

Philips' Corporate Emission Accounting Methodology Scope 1 & 2

At Philips, while we focus on our purpose to improve people's health and well-being, we acknowledge that the healthcare industry is a major contributor to climate change and waste. As such we are committed to pave the way for a low-emission future by reducing not only our scope 1 and 2 emissions, but also our indirect scope 3 emissions. This effort is supported and overseen by the Executive Committee, which seeks increased transparency for its stakeholders to ensure accountability.

We account for 100% of scope 1 and 2 emissions from operations over which Philips or one of its subsidiaries has operational control, but not for emissions from operations in which Philips owns an interest but does not have operational control. By contrast, scope 3 emissions are derived from indirect activities outside Philips control, meaning calculations also include non-operated assets.

Of the 15 scope 3 subcategories, we account for Philips' five most material categories, which together make up 95% of our scope 3 emissions. These are: purchased goods and services (category 1), upstream transportation and distribution (category 4), business travel (category 6), downstream transportation and distribution (category 9), and use of sold products (category 11).

Each scope and scope 3 category is subject to its unique methodology elaborated on in its own document. All calculations are in line with the Greenhouse Gas Protocol; used for management purposes; in line with our Science Based Targets initiative submission; and subject to reasonable assurance by the external auditors of Philips.

Scope 1



Stationary &
Process
emissions



Fugitive
emissions

Scope 2



Purchased
electricity



Purchased
heating



Purchased
cooling



Purchased
steam

Scope 1 & 2

1 Introduction

Scope 1 greenhouse gas (GHG) emissions are direct emissions from sources owned or controlled by the company, such as fuel combustion or non-CO₂ greenhouse gases generated by the fugitive emission of refrigerants or use of chemicals on site. Scope 2 emissions are indirect emissions resulting from the generation of purchased electricity, steam, heating, or cooling consumed by the company.

We report our scope 1 and 2 emissions (in tonnes CO₂-equivalent) in accordance with the GHG protocol. Regarding Scope 1 this includes stationary, process and fugitive emissions¹. Mobile emissions are currently nonexistent in our scope 1 operating landscape. We do however account for our leased and rented vehicles under "scope 3 category 6: Business travel."

2 Methodology

In line with the GHG protocol we use the calculation-based method and simplified estimation method to calculate our scope 1 and 2 emissions.

$$\text{Tonnes CO}_2\text{-e} = \text{Energy or refrigerant consumption} \times \text{Emission factor}$$

2.1 Calculation based methodology

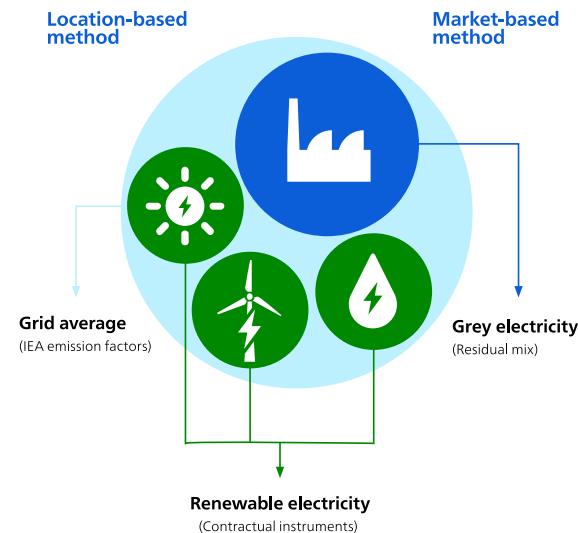
For the calculation-based method, sites report their energy consumption via our internal sustainability reporting system monthly. Consumption per resource is then multiplied with resource or country average emission factors. This approach is being used for all industrial sites and 80% of our non-industrial sites' floor area. Together this covers more than 90% of our total energy demand.

2.1.1 Scope 1 emissions

Reporting sites are required to report their consumption of anthropogenic or biogenic-based fuels, biomass, and refrigerant refills. Total consumption is then converted using externally validated conversion factors into energy values (Lower Heating Values (LHV)). Consumption per resource is finally aggregated across all sites and multiplied by resource specific emission factors.

2.1.2 Scope 2 emissions

According to the GHG protocol, corporations are required to calculate their scope 2 emissions using both the market-based and location-based approach². The market-based approach considers energy emissions by examining the consumer choice and their direct purchase decisions. The location-based approach on the other hand uses country average emission factors. Emissions are therefore not influenced by purchase agreements and can only be reduced by decreasing the activity data.



2.1.2.1 Market based approach

For the emissions caused by energy purchase, we first subtract the amount of renewable energy certificates acquired in a specific region from the actual or estimated amount of energy purchased in that location. The remainder can then be considered grey energy meaning of a nonrenewable source.

We then apply residual mix emission factors to prevent any double counting of renewable energy sources. This factor only entails non-renewable, untracked, or unclaimed energy that is utilized for the segment not covered by purchase certificates. Using country or location specific emission factors would also entail the proportions of renewables that are already accounted for in the equation through the renewable energy certificates.

¹ World Resource Institute & World Business Council for Sustainable Development. (n.d.). Corporate standard: Greenhouse gas protocol. Corporate Standard | Greenhouse Gas Protocol. Retrieved from <https://ghgprotocol.org/corporate-standard>

² Sotos, M. (2020). Ghg Protocol Scope 2 Guidance - An amendment to the Ghg Protocol Corporate Standard. World Resources Institute.

2.1.2.2 Location based approach

For the location-based approach we only examine actual or estimated energy purchase and disregard any renewable energy certificates acquired. This is then multiplied by grid or resource related emission factors.

2.2 Estimation methodology

For the remaining 20% of our non-industrial sites' floor area, the estimation method is based on approximations of activity using the geographic location, building type, and square meters. Please note that the extrapolation applies only to natural gas (scope 1) and electricity consumption (scope 2).

We extrapolate resource intensities per square meter for non-industrial sites using the logic below (same logic is applied for scope 2 emissions):

- Average square meter consumption of sites of the same building type in the Country of operation (e.g., Netherlands, UK, US)
- If the previous is not available we use the Market average (e.g., Western Europe, North America)
- If the previous is not available we use the Regional average (e.g., Greater China, International Markets)
- If no site of same building type reports consumption, we use the World average

Note that we extrapolate warehouses and non-warehouses separately. This is done because generally warehouses have statistically significant different resource requirements compared to all other non-industrial sites.

Although this approach is less accurate, the simplification strongly increases the feasibility while introducing insignificant margin of error. This is because these sites are generally externally owned or shared spaces, meaning we do not have access to activity data. Furthermore, we apply a conservative approach by also including more resource intensive buildings in our extrapolation logic.

3 Emission factors

To convert activity data into tonnes CO₂-equivalent (CO₂e) emissions externally validated emission factors are leveraged.

For the scope 1 emissions, we use two different sets of emission factors. The Department for Business, Energy & Industrial Strategy (BEIS) database is used for all fossil fuels. For all other relevant scope 1 fugitive emissions, the Intergovernmental Panel on Climate Change (IPCC) database is used. We choose BEIS because it is updated more frequently than the IPCC database.

Our scope 2 electricity factors are market specific and vary depending on whether a location- or market-based approach is used.

- For all location-based emissions we apply the country average emission factors of the International Energy Agency (IEA). If this is not available a world average is used.
- For our market-based emissions we apply the e-Grid residual mix emission factor for sites in the USA and the AIB European residual mix emission factors for sites in Europe. For all other geographies, we apply the IEA country average factors as no residual mix emission factors are available.

As we do not have any ownership over the transmission and distribution network, we only account for the energy transformation emissions in scope 2. All other electricity life cycle factors are accounted for in "scope 3 category 3: fuel & energy related activities."

For the purchase of heat, cooling, and steam we use the emission factors published by BEIS (formerly DEFRA). These are updated annually ensuring high degrees of validity.

4 Global Warming Potentials

In accordance with international reporting requirements, emissions from each of the gases is weighted by its Global Warming Potential (GWP), so that total Greenhouse Gas emissions can be reported on a consistent basis. For all of our fuel-related scope 1 emissions, the GWPs are used from the IPCC Fifth Assessment Report. For emissions related to the use of refrigerants (fugitive emissions) the GWPs from the IPCC Sixth Assessment Report are leveraged. For our scope 2 emissions the GWPs of the IPCC fifth Assessment Report are used.

