GRI STANDARDS

GRI GSSB

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GRI 305

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About this Standard

Responsibility	This Standard is issued by the Global Sustainability Standards Board (GSSB). Any feedback on the GRI Standards can be submitted to standards@globalreporting.org for the consideration of the GSSB.
Scope	*GRI 305: Emissions* sets out reporting requirements on the topic of emissions. This Standard can be used by an organization of any size, type, sector or geographic location that wants to report on its impacts related to this topic.
Normative references	This Standard is to be used together with the most recent versions of the following documents. *GRI 101: Foundation* *GRI 103: Management Approach* *GRI Standards Glossary* In the text of this Standard, terms defined in the Glossary are underlined.
Effective date	This Standard is effective for reports or other materials published on or after 1 July 2018. Earlier adoption is encouraged.

Note: This document includes hyperlinks to other Standards. In most browsers, using **'ctrl' + click** will open external links in a new browser window. After clicking on a link, use **'alt' + left arrow** to return to the previous view.

Introduction

A. Overview

This Standard is part of the set of GRI Sustainability Reporting Standards (GRI Standards). These Standards are designed to be used by organizations to report about their impacts on the economy, the environment, and society.

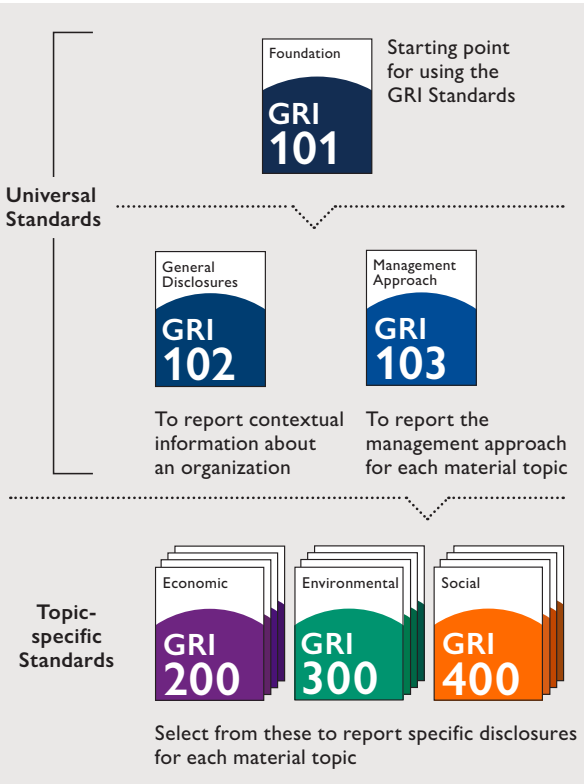
The GRI Standards are structured as a set of interrelated, modular standards. The full set can be downloaded at www.globalreporting.org/standards/.

There are three universal Standards that apply to every organization preparing a sustainability report:

GRI 101: Foundation
GRI 102: General Disclosures
GRI 103: Management Approach

***GRI 101: Foundation* is the starting point for using the GRI Standards. It has essential information on how to use and reference the Standards.**

Figure 1
Overview of the set of GRI Standards



An organization then selects from the set of topic-specific GRI Standards for reporting on its material topics. These Standards are organized into three series: 200 (Economic topics), 300 (Environmental topics) and 400 (Social topics).

Each topic Standard includes disclosures specific to that topic, and is designed to be used together with *GRI 103: Management Approach*, which is used to report the management approach for the topic.

***GRI 305: Emissions* is a topic-specific GRI Standard in the 300 series (Environmental topics).**

B. Using the GRI Standards and making claims

There are two basic approaches for using the GRI Standards. For each way of using the Standards there is a corresponding claim, or statement of use, which an organization is required to include in any published materials.

1. The GRI Standards can be used as a set to prepare a sustainability report that is in accordance with the Standards. There are two options for preparing a report in accordance (Core or Comprehensive), depending on the extent of disclosures included in the report.

   An organization preparing a report in accordance with the GRI Standards uses this Standard, *GRI 305: Emissions*, if this is one of its material topics.

2. Selected GRI Standards, or parts of their content, can also be used to report specific information, without preparing a report in accordance with the Standards. Any published materials that use the GRI Standards in this way are to include a 'GRI-referenced' claim.

See Section 3 of *GRI 101: Foundation* for more information on how to use the GRI Standards, and the specific claims that organizations are required to include in any published materials.

C. Requirements, recommendations and guidance

The GRI Standards include:

Requirements. These are mandatory instructions. In the text, requirements are presented in **bold font** and indicated with the word 'shall'. Requirements are to be read in the context of recommendations and guidance; however, an organization is not required to comply with recommendations or guidance in order to claim that a report has been prepared in accordance with the Standards.

Recommendations. These are cases where a particular course of action is encouraged, but not required. In the text, the word 'should' indicates a recommendation.

Guidance. These sections include background information, explanations and examples to help organizations better understand the requirements.

An organization is required to comply with all applicable requirements in order to claim that its report has been prepared in accordance with the GRI Standards. See *GRI 101: Foundation* for more information.

D. Background context

In the context of the GRI Standards, the environmental dimension of sustainability concerns an organization's impacts on living and non-living natural systems, including land, air, water and ecosystems.

GRI 305 addresses emissions into air, which are the discharge of substances from a source into the atmosphere. Types of emissions include: greenhouse gas (GHG), ozone-depleting substances (ODS), and nitrogen oxides (NO_x) and sulfur oxides (SO_x), among other significant air emissions.

GHG emissions

GHG emissions are a major contributor to climate change and are governed by the United Nations (UN) 'Framework Convention on Climate Change' and the subsequent UN 'Kyoto Protocol'.

This Standard covers the following GHGs:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF_6)
- Nitrogen trifluoride (NF_3)

Some GHGs, including methane, are also air pollutants that have significant adverse impacts on ecosystems, air quality, agriculture, and human and animal health.

As a result, different national and international regulations and incentive systems, such as emissions trading, aim to control the volume and reward the reduction of GHG emissions.

The reporting requirements for GHG emissions in this Standard are based on the requirements of the 'GHG Protocol Corporate Accounting and Reporting Standard' ('GHG Protocol Corporate Standard') and the 'GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard' ('GHG Protocol Corporate Value Chain Standard'). These two standards are part of the GHG Protocol developed by the World Resources Institute (WRI) and the World Business Council on Sustainable Development (WBCSD).

The GHG Protocol has established a classification of GHG emissions called 'Scope': Scope 1, Scope 2 and Scope 3. The GHG emissions standard published by the International Organization for Standardization (ISO), 'ISO 14064', represents these classifications of Scope with the following terms:

- Direct GHG emissions = Scope I
- Energy indirect GHG emissions = Scope 2
- Other indirect GHG emissions = Scope 3

In this Standard, these terms are combined in the following way, as defined in the Glossary section:

- Direct (Scope 1) GHG emissions
- Energy indirect (Scope 2) GHG emissions
- Other indirect (Scope 3) GHG emissions

Ozone-depleting substances (ODS)

The ozone layer filters out most of the sun's biologically harmful ultraviolet (UV-B) radiation. Observed and projected ozone depletion due to ODS generates worldwide concern. The UN Environment Programme (UNEP) 'Montreal Protocol on Substances that Deplete the Ozone Layer' ('Montreal Protocol') regulates the phase-out of ODS internationally.

Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions

Pollutants such as NO_x and SO_x have adverse effects on climate, ecosystems, air quality, habitats, agriculture, and human and animal health. Deterioration of air quality, acidification, forest degradation and public health concerns have led to local and international regulations to control emissions of these pollutants.

Reductions in the emission of regulated pollutants lead to improved health conditions for workers and local communities and can enhance relations with affected stakeholders. In regions with emission caps, the volume of emissions also has direct cost implications.

Other significant air emissions include, for example, persistent organic pollutants or particulate matter, as well as air emissions that are regulated under international conventions and/or national laws or regulations, including those listed on an organization's environmental permits.

GRI 305: Emissions

This Standard includes disclosures on the management approach and topic-specific disclosures. These are set out in the Standard as follows:

- Management approach disclosures (this section references *GRI 103*)
- Disclosure 305-1 Direct (Scope 1) GHG emissions
- Disclosure 305-2 Energy indirect (Scope 2) GHG emissions
- Disclosure 305-3 Other indirect (Scope 3) GHG emissions
- Disclosure 305-4 GHG emissions intensity
- Disclosure 305-5 Reduction of GHG emissions
- Disclosure 305-6 Emissions of ozone-depleting substances (ODS)
- Disclosure 305-7 Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions

1. Management approach disclosures

Management approach disclosures are a narrative explanation of how an organization manages a material topic, the associated impacts, and stakeholders' reasonable expectations and interests. Any organization that claims its report has been prepared in accordance with the GRI Standards is required to report on its management approach for every material topic, as well as reporting topic-specific disclosures for those topics.

Therefore, this topic-specific Standard is designed to be used together with *GRI 103: Management Approach* in order to provide full disclosure of the organization's impacts. *GRI 103* specifies how to report on the management approach and what information to provide.

Reporting requirements

1.1 The reporting organization shall report its management approach for emissions using *GRI 103: Management Approach*.

1.2 When reporting on GHG emissions targets, the reporting organization shall explain whether offsets were used to meet the targets, including the type, amount, criteria or scheme of which the offsets are part.

Guidance

When reporting its management approach for emissions, the reporting organization can also:

- explain whether it is subject to any country, regional, or industry-level emissions regulations and policies; and provide examples of these regulations and policies;
- disclose expenditures on treatment of emissions (such as expenditures for filters, agents) and for the purchase and use of emissions certificates.

2. Topic-specific disclosures

Disclosure 305-1
Direct (Scope 1) GHG emissions

Reporting requirements

Disclosure 305-1

The reporting organization shall report the following information:

a. Gross direct (Scope 1) GHG emissions in metric tons of CO_2 equivalent.

b. Gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all.

c. Biogenic CO_2 emissions in metric tons of CO_2 equivalent.

d. Base year for the calculation, if applicable, including:

- **i. the rationale for choosing it;**
- **ii. emissions in the base year;**
- **iii. the context for any significant changes in emissions that triggered recalculations of base year emissions.**

e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source.

f. Consolidation approach for emissions; whether equity share, financial control, or operational control.

g. Standards, methodologies, assumptions, and/or calculation tools used.

2.1 When compiling the information specified in Disclosure 305-1, the reporting organization shall:

2.1.1 exclude any GHG trades from the calculation of gross direct (Scope 1) GHG emissions;

2.1.2 report biogenic emissions of CO_2 from the combustion or biodegradation of biomass separately from the gross direct (Scope 1) GHG emissions. Exclude biogenic emissions of other types of GHG (such as CH_4 and N_2O), and biogenic emissions of CO_2 that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass).

Reporting recommendations

2.2 When compiling the information specified in Disclosure 305-1, the reporting organization should:

2.2.1 apply emission factors and GWP rates consistently for the data disclosed;

2.2.2 use the GWP rates from the IPCC assessment reports based on a 100-year timeframe;

2.2.3 select a consistent approach for consolidating direct (Scope 1) and energy indirect (Scope 2) GHG emissions; choosing from the equity share, financial control, or operational control methods outlined in the 'GHG Protocol Corporate Standard';

2.2.4 if subject to different standards and methodologies, describe the approach to selecting them;

Disclosure 305-1
Continued

2.2.5 where it aids transparency or comparability over time, provide a breakdown of the direct (Scope 1) GHG emissions by:

2.2.5.1 business unit or facility;

2.2.5.2 country;

2.2.5.3 type of source (stationary combustion, process, fugitive);

2.2.5.4 type of activity.

Guidance

Guidance for Disclosure 305-1

Direct (Scope 1) GHG emissions include, but are not limited to, the CO_2 emissions from the fuel consumption as reported in Disclosure 302-1 of *GRI 302: Energy*.

Direct (Scope 1) GHG emissions can come from the following sources owned or controlled by an organization:

- Generation of electricity, heating, cooling and steam: these emissions result from combustion of fuels in stationary sources, such as boilers, furnaces, and turbines – and from other combustion processes such as flaring;
- Physical or chemical processing: most of these emissions result from the manufacturing or processing of chemicals and materials, such as cement, steel, aluminum, ammonia, and waste processing;
- Transportation of materials, products, waste, workers, and passengers: these emissions result from the combustion of fuels in mobile combustion sources owned or controlled by the organization, such as trucks, trains, ships, airplanes, buses, and cars;
- Fugitive emissions: these are emissions that are not physically controlled but result from intentional or unintentional releases of GHGs. These can include equipment leaks from joints, seals, packing, and gaskets; methane emissions (e.g., from coal mines) and venting; HFC emissions from refrigeration and air conditioning equipment; and methane leakages (e.g., from gas transport).

Methodologies used to calculate the direct (Scope I) GHG emissions can include:

- direct measurement of energy source consumed (coal, gas) or losses (refills) of cooling systems and conversion to GHG (CO_2 equivalents);
- mass balance calculations;
- calculations based on site-specific data, such as for fuel composition analysis;
- calculations based on published criteria, such as emission factors and GWP rates;
- direct measurements of GHG emissions, such as continuous online analyzers;
- estimations.

If estimations are used due to a lack of default figures, the reporting organization can indicate the basis and assumptions on which figures were estimated.

For recalculations of prior year emissions, the organization can follow the approach in the 'GHG Protocol Corporate Standard'.

The chosen emission factors can originate from mandatory reporting requirements, voluntary reporting frameworks, or industry groups.

Estimates of GWP rates change over time as scientific research develops. GWP rates from the *Second Assessment Report* of the Intergovernmental Panel on Climate Change (IPCC) are used as the basis for international negotiations under the 'Kyoto Protocol'. Thus, such rates can be used for disclosing GHG emissions where it does not conflict with national or regional reporting requirements. The organization can also use the latest GWP rates from the most recent IPCC assessment report.

The organization can combine Disclosure 305-1 with Disclosures 305-2 (energy indirect/Scope 2 GHG emissions) and 305-3 (other indirect/Scope 3 GHG emissions) to disclose total GHG emissions.

Further details and guidance are available in the 'GHG Protocol Corporate Standard'. See also references 1, 2, 12, 13, 14 and 19 in the References section.

Disclosure 305-2
Energy indirect (Scope 2) GHG emissions

Reporting requirements

Disclosure 305-2

The reporting organization shall report the following information:

a. Gross location-based energy indirect (Scope 2) GHG emissions in metric tons of CO_2 equivalent.

b. If applicable, gross market-based energy indirect (Scope 2) GHG emissions in metric tons of CO_2 equivalent.

c. If available, the gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all.

d. Base year for the calculation, if applicable, including:

- **i. the rationale for choosing it;**
- **ii. emissions in the base year;**
- **iii. the context for any significant changes in emissions that triggered recalculations of base year emissions.**

e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source.

f. Consolidation approach for emissions; whether equity share, financial control, or operational control.

g. Standards, methodologies, assumptions, and/or calculation tools used.

2.3 When compiling the information specified in Disclosure 305-2, the reporting organization shall:

2.3.1 exclude any GHG trades from the calculation of gross energy indirect (Scope 2) GHG emissions;

2.3.2 exclude other indirect (Scope 3) GHG emissions that are disclosed as specified in Disclosure 305-3;

2.3.3 account and report energy indirect (Scope 2) GHG emissions based on the location-based method, if it has operations in markets without product or supplier-specific data;

2.3.4 account and report energy indirect (Scope 2) GHG emissions based on both the location-based and market-based methods, if it has any operations in markets providing product or supplier-specific data in the form of contractual instruments.

Reporting recommendations

2.4 When compiling the information specified in Disclosure 305-2, the reporting organization should:

2.4.1 apply emission factors and GWP rates consistently for the data disclosed;

2.4.2 use the GWP rates from the IPCC assessment reports based on a 100-year timeframe;

2.4.3 select a consistent approach for consolidating direct (Scope 1) and energy indirect (Scope 2) GHG emissions, choosing from the equity share, financial control, or operational control methods outlined in the 'GHG Protocol Corporate Standard';

2.4.4 if subject to different standards and methodologies, describe the approach to selecting them;

2.4.5 where it aids transparency or comparability over time, provide a breakdown of the energy indirect (Scope 2) GHG emissions by:

- 2.4.5.1 business unit or facility;
- 2.4.5.2 country;
- 2.4.5.3 type of source (electricity, heating, cooling, and steam);
- 2.4.5.4 type of activity.

Guidance

Guidance for Disclosure 305-2

Energy indirect (Scope 2) GHG emissions include, but are not limited to, the CO_2 emissions from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by an organization – disclosed as specified in Disclosure 302-1 of *GRI 302: Energy*. For many organizations, the energy indirect (Scope 2) GHG emissions that result from the generation of purchased electricity can be much greater than their direct (Scope 1) GHG emissions.

The 'GHG Protocol Scope 2 Guidance' requires organizations to provide two distinct Scope 2 values: a location-based and a market-based value. A location-based method reflects the average GHG emissions intensity of grids on which energy consumption occurs, using mostly grid-average emission factor data. A market-based method reflects emissions from electricity that an organization has purposefully chosen (or its lack of choice). It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.

The market-based method calculation also includes the use of a residual mix, if the organization does not have specified emissions-intensity from its contractual instruments. This helps prevent double counting between consumers' market-based method figures. If a residual mix is unavailable, the organization can disclose this and use grid-average emission factors as a proxy (which can mean that the location-based and market-based are the same number until information on the residual mix is available).

The reporting organization can apply the Quality Criteria in the 'GHG Protocol Scope 2 Guidance' so that contractual instruments convey GHG emission rate claims and to prevent double counting. See reference 18 in the References section.

For recalculations of prior year emissions, the organization can follow the approach in the 'GHG Protocol Corporate Standard'.

The chosen emission factors can originate from mandatory reporting requirements, voluntary reporting frameworks, or industry groups.

Estimates of GWP rates change over time as scientific research develops. GWP rates from the *Second Assessment Report* of the IPCC are used as the basis for international negotiations under the 'Kyoto Protocol'. Thus, such rates can be used for disclosing GHG emissions where it does not conflict with national or regional reporting requirements. The organization can also use the latest GWP rates from the most recent IPCC assessment report.

The organization can combine Disclosure 305-2 with Disclosures 305-1 (direct/Scope 1 GHG emissions) and 305-3 (other indirect/Scope 3 GHG emissions) to disclose total GHG emissions.

Further details and guidance are available in the 'GHG Protocol Corporate Standard'. Details on the location-based and market-based methods are available in the 'GHG Protocol Scope 2 Guidance'. See also references 1, 2, 12, 13, 14 and 18 in the References section.

Disclosure 305-3
Other indirect (Scope 3) GHG emissions

Reporting requirements

Disclosure **305-3**

The reporting organization shall report the following information:

a. Gross other indirect (Scope 3) GHG emissions in metric tons of CO_2 equivalent.

b. If available, the gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all.

c. Biogenic CO_2 emissions in metric tons of CO_2 equivalent.

d. Other indirect (Scope 3) GHG emissions categories and activities included in the calculation.

e. Base year for the calculation, if applicable, including:

- **i. the rationale for choosing it;**
- **ii. emissions in the base year;**
- **iii. the context for any significant changes in emissions that triggered recalculations of base year emissions.**

f. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source.

g. Standards, methodologies, assumptions, and/or calculation tools used.

2.5 When compiling the information specified in Disclosure 305-3, the reporting organization shall:

2.5.1 exclude any GHG trades from the calculation of gross other indirect (Scope 3) GHG emissions;

2.5.2 exclude energy indirect (Scope 2) GHG emissions from this disclosure. Energy indirect (Scope 2) GHG emissions are disclosed as specified in Disclosure 305-2;

2.5.3 report biogenic emissions of CO_2 from the combustion or biodegradation of biomass that occur in its value chain separately from the gross other indirect (Scope 3) GHG emissions. Exclude biogenic emissions of other types of GHG (such as CH_4 and N_2O), and biogenic emissions of CO_2 that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass).

Reporting recommendations

2.6 When compiling the information specified in Disclosure 305-3, the reporting organization should:

2.6.1 apply emission factors and GWP rates consistently for the data disclosed;

2.6.2 use the GWP rates from the IPCC assessment reports based on a 100-year timeframe;

2.6.3 if subject to different standards and methodologies, describe the approach to selecting them;

2.6.4 list other indirect (Scope 3) GHG emissions, with a breakdown by upstream and downstream categories and activities;

2.6.5 where it aids transparency or comparability over time, provide a breakdown of the other indirect (Scope 3) GHG emissions by:

- 2.6.5.1 business unit or facility;
- 2.6.5.2 country;
- 2.6.5.3 type of source;
- 2.6.5.4 type of activity.

Disclosure 305-3
Continued

Guidance

Guidance for Disclosure 305-3

Other indirect (Scope 3) GHG emissions are a consequence of an organization's activities, but occur from sources not owned or controlled by the organization. Other indirect (Scope 3) GHG emissions include both upstream and downstream emissions. Some examples of Scope 3 activities include extracting and producing purchased materials; transporting purchased fuels in vehicles not owned or controlled by the organization; and the end use of products and services.

Other indirect emissions can also come from the decomposing of the organization's waste. Process-related emissions during the manufacture of purchased goods and fugitive emissions in facilities not owned by the organization can also produce indirect emissions.

For some organizations, GHG emissions that result from energy consumption outside of the organization can be much greater than their direct (Scope 1) or energy indirect (Scope 2) GHG emissions.

The reporting organization can identify other indirect (Scope 3) GHG emissions by assessing which of its activities' emissions:

- contribute significantly to the organization's total anticipated other indirect (Scope 3) GHG emissions;
- offer potential for reductions the organization can undertake or influence;
- contribute to climate change-related risks, such as financial, regulatory, supply chain, product and customer, litigation, and reputational risks;
- are deemed material by stakeholders, such as customers, suppliers, investors, or civil society;
- result from outsourced activities previously performed in-house, or that are typically performed in-house by other organizations in the same sector;
- have been identified as significant for the organization's sector;
- meet any additional criteria for determining relevance, developed by the organization or by organizations in its sector.

The organization can use the following upstream and downstream categories and activities from the 'GHG Protocol Corporate Value Chain Standard' (see reference 15 in the References section):

Upstream categories

1. Purchased goods and services
2. Capital goods
3. Fuel- and energy-related activities (not included in Scope 1 or Scope 2)
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased assets

   Other upstream

Downstream categories

9. Downstream transportation and distribution
10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Downstream leased assets
14. Franchises
15. Investments

    Other downstream

For each of these categories and activities, the organization can provide a figure in CO_2 equivalent or explain why certain data are not included.

For recalculations of prior year emissions, the organization can follow the approach in the 'GHG Protocol Corporate Value Chain Standard'.

The chosen emission factors can originate from mandatory reporting requirements, voluntary reporting frameworks, or industry groups.

Estimates of GWP rates change over time as scientific research develops. GWP rates from the *Second Assessment Report* of the IPCC are used as the basis for international negotiations under the 'Kyoto Protocol'. Thus, such rates can be used for disclosing GHG emissions where it does not conflict with national or regional reporting requirements. The organization can also use the latest GWP rates from the most recent IPCC assessment report.

The organization can combine Disclosure 305-3 with Disclosures 305-1 (direct/Scope 1 GHG emissions) and 305-2 (energy indirect/Scope 2 GHG emissions) to disclose total GHG emissions.

See references 1, 2, 12, 13, 15, 17 and 19 in the References section.

Disclosure 305-4
GHG emissions intensity

Reporting requirements

Disclosure **305-4**

The reporting organization shall report the following information:

a. GHG emissions intensity ratio for the organization.

b. Organization-specific metric (the denominator) chosen to calculate the ratio.

c. Types of GHG emissions included in the intensity ratio; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3).

d. Gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all.

2.7 When compiling the information specified in Disclosure 305-4, the reporting organization shall:

2.7.1 calculate the ratio by dividing the absolute GHG emissions (the numerator) by the organization-specific metric (the denominator);

2.7.2 if reporting an intensity ratio for other indirect (Scope 3) GHG emissions, report this intensity ratio separately from the intensity ratios for direct (Scope 1) and energy indirect (Scope 2) emissions.

Reporting recommendations

2.8 When compiling the information specified in Disclosure 305-4, the reporting organization should, where it aids transparency or comparability over time, provide a breakdown of the GHG emissions intensity ratio by:

2.8.1 business unit or facility;

2.8.2 country;

2.8.3 type of source;

2.8.4 type of activity.

Guidance

Guidance for Disclosure 305-4

Intensity ratios can be provided for, among others:

- products (such as metric tons of CO_2 emissions per unit produced);
- services (such as metric tons of CO_2 emissions per function or per service);
- sales (such as metric tons of CO_2 emissions per sales).

Organization-specific metrics (denominators) can include:

- units of product;
- production volume (such as metric tons, liters, or MWh);
- size (such as m^2 floor space);
- number of full-time employees;
- monetary units (such as revenue or sales).

The reporting organization can report an intensity ratio for direct (Scope 1) and energy indirect (Scope 2) GHG emissions combined, using the figures reported in Disclosures 305-1 and 305-2.

Background

Intensity ratios define GHG emissions in the context of an organization-specific metric. Many organizations track environmental performance with intensity ratios, which are often called normalized environmental impact data.

GHG emissions intensity expresses the amount of GHG emissions per unit of activity, output, or any other organization-specific metric. In combination with an organization's absolute GHG emissions, reported in Disclosures 305-1, 305-2, and 305-3, GHG emissions intensity helps to contextualize the organization's efficiency, including in relation to other organizations.

See references 13, 14, and 19 in the References section.

Disclosure 305-5
Reduction of GHG emissions

Reporting requirements

Disclosure **305-5**

The reporting organization shall report the following information:

a. GHG emissions reduced as a direct result of reduction initiatives, in metric tons of CO_2 equivalent.

b. Gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all.

c. Base year or baseline, including the rationale for choosing it.

d. Scopes in which reductions took place; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3).

e. Standards, methodologies, assumptions, and/or calculation tools used.

2.9 When compiling the information specified in Disclosure 305-5, the reporting organization shall:

2.9.1 exclude reductions resulting from reduced production capacity or outsourcing;

2.9.2 use the inventory or project method to account for reductions;

2.9.3 calculate an initiative's total reductions of GHG emissions as the sum of its associated primary effects and any significant secondary effects;

2.9.4 if reporting two or more Scope types, report the reductions for each separately;

2.9.5 report reductions from offsets separately.

Reporting recommendations

2.10 When compiling the information specified in Disclosure 305-5, the reporting organization should, if subject to different standards and methodologies, describe the approach to selecting them.

Guidance

Guidance for Disclosure 305-5

The reporting organization can prioritize disclosing reduction initiatives that were implemented in the reporting period, and that have the potential to contribute significantly to reductions. Reduction initiatives and their targets can be described in the management approach for this topic.

Reduction initiatives can include:

- process redesign;
- conversion and retrofitting of equipment;
- fuel switching;
- changes in behavior;
- offsets.

The organization can report reductions disaggregated by initiatives or groups of initiatives.

This disclosure can be used in combination with Disclosures 305-1, 305-2, and 305-3 of this Standard to monitor the reduction of GHG emissions with reference to the organization's targets, or to regulations and trading systems at international or national level.

See references 12, 13, 14, 15, 16, and 19 in the References section.

Guidance for clause 2.9.2

The inventory method compares reductions to a base year. The project method compares reductions to a baseline. Further details on these methods are available in references 15 and 16 in the References section.

Guidance for clause 2.9.3

Primary effects are the elements or activities designed to reduce GHG emissions, such as carbon storage. Secondary effects are smaller, unintended consequences of a reduction initiative, including changes to production or manufacture, which result in changes to GHG emissions elsewhere. See reference 14 in the References section.

Disclosure 305-6
Emissions of ozone-depleting substances (ODS)

Reporting requirements

Disclosure **305-6**

The reporting organization shall report the following information:

a. Production, imports, and exports of ODS in metric tons of CFC-11 (trichlorofluoromethane) equivalent.

b. Substances included in the calculation.

c. Source of the emission factors used.

d. Standards, methodologies, assumptions, and/or calculation tools used.

2.11 When compiling the information specified in Disclosure 305-6, the reporting organization shall:

2.11.1 calculate the production of ODS as the amount of ODS produced, minus the amount destroyed by approved technologies, and minus the amount entirely used as feedstock in the manufacture of other chemicals;

Production of ODS

=

ODS produced

–

ODS destroyed by approved technologies

–

ODS entirely used as feedstock in the manufacture of other chemicals

2.11.2 exclude ODS recycled and reused.

Reporting recommendations

2.12 When compiling the information specified in Disclosure 305-6, the reporting organization should:

2.12.1 if subject to different standards and methodologies, describe the approach to selecting them;

2.12.2 where it aids transparency or comparability over time, provide a breakdown of the ODS data by:

2.12.2.1 business unit or facility;

2.12.2.2 country;

2.12.2.3 type of source;

2.12.2.4 type of activity.

Guidance

Guidance for Disclosure 305-6

The reporting organization can report separate or combined data for the substances included in the calculation.

Background

Measuring ODS production, imports, and exports helps to indicate how an organization complies with legislation. This is particularly relevant if the organization produces or uses ODS in its processes, products and services and is subject to phase-out commitments. Results on ODS phase-out help to indicate the organization's position in any markets affected by regulation on ODS.

This disclosure covers the substances included in Annexes A, B, C, and E of the 'Montreal Protocol' as well as any other ODS produced, imported, or exported by an organization.

See references 1, 2, 8 and 9 in the References section.

Disclosure 305-7

Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions

Reporting requirements

Disclosure **305-7**

The reporting organization shall report the following information:

a. Significant air emissions, in kilograms or multiples, for each of the following:

- **i. NO_x**
- **ii. SO_x**
- **iii. Persistent organic pollutants (POP)**
- **iv. Volatile organic compounds (VOC)**
- **v. Hazardous air pollutants (HAP)**
- **vi. Particulate matter (PM)**
- **vii. Other standard categories of air emissions identified in relevant regulations**

b. Source of the emission factors used.

c. Standards, methodologies, assumptions, and/or calculation tools used.

2.13 When compiling the information specified in Disclosure 305-7, the reporting organization shall select one of the following approaches for calculating significant air emissions:

2.13.1 Direct measurement of emissions (such as online analyzers);

2.13.2 Calculation based on site-specific data;

2.13.3 Calculation based on published emission factors;

2.13.4 Estimation. If estimations are used due to a lack of default figures, the organization shall indicate the basis on which figures were estimated.

Reporting recommendations

2.14 When compiling the information specified in Disclosure 305-7, the reporting organization should:

2.14.1 if subject to different standards and methodologies, describe the approach to selecting them;

2.14.2 where it aids transparency or comparability over time, provide a breakdown of the air emissions data by:

2.14.2.1 business unit or facility;

2.14.2.2 country;

2.14.2.3 type of source;

2.14.2.4 type of activity.

Guidance

See references 3, 4, 5, 6 and 10 in the References section.

Glossary

This Glossary includes definitions for terms used in this Standard, which apply when using this Standard. These definitions may contain terms that are further defined in the complete *GRI Standards Glossary*.

All defined terms are underlined. If a term is not defined in this Glossary or in the complete *GRI Standards Glossary*, definitions that are commonly used and understood apply.

base year

historical datum (such as year) against which a measurement is tracked over time

baseline

starting point used for comparisons

Note: In the context of energy and emissions reporting, the baseline is the projected energy consumption or emissions in the absence of any reduction activity.

biogenic carbon dioxide (CO_2) emission

emission of CO_2 from the combustion or biodegradation of biomass

carbon dioxide (CO_2) equivalent

measure used to compare the emissions from various types of greenhouse gas (GHG) based on their global warming potential (GWP)

Note: The CO_2 equivalent for a gas is determined by multiplying the metric tons of the gas by the associated GWP.

CFC11 (trichlorofluoromethane) equivalent

measure used to compare various substances based on their relative ozone depletion potential (ODP)

Note: The reference level of 1 is the potential of CFC-11 (trichlorofluoromethane) and CFC-12 (dichlorodifluoromethane) to cause ozone depletion.

direct (Scope 1) GHG emissions

GHG emissions from sources that are owned or controlled by an organization

Note 1: A GHG source is any physical unit or process that releases GHG into the atmosphere.

Note 2: Direct (Scope 1) GHG emissions can include the CO_2 emissions from fuel consumption.

energy indirect (Scope 2) GHG emissions

GHG emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by an organization

global warming potential (GWP)

value describing the radiative forcing impact of one unit of a given GHG relative to one unit of CO_2 over a given period of time

Note: GWP values convert GHG emissions data for non-CO_2 gases into units of CO_2 equivalent.

greenhouse gas (GHG)

gas that contributes to the greenhouse effect by absorbing infrared radiation

greenhouse gas (GHG) trade

purchase, sale or transfer of GHG emission offsets or allowances

impact

In the GRI Standards, unless otherwise stated, 'impact' refers to the effect an organization has on the economy, the environment, and/or society, which in turn can indicate its contribution (positive or negative) to sustainable development.

Note 1: In the GRI Standards, the term 'impact' can refer to positive, negative, actual, potential, direct, indirect, short-term, long-term, intended, or unintended impacts.

Note 2: Impacts on the economy, environment, and/or society can also be related to consequences for the organization itself. For example, an impact on the economy, environment, and/or society can lead to consequences for the organization's business model, reputation, or ability to achieve its objectives.

material topic

topic that reflects a reporting organization's significant economic, environmental and social impacts; or that substantively influences the assessments and decisions of stakeholders

Note 1: For more information on identifying a material topic, see the Reporting Principles for defining report content in *GRI 101: Foundation*.

Note 2: To prepare a report in accordance with the GRI Standards, an organization is required to report on its material topics.

Note 3: Material topics can include, but are not limited to, the topics covered by the GRI Standards in the 200, 300, and 400 series.

other indirect (Scope 3) GHG emissions

indirect GHG emissions not included in energy indirect (Scope 2) GHG emissions that occur outside of the organization, including both upstream and downstream emissions

ozone-depleting substance (ODS)

substance with an ozone depletion potential (ODP) greater than 0 that can deplete the stratospheric ozone layer

Note: Most ODS are controlled under the United Nations Environment Programme (UNEP), 'Montreal Protocol on Substances that Deplete the Ozone Layer', 1987, and its amendments, and include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, and methyl bromide.

reduction of greenhouse gas (GHG) emissions

decrease in GHG emissions or increase in removal or storage of GHG from the atmosphere, relative to baseline emissions

Note: Primary effects will result in GHG reductions, as will some secondary effects. An initiative's total GHG reductions are quantified as the sum of its associated primary effect(s) and any significant secondary effects (which may involve decreases or countervailing increases in GHG emissions).

Scope of GHG emissions

classification of the operational boundaries where GHG emissions occur

Note 1: Scope classifies whether GHG emissions are created by an organization itself, or are created by other related organizations, for example electricity suppliers or logistics companies.

Note 2: There are three classifications of Scope: Scope 1, Scope 2 and Scope 3.

Note 3: The classification of Scope derives from the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Corporate Accounting and Reporting Standard', Revised Edition, 2004.

significant air emission

air emission regulated under international conventions and/or national laws or regulations

Note: Significant air emissions include those listed on environmental permits for an organization's operations.

References

The following documents informed the development of this Standard and can be helpful for understanding and applying it.

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4. United Nations Economic Commission for Europe (UNECE) Convention, 'Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone', 1999.
5. United Nations Economic Commission for Europe (UNECE) Convention, 'Helsinki Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes', 1985.
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11. United Nations (UN) Framework Convention, 'United Nations Framework Convention on Climate Change', 1992.
12. United Nations (UN) Protocol, 'Kyoto Protocol to the United Nations Framework Convention on Climate Change', 1997.

Other relevant references:

13. CDP, *Investor CDP Information Request*, updated annually.
14. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Corporate Accounting and Reporting Standard', Revised Edition, 2004.
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17. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Product Life Cycle Accounting and Reporting Standard', 2011.

18. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Scope 2 Guidance. An amendment to the GHG Protocol Corporate Standard', 2015.

19. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'Greenhouse Gas Protocol Accounting Notes, No. 1, Accounting and Reporting Standard Amendment', 2012.

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