

# REPORTING CRITERIA VODAFONEZIGGO

## Carbon footprint according to international and national standards.

To acquire a reliable and undisputable footprint, clear scoping of the organizational and operational boundaries are required. Therefore, the footprint of VodafoneZiggo is drawn according to the guidelines of the Greenhouse gas protocol (GHG protocol) and the ISO 14064-1 standard.

## Organizational boundaries

The organizational boundaries of the carbon footprint of VodafoneZiggo are shown in the figure below. The greenhouse gas emissions within these boundaries are attributed to the carbon footprint of VodafoneZiggo.

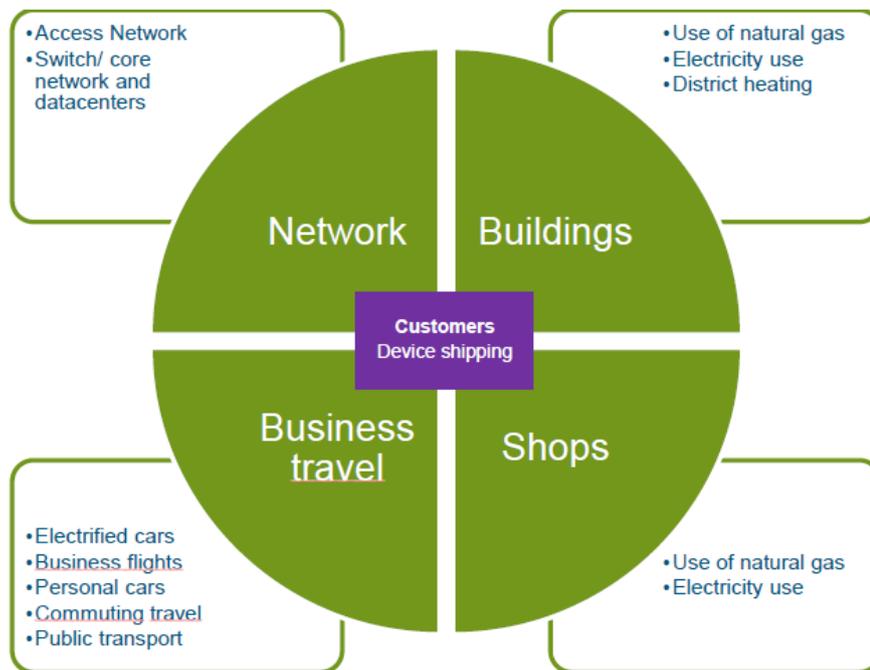


Figure 0.1: Operations and use of VodafoneZiggo.

## Operational boundaries

To define the operational boundaries for the carbon footprint of VodafoneZiggo the scope classification of the GHG Protocol has been used. The GHG Protocol makes a difference between direct and indirect emissions, where the indirect emissions are divided in indirect emissions due to use of electricity and district heating and emissions due to other indirect emissions.

Scope 1 consists of direct greenhouse gas emissions due to combustion, for example burning natural gas to warm buildings or using gasoline for company-owned cars. Also, direct emissions caused by the leakage of refrigerants and fire suppressants belong to this scope.



Scope 2 consists of the indirect emissions of greenhouse gases due to purchased energy, for example emissions caused by the production plants of electricity or district heating.

Scope 3 consists of all other indirect greenhouse gas emissions. Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. Some examples of scope 3 activities are extraction and production of purchased materials, waste disposal, personal cars for business travel.

The GHG Protocol includes all scope 1- and 2-emissions of the six Kyoto gases in a carbon footprint, with the exception of the emissions caused by leakage of refrigerants and fire suppressants if no reliable data are available.

Scope 3-emissions can be reported optionally. A scope 3-analysis can be helpful to make an inventory of the own carbon footprint within the operating activity chain. By this, a more effective climate policy can be developed.

For VodafoneZiggo, the scopes are defined as below:

**Scope 1 – Direct emissions due to:**

- Fuel usage
- for heating of shops and buildings (natural gas);
- for the access sites (gasoil);
- for the switch/ core sites and datacenters (gasoil);
- for company cars (petrol and gasoil).
- Refrigerants and fire suppressants.

**Scope 2 – Indirect emissions due to:**

- Electricity purchased for the buildings, shops and the network;
- Electricity used for electrified cars;
- District heating for buildings.

**Scope 3 – Other Indirect GHG emissions**

The aspects of scope 3 which VodafoneZiggo reports are based on:

1. the relevance of the activity for (the aim of) the company;
2. availability and reliability of data;
3. reporting of peers for the activity;
4. promotional significance (Public Relations/visibility for consumers).

VodafoneZiggo have decided to include emissions due to:

- Business flights;
- Business travel by personal cars;
- Business travel by public transport;
- Commuting travel;
- Shipping device boxes to end-users;

because:

- VodafoneZiggo has direct influence;
- VodafoneZiggo has possibilities for indirect influence;
- VodafoneZiggo promotes mobile working and has the policy to reduce business traveling and paper use;
- Detailed data are available;
- Peers report emission by business flights.



### **Emission factors**

To define the carbon footprint of an organization, the amount of (fossil) energy usage should be converted to the amount of CO<sub>2</sub>-emission caused by this usage. The impact of leaked refrigerants has been directly converted to CO<sub>2</sub>-equivalents based on data about total GWP5-values of refrigerant use. To calculate the carbon footprint of VodafoneZiggo for 2018 from energy use, emission factors of CO<sub>2</sub>emissiefactoren.nl have been used. This is a list of emission factors by a joint collaboration of Dutch NGOs to calculate CO<sub>2</sub>-emissions for Dutch GHG activities.

### **Assumptions used**

The scope 3 emissions caused by business travel by public transport and business travel by personal cars have been calculated based on the calculation of emissions in 2016 and extrapolated to an 2018 estimation based on total FTE.