# Chapter 4.5
# Greenhouse Gas Emissions

## BACKGROUND

Humans are increasingly influencing the climate and the earth's temperature by burning fossil fuels, cutting down rainforests and raising livestock. These activities release gases such as carbon dioxide, methane, nitrous oxide, ozone and a few others that have the ability to trap heat in the Earth's atmosphere. Many of these gases also occur naturally, but human activity is increasing the concentrations of some of them in the atmosphere.[238] Global concern over greenhouse gas emissions and climate change has led to the development of the United Nations Framework Convention on Climate Change, and has spurred the establishment of targets for the reduction of greenhouse gas emissions that are applicable in over 190 countries.[239]

**TERMS USED IN THIS CHAPTER**

Affected Community ■ Corporate Owner ■ Existing Mine ■ Host Country Law ■ Mining Project ■ Mining-Related Activities ■ Operating Company ■ Significant Changes to Mining-Related Activities ■ Stakeholder ■

*These terms appear in the text with a dashed underline. For definitions see the Glossary of Terms at the end of the document.*

Mining is a major energy consumer and emitter of greenhouse gas emissions. According to the International Council on Mining and Metals, the mining industry's greenhouse gas emissions come from two major categories. The first is direct emissions as a result from fossil fuel use in mining and processing operations, transportation of ore and electricity generation at remote sites, and fugitive emissions. The second is indirect emissions from electricity use, primarily in refining and smelting operations.

Mining companies can reduce fuel and energy consumption in both of these areas and thereby cut costs and improve competitiveness by adopting best practices in energy efficiency and emissions reductions.

## OBJECTIVES/INTENT OF THIS CHAPTER

To minimize climate change impacts through increased energy efficiency, reduced energy consumption and reduced emissions of greenhouse gases.

## SCOPE OF APPLICATION

RELEVANCE: This chapter is relevant for all mines.

[238] European Commission website: "Causes of Climate Change." https://ec.europa.eu/clima/change/causes_en

[239] For example, see: "Nationally appropriate mitigation commitments or actions by developed country Parties," United Nations Climate Change website. http://unfccc.int/focus/mitigation/items/7223.php

# Greenhouse Gas Emissions Requirements

## 4.5.1. Greenhouse Gas Policy

4.5.1.1. The operating company or its corporate owner shall develop and maintain a greenhouse gas or equivalent policy that commits the company to:

a. Identifying and measuring greenhouse gas emissions from the mining project;

b. Identifying energy efficiency and greenhouse gas reduction opportunities across the mining project;

c. Setting meaningful and achievable targets for reductions in absolute greenhouse gas emissions at the mine site level or on a corporate-wide basis;[240] and

d. Reviewing the policy at least every five years and revising as needed, such as if there are significant changes to mining-related activities, new technologies become available, or there are newly identified opportunities for reductions.

[flag] **4.5.1.1.c. Issue in brief:** While there is agreement among IRMA sectors that setting greenhouse gas reduction targets is something that every responsible company should be doing, there is not yet cross-sectoral agreement within IRMA regarding how to set those targets.

There are a number of initiatives underway (e.g., Climate Action 100+, Science Based Targets, Transition Pathway Initiative, etc.) that are encouraging companies to set "science based" targets. These are targets that are consistent with the Paris Agreement's goal of limiting global average temperature increase to well below 2 degrees above pre-industrial levels. Numerous companies globally have made commitments to setting science based targets, but there is not a lot of information on or evidence of mining companies setting such targets.

IRMA will use the Launch Phase as a time to ask mines whether or not they are setting "science-based targets" for greenhouse gas emissions reductions, and if they are not, what are the barriers are to making such a commitment? The outcome of the queries will help inform the version of the Standard that will be used when IRMA starts certifying mines in 2019.

## 4.5.2. Emissions Quantification

4.5.2.1. The operating company shall comply with emissions quantification methods described in a widely accepted reporting standard, such as the *Greenhouse Gas Protocol Corporate Standard* or the Global Reporting Initiative's *GRI 305* emissions reporting standard.[241]

[240] A target for reductions in absolute greenhouse gas emissions is defined by a reduction in absolute (or total) emissions over time (e.g., reduce total emissions by 20% below 2007 levels by 2020). For the purposes of this requirement, only targets for Scope 1 and 2 emissions are required to be included in the target, although Scope 3 emissions may also be included. Scope 1 emissions are the direct emissions from the mining project (or company, if setting targets on a corporate-wide basis); Scope 2 are the indirect emissions from consumption of purchased electricity, heat, and steam. Scope 3 are other indirect emissions. See GHG Protocol Standard for more details. https://ghgprotocol.org/corporate-standard

[241] Gas Protocol Corporate Accounting and Reporting Standard. https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf; and *GRI 305* emissions reporting standard. https://www.globalreporting.org/standards/gri-standards-download-center/gri-305-emissions/

### 4.5.3. Emissions Reduction Strategies

4.5.3.1. The greenhouse gas policy shall be underpinned by a plan that details the actions that will be taken to achieve the targets set out in the policy.

4.5.3.2. The operating company shall demonstrate progress toward its greenhouse gas reduction targets.

4.5.3.3. The operating company shall demonstrate that it has investigated greenhouse gas reduction strategies, and shall document the results of its investigations.

### 4.5.4. Reporting

4.5.4.1. The greenhouse gas policy shall be publicly available.

4.5.4.2. On an annual basis, the operating company or its corporate owner shall:

a. Disclose to IRMA auditors an accounting of greenhouse gas emissions from the mining project, achievement of and/or progress towards mine-site-level greenhouse gas reduction targets, and efforts taken to reduce emissions from the mining project and mining-related activities; and

b. Publicly report on mine-site-level or corporate-level greenhouse gas emissions, progress towards greenhouse gas reduction targets and efforts taken to reduce emissions.

[flag] **4.5.4.2.b. Issue in brief:** While there is agreement among IRMA sectors that mines should be measuring their emissions and should have greenhouse gas reduction policies, targets and strategies in place, there is not full agreement on whether reporting of greenhouse gas emissions should occur at the mine site level, the corporate/company-wide level, or both. Many mining companies do report emissions and greenhouse gas reduction targets, but this often occurs on a corporate-wide basis. Since IRMA is certifying mine sites, not companies, the preference expressed by some stakeholders is that every mine site annually report its greenhouse gas emissions and targets. IRMA will use its Launch Phase to gather information on whether mines engaged with IRMA and other leading companies are reporting emissions and targets for individual mine sites, or whether most companies are still only doing this on a company-wide basis. This information will inform how we proceed with this requirement when we release the version of the Standard that will be used for mine certification.

NOTES

In the future, the IRMA Steering Committee may consider the development of numeric criteria to further guide mining GHG emissions as appropriate.

| CROSS REFERENCES TO OTHER CHAPTERS | |
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| **CHAPTER** | **ISSUES** |
| 1.1—Legal Compliance | As per Chapter 1.1, if there are host country laws governing the reporting or reduction of greenhouse gas emissions, the company is required to abide by those laws. If IRMA requirements are more stringent than host country law, the company is required to also meet the IRMA requirements, as long as complying with them would not require the operating company to violate host country law. |
| 1.2—Community and Stakeholder Engagement | Reporting to stakeholders shall conform with the Communications and Access to Information requirements in 1.2.4, which require that communications and information be in culturally appropriate formats and languages that are accessible and understandable to affected communities and stakeholders, and provided in a timely manner. |
| 1.4—Complaints and Grievance Mechanism and Access to Remedy | As per Chapter 1.4, the operating company is required to have an operational-level grievance mechanism available to stakeholders, including procedures for filing mining-related complaints, and having those complaints recorded, investigated and resolved in a timely manner. Any complaints from stakeholders related to greenhouse gas emissions and reporting should be addressed through the company's grievance mechanism (if not resolved through informal dialogue or other means). |
| 2.1—Environmental and Social Impact Assessment and Management | Potential impacts from greenhouse gas emissions (e.g., environmental and social impacts related to climate change) should be considered in the ESIA. The assessment may result in the development of mitigation and/or greenhouse gas reduction strategies. |