



GUIDELINE FOR CORPORATE GREENHOUSE GAS EMISSION REPORTING BY INDUSTRIAL GASES COMPANIES

Doc 258/25 (Rev.1)

EUROPEAN INDUSTRIAL GASES ASSOCIATION AISBL

AVENUE DE L'ASTRONOMIE 30 • B – 1210 BRUSSELS

Tel: +32 2 217 70 98

E-mail: info@eiga.eu • Internet: www.eiga.eu



Documents

Document Sharing Hub



GUIDELINE FOR CORPORATE GREENHOUSE GAS EMISSION REPORTING BY INDUSTRIAL GASES COMPANIES

Prepared by JWG-A-1139
Published in March 2025

As part of a programme of harmonisation of industry standards, the European Industrial Gases Association (EIGA) has published EIGA Doc 258, *Guideline for Corporate Greenhouse Gas Emission Reporting by Industrial Gases Companies*. This publication was jointly produced by members of the International Harmonisation Council.

This publication is intended as an international harmonised publication for the worldwide use and application by all members of the International Harmonisation Council whose members include the Asia Industrial Gases Association (AIGA), Compressed Gas Association (CGA), European Industrial Gases Association (EIGA), and Japan Industrial and Medical Gases Association (JIMGA). Regional editions have the same technical content as the EIGA edition, however, there are editorial changes primarily in formatting, units used and spelling. Regional regulatory requirements are those that apply to Europe.

Disclaimer

All technical publications of EIGA or under EIGA's name, including Codes of practice, Safety procedures and any other technical information contained in such publications were obtained from sources believed to be reliable and are based on technical information and experience currently available from members of EIGA and others at the date of their issuance.

While EIGA recommends reference to or use of its publications by its members, such reference to or use of EIGA's publications by its members or third parties are purely voluntary and not binding.

Therefore, EIGA or its members make no guarantee of the results and assume no liability or responsibility in connection with the reference to or use of information or suggestions contained in EIGA's publications.

EIGA has no control whatsoever as regards, performance or non performance, misinterpretation, proper or improper use of any information or suggestions contained in EIGA's publications by any person or entity (including EIGA members) and EIGA expressly disclaims any liability in connection thereto.

EIGA's publications are subject to periodic review and users are cautioned to obtain the latest edition.

© EIGA grants permission to reproduce this publication provided the Association is acknowledged as the source

EUROPEAN INDUSTRIAL GASES ASSOCIATION AISBL
Avenue de l'Astronomie 30 B 1210 Brussels Tel: +32 2 217 70 98
E-mail: info@eiga.eu Internet: www.eiga.eu



Document Sharing Hub

Table of Contents

1	Introduction	1
2	Scope and purpose	1
2.1	Scope.....	1
2.2	Purpose	1
3	Definitions	1
3.1	Publication terminology	1
3.2	Technical definitions	2
4	Background.....	2
5	Greenhouse gas scopes	4
5.1	Scope 1.....	4
5.2	Scope 2.....	5
5.3	Scope 3 - categories 1 to 15.....	5
6	Guidance on the accounting of emissions by scopes and categories	6
6.1	Scope 3 reporting	6
7	Illustration: How emissions are to be accounted for various configuration on a hydrogen production plant by reforming	18
8	References.....	20
	Table 1 – Typical approach for accounting and reporting of non-consolidated assets	4
	Table 2 - The 15 categories of Scope 3.....	5
	Table 3 - High level guidance for allocation of emissions to GHG Protocol scopes & categories.....	7
	Table 4 - Analysis by GHG emission sources.....	9

Amendments to DOC258/25

Section	Change
	Editorial corrections

NOTE Technical changes from the previous edition are marked with a line in the left margin

1 Introduction

In recent years there has been an increase in attention and requirements, from regulators, investors, and other stakeholders such as non-governmental organizations (NGOs), for mandatory or voluntary disclosure by private companies of greenhouse gas (GHG) related information. Of particular focus are the GHG emissions induced by the company's activities across the value chains they are operating in, as well as related risks (i.e. transition risks and physical risks) and opportunities. More widely, this relates to increasing attention to extra-financial performance reporting on Environment, Social and Governance – (ESG) matters with attempts to streamline and harmonise disclosures, metrics and KPIs, to ensure adequate comparability within and across sectors. In parallel, specific reporting and climate target-setting frameworks are being developed for the chemical sector which often includes industrial gas operations. As a result, having clear and harmonised GHG emission reporting practices aligned with recognised standards for industrial gas operations will help the specificities of these activities be correctly taken into account.

2 Scope and purpose

2.1 Scope

This publication provides guidance on accounting and reporting GHG emissions by industrial gases companies (IGC) covering their industrial gases operations.

This publication does not provide views on how to account for Carbon Footprint of Products (CFP). However, any harmonised approach developed by IGC's or trade associations to calculate CFP should be consistent with the approach for corporate accounting and reporting of GHG emissions.

This publication does not substitute any local or national regulatory compliance that incorporates GHG related disclosures, such as, but not limited to, requirements to provide greenhouse gas inventory based on different system boundaries or using specifically mandated emissions factors, or system such as the European Emission Trading Scheme (EU ETS) [1].

2.2 Purpose

The purpose of this publication is to provide an interpretation of *The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard* (GHG Protocol) [2]

3 Definitions

For the purpose of this publication, the following definitions apply.

3.1 Publication terminology

3.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

3.1.2 Should

Indicates that a procedure is recommended.

3.1.3 May

Indicates that the procedure is optional.

3.1.4 Will

Is used only to indicate the future, not a degree of requirement.

3.1.5 Can

Indicates a possibility or ability.

3.2 Technical definitions

3.2.1 Greenhouse gas (GHG) emissions

Release of a GHG into the atmosphere. The release can occur at various stages of the value chain and should be accounted for and disclosed by the reporting company.

3.2.2 Industrial gases operations

Operations that involve the manufacture, filling or distribution of industrial, medical and food gases including air gases (nitrogen (N₂), oxygen (O₂), argon (Ar), hydrogen (H₂), carbon monoxide (CO), carbon dioxide (CO₂), nitrous oxide (N₂O), specialty, medical and technical gases and their mixtures by pipeline, road tanker or in compressed or liquefied gases containers.

3.2.3 Tolling

Arrangement that occurs when a company processes feedstock owned (or “at no cost”) by a third party, such as a customer.

NOTE - An example is customers in the oil and gas industry who provide natural gas for hydrogen production.

NOTE - Companies engaged in tolling for another firm should determine in which scope/categories where the emissions from the processing may be included in their GHG emissions reporting, based on the regulatory environment and contractual arrangements with the other firm regarding reporting of these emissions.

4 Background

This guidance follows the approach and principles set out in the GHG Protocol [2]:

- **Relevance:** Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.
- **Completeness:** Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.
- **Consistency:** Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.
- **Transparency:** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
- **Accuracy:** Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable.

Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

The GHG Protocol recommends a three-step approach, starting with an **inventory** of GHG emission sources across the value chain of the reporting company, then a **quantification** and **allocation** to certain carbon accounting categories, and finally **disclosure** and **reporting** of the emissions data in a manner adapted to the target audience for said reporting, see Figure 1

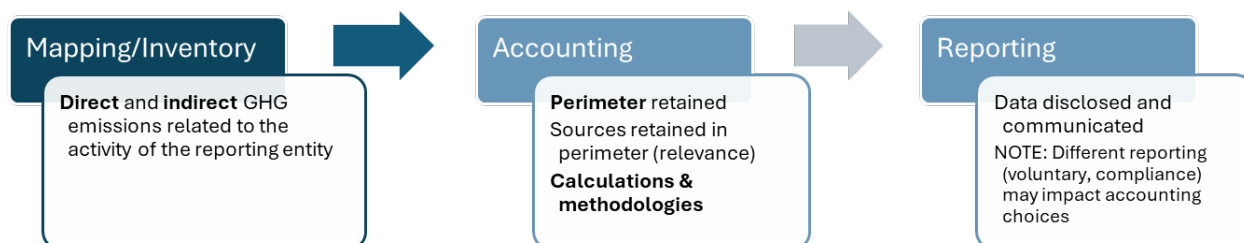


Figure 1—GHG Protocol three-step approach

Once GHG emissions are identified and mapped, the GHG Protocol provides guidance on disclosing them in various scopes and categories, depending on the nature of the emissions and choices made to define organizational and operational boundaries.

This publication does not provide any compulsory recommendation on how the boundaries should be selected. Each company should elect the approach that best aligns with its economic model and its financial structure.

In accordance with the principles of the GHG Protocol and World Business Council for Sustainable Development (WBCSD) guidance for the chemical sector, and the increased integration between financial and extra-financial performances disclosures requirements, it is recommended that:

- Any material GHG emission source that provides relevant information on the impact or exposure of a company to climate change is disclosed. In that respect, it is noted that having a reporting that covers emissions across the full value chain, that is all GHG Protocol Scopes (1, 2, 3), makes it easier to present the GHG emissions footprint of industrial gas activities in a way consistent with the business value chain". Limiting disclosure to Scope 1 and 2 can limit disclosure and raise questions about the completeness and transparency of the disclosure.
- GHG emissions reporting is as much as possible aligned with financial reporting in order to provide a consolidated view on the business, using the same consolidation approach ; in that respect, any material emission related to assets or operations that are financially fully consolidated should be reported for 100% of the emissions while emissions from assets or companies from equity-accounted joint ventures (JV) should be reported pro rata equity, in the relevant reporting categories (See Table 1 for WBCSD guidance)
- Any exclusion or partial reporting is clearly disclosed and explained, in particular in relation to the company's approach for financial reporting, so the defining factor for how JV emissions should be included (Scopes 1, 2, 3) should follow the appropriate financial rules
- As per the GHG Protocol, companies may use one of two distinct approaches to consolidate GHG emissions and should account for and report their consolidated GHG emission data according to one of the following: the equity share and the control approaches (financial control or operational control) [2]. If the reporting company wholly owns all its operations, its organizational boundary will be the same whichever approach is used. For companies with joint ventures, the organizational boundary and the resulting emissions can differ depending on the approach used. In both wholly owned and joint ventures, the choice of approach can change how emissions are categorised when operational boundaries are set.

Table 1 – Typical approach for accounting and reporting of non-consolidated assets ³

	Description of example situation		Implication for reporting on GHG emissions	
	Description of joint arrangement	Financial consolidation	Report in scope 1/2 (following consolidated affiliate revenues)	Report in scope 3 - Investments
1	Company owns 100% of shares of affiliate	100% of affiliate revenues	100%	0%
2	50/50 Joint Venture	100% of affiliate revenues	100%	0%
3	50/50 Joint Venture	0% of affiliate revenues	0%	50%
4	50/50 Joint Venture	50% of affiliate revenues	50%	0%
5	20% interest	0% of affiliate revenues	0%	20%
6	3% interest	0% of affiliate revenues	0%	0%

12 Guidance for Measuring & Reporting Corporate Value Chain GHG Emissions in the Chemical Sector

1

5 Greenhouse gas scopes

The GHG emissions mapped along the value chain are reported in various scopes defined as follows by the GHG Protocol ²:

5.1 Scope 1

Companies report in Scope 1 direct GHG emissions from operations that are owned or controlled by the reporting company.

Direct GHG emissions are principally the result of the following types of activities undertaken by the company:

- Generation of electricity, heat, or steam. These emissions result from combustion of fuels in stationary sources, e.g., boilers, furnaces, turbines
- Physical or chemical processing.
- Transportation of materials, products, and waste. These emissions result from the combustion of fuels in company mobile combustion sources (e.g., trucks, trains, ships, airplanes, buses, and cars), or
- Fugitive emissions. These emissions result from intentional or unintentional releases, e.g., equipment leaks from joints, seals, packing, and gaskets; hydrofluorocarbon (HFC) emissions during the use of refrigeration and air conditioning equipment; and methane leakages from gas transport.

¹ <https://www.wbcsd.org/contentwbc/download/2831/35596/1>