

Company Energy Audit

Including the Calculation of a Company's Greenhouse Gas Emissions

Manual

Version: 1.0 including Commuting



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Congratulations!

Your company has decided to carry out a calculation of its greenhouse gas emissions. We are happy that your company is taking responsibility for the environmental impact of its activities. The calculation of greenhouse gas emissions allows you to identify reduction potential. In the following document we give an introduction on why and how the calculation of greenhouse gas emissions is carried out. Additionally we provide you forms in MS Excel necessary for gathering relevant data of your company.

Introduction

The increased amounts of carbon dioxide (CO₂) and other greenhouse gases are the primary causes of the human-induced component of global warming. They are mainly released by the burning of fossil fuels for the purpose of electricity production, space heating and transport (apart from land clearing and agriculture, etc.) and lead to an increase in the greenhouse effect.

Your company can assume its responsibility for its contribution to global warming by reducing its greenhouse gas emissions.

As a first step your greenhouse gas emissions for the year 2006 need to be calculated.

Calculation of Greenhouse Gas Emissions

The greenhouse gas emissions caused by a company originate from the company's:

- 1 **Energy use** (electricity and space heating)
- 2 **Fuel Use** (company's vehicles)
- 3 **Business Travel** (air, bus, train, LUAS/Dart, car, taxi, motorbike/moped)
- 4 **Commuting** (bus, train, car)

The attached forms are designed to gather information for these four sections necessary for the calculation of the greenhouse gas emissions.

Data needed

The figures needed can be excerpted from:

- invoices (e.g. ESB, Bordgáis, Airtricity, bills from petrol stations) for the section "energy use" and "fuel use"
- travel expense report (e.g. tickets for plane, bus, train, LUAS/DART, miles done by private car for business purpose) for the section "business travel"
- questionnaire for employees

Regarding invoices, expenses and statistics ask your accountant for help!

Results

The results can be presented as:

- total annual greenhouse gas emissions in kg
- greenhouse gas emissions/m²
- greenhouse gas emission/employee

Mobility Management Plan

If your company intends to establish a mobility management plan which includes the commute modes of its employees, the greenhouse gas emissions associated with these modes may be calculated.

In order to gather the relevant data you have to interview each employee about his/her commuting mode.

Future Action

As a future step (that is not part of this calculation) the potential for reducing the greenhouse gas emissions needs to be identified and realised. A reduction of greenhouse gas emissions might result in a reduction of costs; the reduction of the electricity does not only result in a reduction of greenhouse gas emissions but in a lower electricity bill as well.



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