BV Twentsche Kabelfabriek

Carbon Footprint Report 2015

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Introduction

Fossil fuels are gradually becoming scarcer, energy prices are rising and the climate debate is increasingly prominent. Consumers wish to deal with companies who operate sustainably, while the new generation of employees expect their employers to make a significant contribution to society and the environment. In short: environmentally aware policies are now essential.

Such policies are referred to as sustainable enterprise or Corporate Social Responsibility (CSR). For TKF maximum attention to sustainability is a given, and this has been an important strategic issue within our organisation for many years.

At TKF we see our Carbon Footprint as an element of our Corporate Social Responsibility policy. By drawing up this Carbon Footprint Report TKF will gain an insight into our CO_2 emissions, allowing us to set objectives and to implement measures to achieve these objectives.

Contents

Description of the organisation

BV Twentsche Kabelfabriek (TKF) is a market-oriented organisation, developing, manufacturing and supplying Telecoms, Building and Industrial Connectivity Solutions to clients in the market segments Broadband, (Renewable) Energy, Marine and Offshore, Infrastructure, Construction and Industry. TKF have a broad base of knowledge and expertise in R&D, manufacturing, sales and marketing, with production split between premises in Lochem and Haaksbergen, allowing us to deliver a combination of customer-specific cables and connectivity solutions with rapid turnaround times.

From our origins in 1930 as a cable manufacturer with an exclusive focus on the Dutch market TKF have developed into a technologically groundbreaking supplier of cable solutions to clients all around the world. Our membership of the technology business TKH Group N.V., an internationally operational group of businesses based in the Netherlands, provides us with access to a range of national and international marketing, purchasing, sales and research groups representing a highly diverse range of specialities.

We are fully aware of our societal role. Innovation, Growth and Responsibility are important core concepts for TKF.

Responsibilities

This report is prepared annually by the QHSE Officer and the QHSE Manager. Different elements of the business have their own responsibilities in relation to the delivery and the quality of the data. The HSE Officer will check the accuracy, completeness and demonstrability of the data provided. The TKF management team have ultimate responsibility for the process.

Methodology

TKF's Carbon Footprint Report is drawn up annually; the present report relates to financial year 2015. We drew up our first Carbon Footprint Report on the year 2009, and 2009 is therefore used as the reference year for the measurement and comparison of the established reduction objectives.

Drawing upon ISO 15001 and the GHG protocol, TKF have made a distinction between two main categories, Direct CO2 emissions (Scope 1) and Indirect CO2 emissions (Scope 2). The main categories are further subcategorised as:

Direct CO2 emissions:

- Gaseous and other fossil fuels (natural gas, LPG, diesel, lubricating oils and propane).
- Personal transport by road (lease cars and our in-house vehicle fleet).

Indirect CO2 emissions:

- Electricity
- Air transport of personnel (including intermediate landings).
- Personal transport in private cars (claimed kilometres).

A number of conversion factors taken from the CO2 Performance Ladder Manual Version 2.2 were used to determine emissions from the above subcategories.

Organisational boundary

The reporting organisation B.V. Twentsche Kabelfabriek (hereinafter referred to as TKF) is an operating company in the TKH Group. In determining the organisational boundary TKF have taken account of all locations and entities over which we have 100% operational or financial control. The following locations are included within the organisational boundary.

- BV Twentsche Kabelfabriek, Haaksbergen headquarters.
- BV Twentsche Kabelfabriek, Lochem branch premises.

A start was made on the construction of a production location for subsea cables at the Lochem premises in 2015. No production is underway as yet, but gas and electricity are being used during the construction operations.

Methodology, assumptions and uncertainties

Gaseous and other fossil fuels

Heating

This data is based on invoices from our energy supplier. They determine our consumption of gas using gas meters. We assume a level of inaccuracy from these meters of less than 1%. Seasonal effects on gas consumption were discounted in the evaluation of the objectives, in accordance with the "weighted degree days" methodology, with a balance point of 18 °C.

LPG, diesel, lubricating oils and propane

These measurement data were obtained via invoices, which are deemed to be sufficiently accurate for this purpose. This relates to LPG for our forklift trucks, sporadic use of diesel, lubricating oils and propane as required by our machine fleet.

Personal transport by road

A listing of the vehicle details and the annual distances travelled is obtained from the leasing companies. The total distance travelled annually for each fuel type is multiplied by the appropriate conversion factor from the CO2 Performance Ladder Manual 2.2. This approach provides the most accurate and reliable picture of the CO2 emissions. This applies not only to lease cars but also to vehicles in our own machine fleet where a fuel card is held.

Personal transport in private cars

This relates to business travel using a private vehicle. This data is deemed to be adequately reliable as it has been collated on the basis of the travel distances claimed by the employees and recorded by the salary administration department. No distinction is made between fuel types, as the CO2 emissions in question are lower than 1% of total CO2 emissions.

Electricity

This data is based on invoices from our energy supplier. The measurement data for electricity consumption is taken from invoices compiled on the basis of the readings from electricity meters. The data is deemed to be adequately reliable due to an inaccuracy of ± 0.5 %.

Air transport of personnel

We use the data provided by our travel agencies to calculate the distances flown. This measurement data is deemed to be sufficiently accurate. All kilometres flown are classified as follows: 0 to 700 kilometres, 700 to 2,500 kilometres and 2,500 kilometres and above. This includes intermediate landings, allowing the most realistic calculation of the CO2 emissions.

Coolants

Formally speaking, coolants in cooling installations (air conditioners) fall within Scope 2. TKF have made a conscious decision not to include these in our Carbon Footprint Report, as coolants are CO2 equivalents but are not themselves CO2.

Biomass and removal of greenhouse gases

The binding of CO2 (removal of greenhouse gases) and the combustion of biomass did not take place at TKF during 2015.

Hire cars

TKF place the sporadic use of **hire cars** and externally hired transport under Scope 3.

Carbon Footprint 2015

Total CO2 emissions for 2015 amounted to 9278 tonnes, categorised as follows:

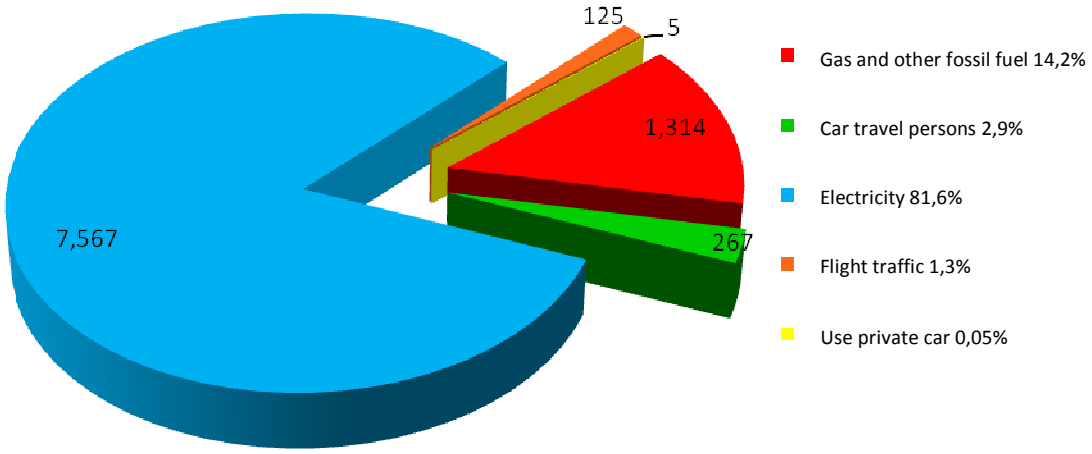


Figure: 1.2
TKF total CO2 emissions in tonnes 2015

The largest proportion of the Carbon Footprint for 2015 can be ascribed to purchased electricity (81.6%), gaseous and other fossil fuels (14.2%) and personal transport by road (2.9%). Comparing 2015 to 2009 it is notable that CO2 emissions due to electricity consumption have fallen again in 2015 (2%). CO2 emissions from gaseous and other fossil fuels have fallen by 6.1% compared to 2009. TKF's output was 20% higher than in 2015. The output figures have been corrected to reflect current cost prices.

1582 tonnes of total CO2 emissions (9278 ton) can be allocated to Scope 1 (direct CO2 emissions) and 757 tonnes to Scope 2 (indirect CO2 emissions), as represented in Figure 1.2.

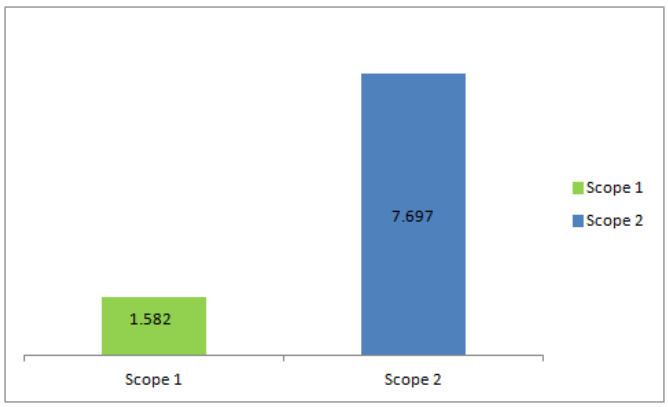


Figure: 1.2
Allocation to scope categories of TKF CO2 emissions

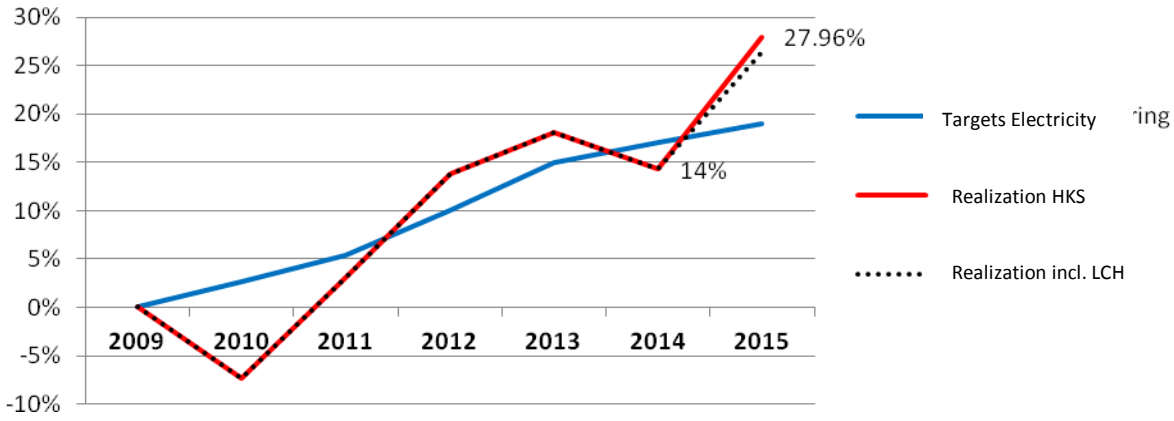
Evaluation of CO2 reduction objectives 2015

Evaluation of sub-objectives 2015

Electricity

The objective for the period 2015 is a reduction of 2% in electricity consumption compared to 2014. In order to allow comparisons of electricity consumption over the years this has been linked to the parameter "current production value". The definition of production value is the cost price value of all manufacturing orders for end products reported as complete. This production value is corrected annually on the basis of the currently applicable raw materials prices. The trends relating to electricity consumption and current production value from 2009 up to and including 2015 are compared in the graph below.

In 2015 TKF used 3% less electricity than in 2014, so that the corrected production value for 2015 has increased by 9% compared to 2014. Where a relationship is established between electricity consumption and the parameter "current production value" it is found that electricity consumption fell by around 3% in 2015, while in relation to output (production value) an eventual reduction of 12% was achieved. This means that the objective of a 2% reduction in electricity consumption for 2015 has been amply achieved. When we consider the reference year 2009 a total reduction in electricity consumption of some 26.43% is seen, see the trend graph below. This reduction was achieved despite the start-up of the Lochem factory.

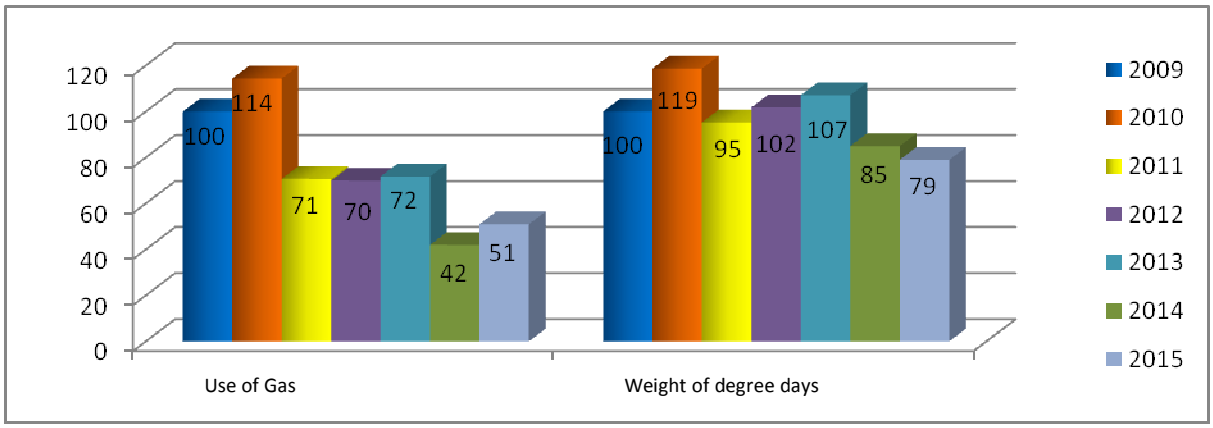


A number of actions intended to reduce electricity consumption by the specified 2% were identified and partly implemented in 2015. These included the more efficient use of lighting and the reduction of compressed air leakage losses.

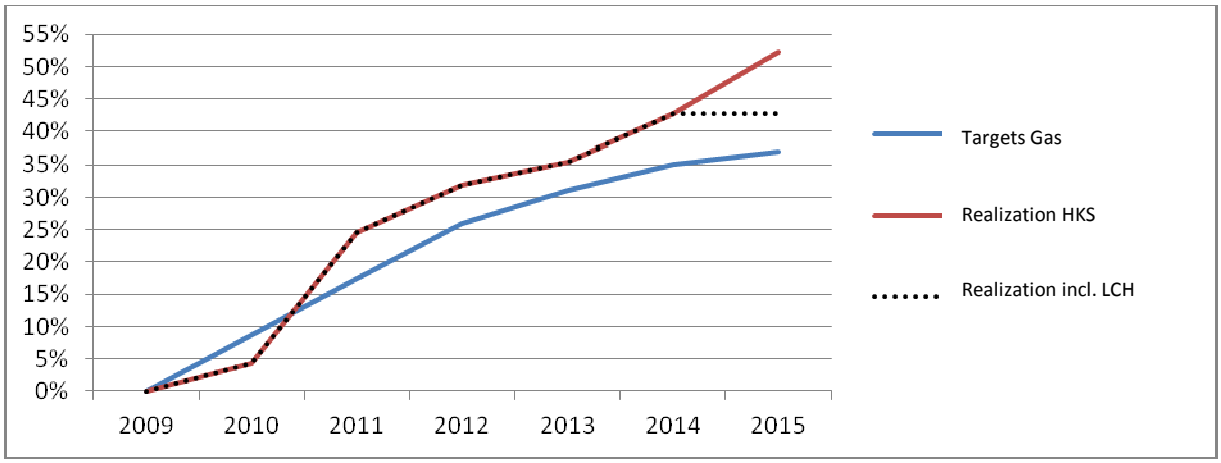
In the context of Corporate Social Responsibility and sustainability there were several communications to staff about the individual contributions they could make to the reduction of CO2 emissions by TKF, for example by switching off lights and machinery.

Gaseous and other fossil fuels

The objective for 2015 was to save 4% on gas consumption compared to 2014. Gas consumption is to some extent dependent on the weather. Climatic effects can partially be eliminated by means of the weighted degree days method, allowing visualisation of an absolute rise or fall in gas consumption (CO2 emissions). A degree day is defined as the difference between the balance point and the mean 24 hour outside temperature. The balance point here is set to 18°C, so that above a mean 24-hour temperature of 18°C the number of degree days is equivalent to 0. Weighted degree days provide a further correction for the effects of sun, precipitation and wind. This report draws upon the weighted degree days measured at the Heino weather station in Overijssel.



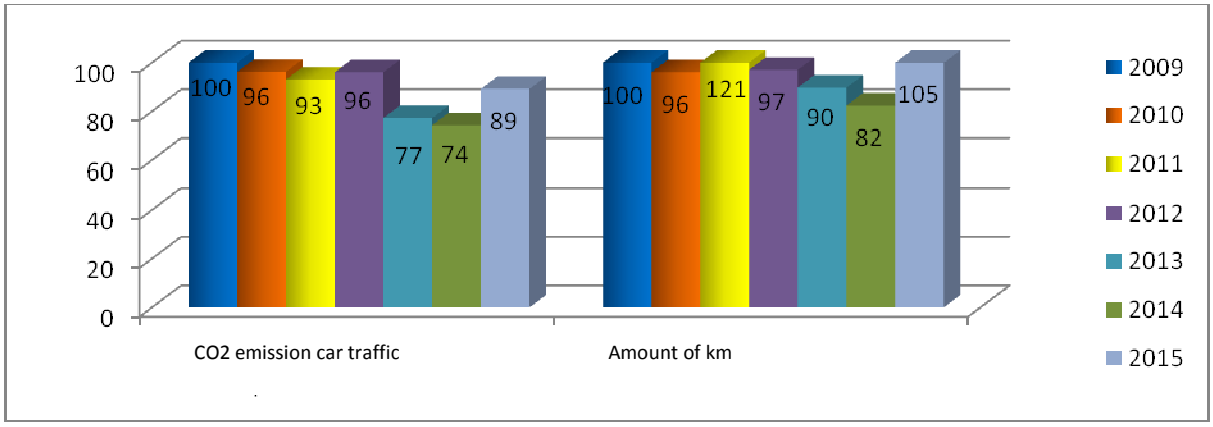
Gas consumption for 2015 rose by 17% compared to 2014, with the parameter "weighted degree days" rising by 9% over this period. This reflects the fact that 2015 was clearly less mild than 2014. Following correction of the degree days it is found that gas consumption actually remained steady, so that the reduction objective of 4% for gas consumption was not achieved. Gas consumption was reduced by around 42.5% in 2015, compared to the reference year 2009. See the trend graph below.



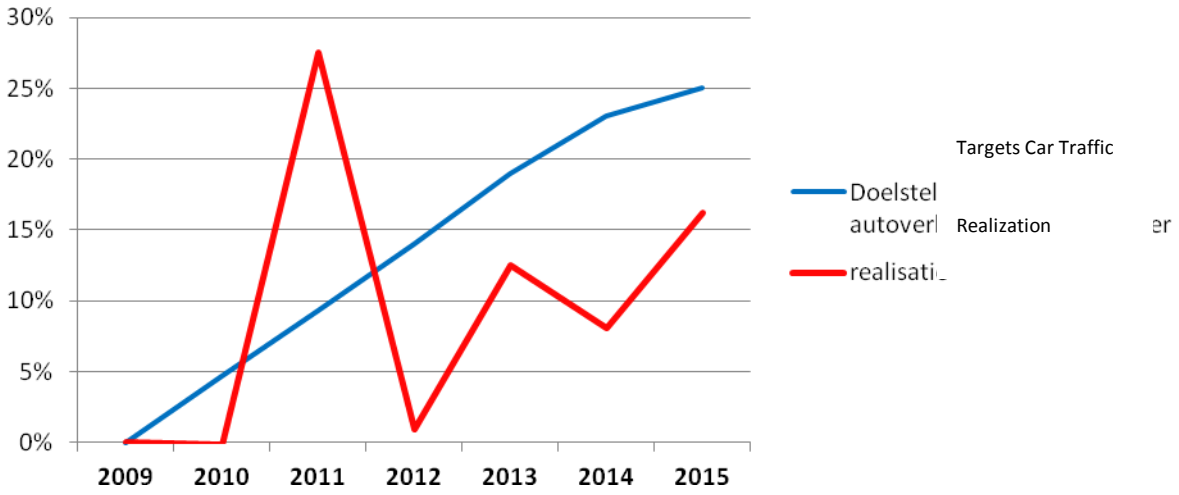
Despite the opening of the Lochem factory a clear downward trend in gas consumption is evident.
If we leave Lochem out of consideration a gas reduction objective of 10% would have been achieved, however the resumption of construction activities at Lochem meant that we had the construction site to deal with, so that the energy reduction could not be achieved.

Personal transport by road

The objective for personal transport by road was a reduction of 4% compared to 2014. In order to allow comparison with successive years CO2 emissions were standardised for the total driven kilometres for each year. What is measured here is therefore whether we have been driving in a more economical and more environmentally aware way, that is to say, whether CO2 emissions for each kilometre travelled have been reduced.

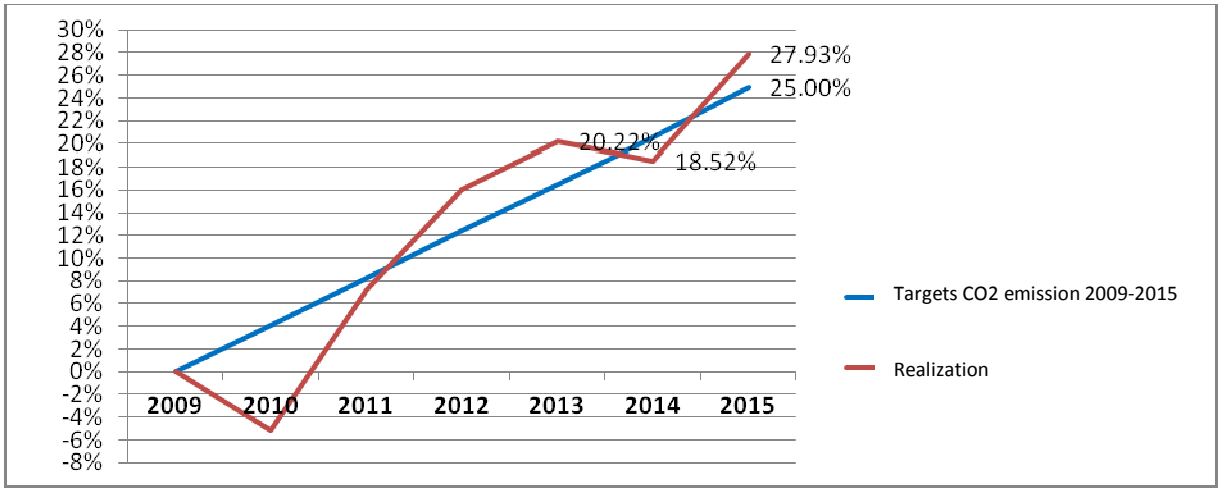


The total travel distances for 2015 fell by 13% compared to 2014, while absolute CO2 emissions showed a drop of around 17% for the same period. This reduction is the result of a shift away from the use of petrol and diesel and towards hybrid vehicles. Our lease car policy relating to the deployment of energy-efficient cars continues to be a prominent aspect of TKFs approach. A comparison with the reference year 2009 shows that CO2 emissions for car travel have been reduced by 16% in 2015. See the trend graph below.



Evaluation of primary objective for 2015

TKF have set as our primary objective a reduction of 25% in CO2 emissions by the end of 2015, compared to the reference year 2009.
At the end of 2015 TKF had managed to achieve a reduction of 27.93% compared to the reference year 2009. Following 2 years where the level of reduction remained broadly steady, a further reduction of around 50% was evident in 2015, compared to the previous year.
However the start-up of the factory in Lochem and the number of diesel vehicles as well as hybrid vehicles driving mainly on petrol rather than electrical power has meant that the reduction in CO2 emissions from vehicular transport has not fallen so steeply.
Where the factory in Lochem is concerned the problem is that this does not yet represent a production value.
Despite these difficulties we have nevertheless succeeded in achieving the target reduction.
We could improve still further on this, for example by purchasing more green electricity and by increasing the use of hybrid or fully electric vehicles at TKF.



Conclusion

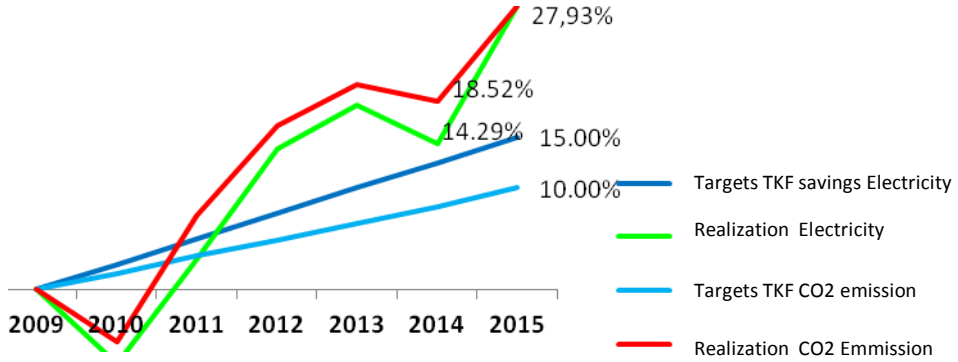
In the previous year TKF have achieved a total reduction in CO2 of 27.93% compared to 2009. The sub-objectives for 2015 relating to the consumption of electricity have been achieved, while the sub-objective for gas was missed, due to the start-up of the factory at Lochem.

The sub-objective relating to CO2 reductions for the vehicle fleet was not achieved, the reason being the acquisition and use of new, diesel-powered lease cars, as well as the continuing consumption of fossil fuels by hybrid vehicles.

The attainment of level 3 on the CSR Performance Ladder was a theme for 2014. One element of the CSR Performance Ladder involves the identification of CO2 emissions, the setting of reduction objectives and the monitoring of the achievement of these objectives. The CSR strategy of the parent company TKH is central to the fixing of the CSR objectives. TKH identified the following CO2-related objectives for 2015:

- Total energy consumption reduction in KWh/turnover volume; 15% reduction in 2015, with 2008 as the reference year.
- Total CO2 emissions footprint (energy consumption); 10% reduction in 2015, with 2008 as the reference year.

Since TKF use 2009 as the reference year and the Carbon Footprint data for 2008 is not available, 2009 was used as the reference year for the achievement of the reduction objective.



The trend graph above shows that TKF have realised their CO2-related objective in relation to CO2 emissions.

The CO2 reduction achieved will provide a solid impetus to future developments. The ambitious objective of reducing CO2 emissions by 25% by the end of 2015 has been achieved.
The initiatives launched provided a sound foundation for this achievement.

At TKF and in the production operation in particular we have adopted the LEAN philosophy, where "flow" is a crucial element: we are for example engaged on a daily basis in dealing as efficiently as possible with materials, by minimising waste and excessive consumption. The minimalisation of forklift truck traffic is another factor here.

TKF are certainly moving in the right direction, but there is always room for improvement. So for example we might make further gains by raising awareness and changing the behaviour of our employees, so that a significant reduction in energy consumption and CO2 emissions could be achieved through a large number of relatively minor savings.

There will also be a far greater emphasis on fully electric transport, while our transport policy will be modified so that petrol and diesel driven cars and the thirsty hybrid vehicles may no longer be purchased.
There are certainly plenty of alternatives if we consider the operating range of today's electric vehicles.

Haaksbergen, November 2016
T. Zondag