions.

In table 2, below, the average amount of reported (emitted) VOC (in tonnes) per reported ktonne of product produced in each region is summarised.

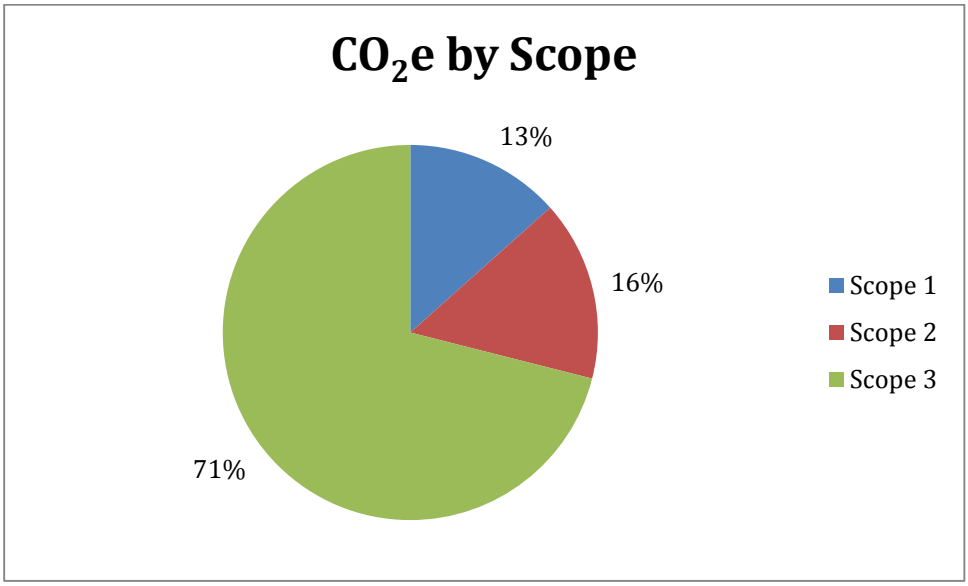
Table 2. t reported VOC/ kt product for the Geographical Regions

Business Area	t VOC/kt product (metric tonnes)	t CO2e from VOC/t VOC
Americas	3.82	12
SAPME	7.06	10
Greater China	4.03	10
E&A	4.61	8

Table 2 shows that SAPME reports the most VOC; Americas report the lowest volumes, and Greater China and E&A somewhat higher than Americas.

Tonnes CO2e from VOC was divided by the tonnes of VOC to see if there were differences between the emissions in the geographical areas. As shown in table 3 the geographical units have values within the same range. Compared to Märsta, however, which has the best available technique for heat recovery and incineration of emissions at Beckers, the CO2e emissions are higher. In Märsta only 3 tonnes CO2e per tonnes VOC is emitted. This shows a potential of decreasing the climate impact from VOC by investing in improved technology.

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



The majority of emissions stances from scope 3, followed by scope 2 and scope 1. The emission pattern as shown in table 2 is common for companies in general, where scope 3 is the largest source of emissions.

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 2011 include: products (volume produced in metric tonnes), full time employee (FTE) and total sales (KSEK).

Table 5. Emissions/Key Performance Indicator

KPI	2011	Lowest	Highest
t CO_2e /FTE	44	13	92
t CO_2e /Total Sales MSEK	20	1	36
t C02e/Products (volume in metric tonnes)	1	0.17	1.9

For Beckers as a whole, one tonne CO2e is emitted per product in metric tonnes. When compared with the lowest and highest emissions per KPI for the business units, it is shown that there is a variation in emissions data. This might to some extent be explained by differences in production, but is most likely due to quality and completeness differences in the data reported.

Per full time employee (FTE) 44 tonnes of CO2e is emitted, but as is shown in table 5 the lowest unit has 13 tonnes CO2e per FTE compared to the maximum of 92 t CO_2e per FTE.

Future

Beckers will go on assessing climate impact yearly.
Actions to reduce carbon emissions are discussed. The environmental impact of our operations is also followed by Environmental KPIs throughout the whole Becker group.
Targets have been set on improvement of Energy consumption, Waste and VOC emissions from sites. Those targets will also improve the climate impact.