



November 2014

NIRAS CLIMATE ACCOUNT 2013

Project no. A20124
Document no. 1214100167
Version 2
Prepared by ACS
Verified by NKH
Approved by CLP

1 INTRODUCTION

This climate account is made for the Danish consultancy company NIRAS. NIRAS is an international multidisciplinary consultancy company with activities in Denmark and 35 countries across the world.

The account follows The Greenhouse Gas (GHG) Protocol Corporate Standard¹.

1.1 Organisational and operational boundaries

This report estimates the GHG-emissions caused by NIRAS A/S activities in the year 2013. Hence, *2013 is the baseline year* for this type of inventory at NIRAS.

The operational boundary covers scope 1 and scope 2 and part of scope 3 (business travel) caused by NIRAS' Danish operations. The scopes are defined by the GHG protocol and are further explained in section 2.

The offices which are included within NIRAS A/S are:

- Allerød
- Ålborg
- Århus
- Esbjerg
- Kolding
- Odense
- Nykøbing Falster
- Holbæk
- Frederikshavn
- Holsterbro
- Ørestaden

For this inventory a selected range of activities (within scope 1, scope 2 and scope 3) have been included, dependent on the accessibility of data and to which degree it is possible to influence the magnitude of the emissions.

The included activities are:

Scope 1

- Natural gas for heating
- Use of company cars
- Use of employee cars for business purpose (car allowance)

Scope 2

- Electricity used in offices
- District heating used in offices
- Production of renewable energy

¹ <http://www.ghgprotocol.org/standards/corporate-standard>

Scope 3

- Transportation by train
- Transportation by airplane

In future reports the organisational and operational boundaries may vary (new activities included/old activities excluded), and new measurements as well as new GHG emission sources may be applied. In case of such an occurrence, NIRAS will conduct a recalculation and backcast these data points.

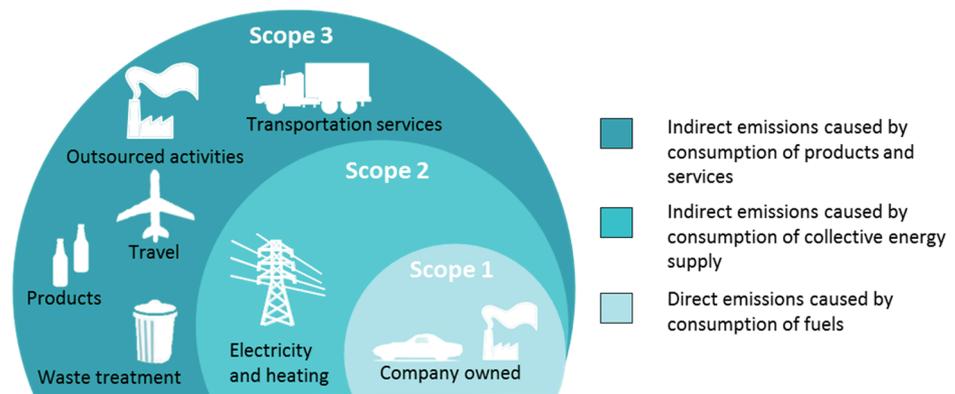
In the following section the results of the 2013 climate account will be presented.

2 RESULTS 2013

The emissions are categorized into either direct or indirect emissions. Direct emissions are defined as emissions that are directly caused by a source, which the company owns or controls. Indirect emissions arise from the company's consumption of energy products and services, where the company does not have direct control or ownership of the emission source.

The direct and indirect emissions are divided into the following scopes (see The GHG Protocol Corporate Standard):

- Scope 1: All direct discharges caused by the company, for example. the combustion of fuels in their own cars and own boilers for energy production.
- Scope 2: All indirect emissions caused by the company's purchase of energy, including electricity and district heating.
- Scope 3: Other indirect emissions caused by the company's procurement of goods and services, for example. procurement of IT equipment, consulting, food, outsourced activities, travel, advertising, marketing, waste, etc.



2.1 The total CO₂-emission in 2013

The total GHG-emissions for NIRAS A/S is 2,149 ton of CO₂ for the year 2013. This is equivalent to 2.1 ton per fulltime employee.

In the table below a distribution of the emissions can be seen according to the different scopes and activities:

Activities	CO ₂ -emissions	% share
Scope 1	934 ton	43 %
Natural gas for heating	229 ton	10%
Use of company cars	318 ton	15 %
Use of employee cars for business purpose	387 ton	18 %
Scope 2	610 ton	28 %

Electricity used in offices	504 ton	23 %
District heating used in offices	106 ton	5 %
Scope 3	605 ton	33 %
Transportation by train	15 ton	1 %
Domestic air transport	51 ton	2 %
Continental air transport	159 ton	7 %
Intercontinental air transport	380 ton	18%
Total	2,149 ton	100 %

Table 2.1 - CO2-emissions divided according to the different scopes and activities

The results of table 2.1 are also presented in the multi-layer pie chart below:

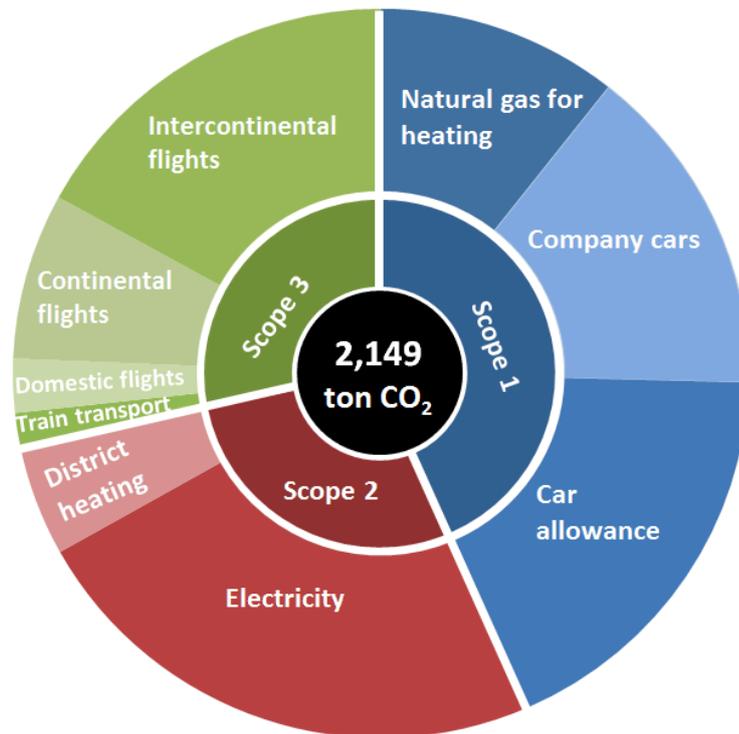


Figure 2.1 - Visualization of the distribution of the CO2-emissions on different scopes and activities

2.2 Production of renewable energy

NIRAS also produces renewable energy (electricity) based on solar panels, and also collects food waste which is used to produce electricity and heat by a third party.

The solar panels produced a total of 194,375 kWh at the Allerød office in 2013. Of these 14,396 kWh were sold back to the grid. The remaining 179,979 kWh have been used at the Allerød office and constitutes approx. 20 % of the consumed electricity in the building.

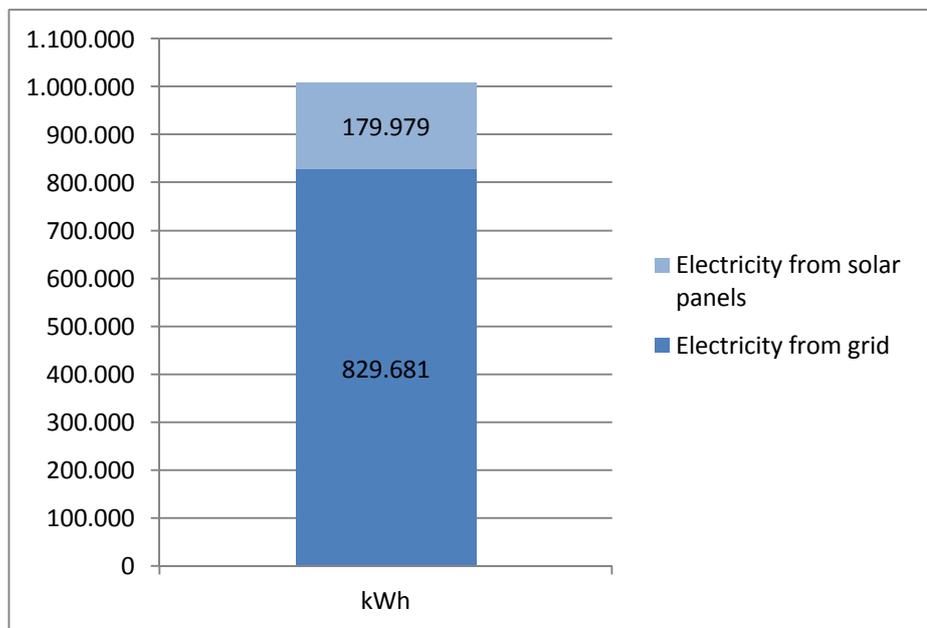


Figure 2.2 - Division of the total consumption of electricity at the Allerød office on electricity from grid and solar panels

By producing electricity on solar cells a reduction of 64,432 kg CO₂ has been accomplished. Please note that the CO₂ emission related to electricity in table 2.1 only includes electricity purchased from the grid, and the reduction of 64.432 kg CO₂ has been accounted for.

Furthermore NIRAS sells food waste to a company called Biotrans Nordic. They produce electricity and heating from it and the food waste collected within NIRAS in 2013 produced a total of 6,618 kWh of electricity and 8,288 kWh of heating. This equivalents to 3,383 kg CO₂ reduction, which is included in the climate account.