



Detailed Summary of Areas of Impact by Scope¹

This resource provides information about prominent sources of impact in relation to the scope that they fall under. The information is adapted from the *Greenhouse Gas Protocol : A Corporate Accounting and Reporting Standard*. Links to the information are found throughout or you can find the document [here](#).

Recall: Scope 1, 2 and 3²

Scope 1: All direct GHG emissions originating from: The generation of electricity, heat, or steam; physical or chemical processing; transportation of materials, products, waste, and employees; emissions resulting from intentional or unintentional releases.

Scope 2: Indirect GHG emissions originating from the consumption of purchased electricity, heat or steam.

Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

¹ This diagram is from <http://www.crchallenge.org/wp-content/uploads/2011/07/WRI-GHG-SCOPE3-REPORTING.png>

² Information on Scope 1, 2 & 3 adapted from *The Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard* found here: <http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf>

Area of Impact: Electricity

Scope 2

Electricity produced through non-renewable sources (e.g. coal) has high environmental impacts that contribute to global climate change. Alternatively, electricity produced by renewable methods has/have a much lower environmental impact. The impact of the electricity you purchase depends on the makeup of the electricity being produced by your electricity provider. Alternatively electricity can also be produced on site either through renewable (e.g. solar panels) or non-renewable ways (e.g. diesel generator)

Examples:

- Electricity purchased from local distribution company
- Electricity produced on site
- Diesel Generator

[For more information please refer to Chapter 4 of the GHG-P, pg. 27, and pg. 29 \(Electricity-related activities not included in Scope 2, see Appendix A\).](#)

Area of Impact: Fossil Fuels

Scope 1 & 3

Fossil fuels are burned to produce useful energy (electricity, heating etc.). As a result, these fossil fuels release greenhouse gases as well as other air pollutants into the air.

Examples:

- Combustion of fuel in boilers or furnaces owned by your organization
- Business travel in vehicles owned by the organization, such as company cars or corporate jets
- Employee commuting in company-owned vehicles

[For more information please refer to Chapter 4 of the GHG-P, pg. 27, \(Generation of electricity, heat or steam, Transportation of Materials, Scope 1\) and pg. 29 \(Transportation related activities, Scope 3\).](#)

Area of Impact: Transportation

Scope 3

Transportation in this case refers to the transport of people through a variety of means. Despite the fact that it is through a variety of means, the impact would typically entail measuring the energy source to power the mode of transportation. For example, the gasoline used to power a bus, or personal vehicle, the jet fuel used to power an airplane, or the electricity used to power a subway car.

Examples:

- Air, marine and rail travel
- Public transit and use of personal vehicle
- Business travel in non-company owned vehicles, such as rental cars, employee cars, trains, and commercial planes
- Employee commuting in vehicles not owned by the reporting organization

[For more information, please refer to Chapter 4 of the GHG-P, pg. 29 \(Transportation related activities, Scope 3\).](#)

Area of Impact: Waste

Scope 3

For waste, emissions are generated from the transport of the waste from your organization to the landfill, recycling facility etc. Additional environmental impact is dependent on the disposal method.

Examples:

- Decomposition of waste sent to landfill
- Recycled waste
- GHG emissions from the incineration of waste

Waste Sources:

- Organics
- Mixed Paper, cardboard, foam packaging and mixed containers
- Building renovation material and metal
- Yard waste, soil, paper towels
- Furniture, wood and pallets
- Fluorescent lamps, batteries, and e-waste

[For more information, please refer to Chapter 4 of the GHG-P, pg. 29 \(Waste disposal, Scope 3\).](#)

Area of Impact: Purchasing

Scope 3

This category covers a broad range of categories, including all purchased goods, and services. This includes goods such as office supplies, paper, and services such as banking. The environmental impact for products is derived from the raw materials, manufacture and delivery of the purchased goods. For services, the environmental impact involves the emissions associated with the service. For example for

banking services, this would involve the energy and resources required to operate the bank. This category is mainly concerned with the emissions of the purchased goods or services that the organization relies on.

Examples:

- Production or manufacture of materials and resources used by an organization, such as furniture, paper, equipment, toner cartridges, etc.
- Outsourced activities such as shipping, courier services, and printing services

[For more information, please refer to Chapter 4 of the GHG-P, pg. 29 \(Use of sold products and services, Scope 3\).](#)

Area of Impact: Freight

Scope 1 & 3

Environmental impact from the transport of goods to or from an organization.

Examples:

- Rail, marine, air, and road freight

[For more information, please refer to Chapter 4 of the GHG-P, pg. 27 \(Transportation of materials, products, waste and employees, Scope 1\) and pg. 29 \(Transport-related activities, Scope 3\).](#)

Area of Impact: Capital

Scope 3

The environmental impact of the manufacture or construction of any long term capital asset (goods). The environmental impact of these goods would be amortized over the lifespan of the product.

Examples:

- Computers
- Buildings, and roads
- Machinery

[For more information, please refer to Chapter 4 of the GHG-P, pg. 29 \(Leased assets, franchises, and outsourced activities, Scope 3\).](#)

Area of Impact: GHG Release (Industrial)

Scope 1, 2 & 3

Direct release of GHG emissions. This would be most commonly from A/C units that release GHGs, but are also commonly caused by industrial processes

Examples:

- Refrigerant usage and leakage in A/C units
- Laboratory gas usage
- Industrial GHG Sectors
- Iron and steel manufacture, non-Ferrous Metals
- Chemicals, petroleum refining
- Cement, glass, pulp and paper
- Food

[Please refer to Chapter 4 of the GHG-P, pg. 27 \(Physical or chemical processing, and fugitive emissions, Scope 1\) and pg. 29 \(Electricity-related activities not included in Scope 2, Scope 3\).](#)

[For more detailed information on all of these areas of impact, please also look into the Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard and on p. 32 for specific breakdowns of Scope 3 categories.](#) The original GHG-P gives the reader a breakdown of everything that your business can include in its carbon footprint. Scope 3 calculations are optional and usually the largest component of any carbon footprint, a supplemental document is available.