The Path to Climate Neutrality Measuring: the Basics





United Nations Climate Change Global Climate Action





CLIMATE NEUTRAL NOV

Global Climate Action

Measure

Calculating greenhouse gas emissions



Measure: Terminology

1- GHG inventory/carbon footprint

Greenhouse gas emissions that are attributable to the organization

2- Carbon¹

Generally understood as "carbon equivalent" or CO2e, includes all GHGs, not only CO2 or carbon-containing ones

3- Emission sources

Activities that generate GHG emissions.

4- Emission factors

Conversion factors from activities to GHG emissions.



1 Note that this term can have other meanings for other organizations

1- Completeness

All relevant emission sources must be included.

2-Consistency - Comparability

The same approach must be used year after year.

3- Transparency

All information (including assumptions and approximations) must be publicly disclosed.



Measure: GHG Protocol and its Scopes

Scope 1 – All Direct Emissions from the activities of an organisation or under their control.

Burning of fuels, driving owned cars.

Scope 2 – Indirect Emissions from electricity/heating/cooling purchased and used by the organisation.

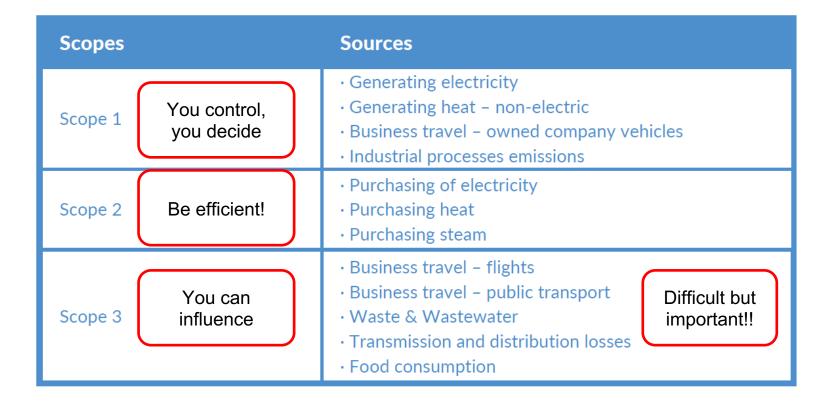
Purchasing electricity, heat, steam, cooling

Scope 3 – All Other Indirect Emissions

Everything else! Business travel, commuting, waste, water, purchased goods and services of all types

Scope 3 is usually the biggest and the most complex, but also very important to work on







Scope 2

Formally, organizations must report Scope 2 electricity-related emissions based on market-based and location-based method.

For Climate Neutral Now purposes and our calculator, we use location-based method and emissions will be zero if there is a renewable energy contract or guarantee of origin in place.

Scope 3

The GHG Protocol has detailed guidance on how to determine which emission sources to include in Scope 3.

For Climate Neutral Now purposes, we encourage organizations to include all scope 3 sources where it is feasible to make an estimation.



GHG emissions = activity level x activity emission factor

GHG emissions = 4000 kWh/year x **0.596 kg CO2e/kWh** / 1000 = 2.38 tonsCO2e/year

DEFRA Emission Factors

- Conversion factors allowing calculation of GHG emissions from a range of activities
- Developed by UK Government's Department for Environment, Food & Rural Affairs (DEFRA)
- They are the basis for our simplified calculator, except for electricity-related emissions.



Thank you





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