

SUMMARY of FRoSTA AG Corporate Carbon Footprint.

This paper reports about FRoSTA AG's company carbon footprint (CCF). In contrast to the individual product carbon footprints (PCF) of each FRoSTA product – already published on www.frosta.de since 2008 - the present climate balance is only regarding the environmental impact of all activities that take place within the boundaries of our plants and offices. So everything that is within the direct responsibility of FRoSTA AG.

In comparison to the Corporate carbon footprint of 2011 FRoSTA reduced the CO₂e emissions of the whole company by around 5.6%.

From 2011 to 2013 the following reductions were achieved:

	Emission/ usage per ton of production 2011-2013 in%
Total CO ₂ e emissions	-5,6%
Electricity	-10%
Fossil Energy	- 8%
Business trips	- 14%
factory operational material	- 20%

Total CO₂e emissions in 2013 were 57.980 tons versus 60.550 tons in 2011. Since our production volume rose in that period from 181.420 tons to 182.775 tons in 2013 the specific emissions (tons Co₂e per ton of production) decreased from 0,334 to 0,317.

The main reasons for this successful development were:

1. The introduction of our energy management system ISO 50001, which led to a series of measures to reduce the consumption of electricity.
2. The increased use of waste heat for freezing and switching from fuel to environmentally friendly natural gas contributed to the reduction in the consumption of fossil fuels.
3. The reduction of business travels is mainly due to the increased use of modern means of communication, e.g. video conferences

In 2011 we set goals to reduce total CO₂ emissions as well as other selected consumptions to be reached by 2015. Since we have already reached most of these reductions we decided to set new goals for 2013-2017:

Reduction Goals FRoSTA AG 2013 – 2017

	Unit	Goal 2011- 2015	Change 2011- 2013	Goal 2013-2017
Total CO ₂ e Emission	tCO ₂ e/tFG	-5%	-5,6%	-5%
Electricity	kWh/tFG	-5%	-10%	-5%
Fossil Energy	kWh/tFG	-10%	-8%	-5%
Total Waste	kg/tFG	not defined	-2%	-2%

Packaging	kg/tFG	-5%	+7%	not defined
Transport of Finished Goods (FG)	km	-5%	+2,3%	-5%
Business Trips	pkm/tFG	-10%	-14%	-5%

Projects of FRoSTA AG that help to achieve our environmental goals

1. FRoSTA Purity Command

Several aspects of our purity command help reduce our carbon footprint:

- Vegetables: our vegetables are always grown outside, never in heated greenhouses. This is why the carbon footprint of our Spanish tomatoes- including freezing, transport and storage- is 8 times lower than the footprint of fresh regional greenhouse tomatoes.
- Our ingredients are never transported by air
- Our fresh pasta has a carbon footprint of 190g CO₂e/kg compared to 350g Co₂e/kg for dry pasta
- Fresh ingredients have a significantly lower CO₂e footprint than highly processed ingredients (for example fresh milk vs powdered milk -25%)
- Our new roux technology saves also CO₂e

2. Implementation of our Environmental Calculations into our SAP System

Since 2013 our Life-cycle assessment is integrated into our SAP System. We thereby created a strong tool for monitoring and controlling our consumptions for all activities of the company.

3. Ecological aspects are taken into account for all Investment decisions at FRoSTA

Since 2010 we do not only consider cost aspects but also the environmental impact of our investments are taken into account.

The modernisation of our fish finger line in Bremerhaven in 2014 led to a significant reduction of CO₂e emissions due to more efficient frying and frosting.

4. New Packaging for FRoSTA Gourmet Fillet: paper vs aluminium

This new packaging is saving CO₂e twice: first of all the production, including recycling, of the new raw material is causing 40% less CO₂e emissions than aluminium. And Second, the new packaging is enabling the consumer to prepare the product in the microwave instead of the oven. This is causing four times less CO₂ emissions.

5. Energy Management

In 2013 all four plants were certified according to ISO 50001. The goal of this certification was to systematically record and collect all energy consumption in production and storage and thereby identifying further potential for savings.

In 2012 our plants Bydgoszcz and Rheintal changed from using heating oil to gas which saves 500t CO₂e per year.

6. Block-type thermal power station

The construction of our own power station in Bremerhaven is finished. A gas-fired engine is producing electric power. The advantage of this technology is that we use the waste heat to heat our buildings and processes. Estimated savings amount to 1.100 t CO₂e/year.

7. Car Policy

Our green car policy is restricting the CO₂ emission of every single car of our fleet. Our goal is to reduce the average emission of all vehicles by 4,5% every year.

FRoSTA employees who chose to drive a more economic car will receive a bonus.

Since 2013 FRoSTA is partner of the initiative PROJECT CLIMATE. By the purchase of Gold Standard CO₂ certificates we are compensating the unavoidable CO₂ emissions of our car fleet. The money is spent in China where traditional coal ovens are being replaced by more efficient and cleaner biomass burners.

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