

G4-EN16

ENERGY INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 2)

- a. Report gross energy indirect (Scope 2) GHG emissions in metric tons of CO₂ equivalent, independent of any GHG trades, such as purchases, sales, or transfers of offsets or allowances.
- b. Report gases included in the calculation, if available.
- c. Report the chosen base year, the rationale for choosing the base year, emissions in the base year, and the context for any significant changes in emissions that triggered recalculations of base year emissions.
- d. Report standards, methodologies, and assumptions used.
- e. Report the source of the emission factors used and the global warming potential (GWP) rates used or a reference to the GWP source, if available.
- f. Report the chosen consolidation approach for emissions (equity share, financial control, operational control).

GUIDANCE**Relevance**

This Indicator covers the disclosure of energy indirect (Scope 2) GHG emissions, in CO₂ equivalents, of the GHGs covered by the UN 'Kyoto Protocol' and the WRI and WBCSD 'GHG Protocol Corporate Accounting and Reporting Standard'.

GHG emissions are a major contributor to climate change and are governed by the UN 'United Nations Framework Convention on Climate Change'¹⁰⁰ and the subsequent UN 'Kyoto Protocol'. Some GHGs, including methane (CH₄), 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 tradable emission permits) aim to control the volume, and reward the reduction of GHG emissions.

An organization's energy indirect (Scope 2) GHG emissions result from the generation of the electricity, heating, cooling, and steam which it purchased from other organizations for its own consumption.

For many organizations the energy indirect (Scope 2) GHG emissions that result from the generation of purchased electricity are much greater than their direct GHG emissions.

This Indicator may be used in combination with Indicators G4-EN15 (Scope 1 emissions) and G4-EN17 (Scope 3 emissions) to report an organization's total GHG emissions. The combination of direct and indirect emissions provides insights into the cost implications of taxation or trading systems. It also provides insight into an organization's environmental footprint and performance.

Compilation

Identify indirect emissions of GHGs that result from the generation of the electricity, heating, cooling, and steam which is purchased or acquired for own consumption by the organization.

Exclude other indirect (Scope 3) emissions. These other indirect (Scope 3) emissions are reported in Indicator G4-EN17.

Calculate the gross energy indirect GHG emissions that result from the generation of purchased electricity, heating, cooling, and steam. Exclude any GHG trades, such as purchases, sales, or transfers of offsets or allowances.

Select a consistent consolidation approach for emissions, and apply it to calculate the gross energy indirect (Scope 2) GHG emissions. When possible, select an approach that is consistent with the approach used in Indicator G4-EN15. Organizations may select the equity share, financial control, or operational control methods outlined in the WRI and WBCSD 'GHG Protocol Corporate Accounting and Reporting Standard'.

Select and report a base year for which emissions data are available, and specify the reasons for selecting that particular year.

Organizations are expected to report standards, methodologies, and assumptions used to calculate and measure emissions, with a reference to the calculation tools used. Organizations subject to different standards and methodologies should describe the approach to selecting them.

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Organizations may further disaggregate energy indirect (Scope 2) GHG emissions data where this aids transparency or comparability over time. For example, they may disaggregate data by:

- Business unit or facility
- Country
- Source type (electricity, heating, cooling, and steam)
- Activity type

For recalculations of prior year emissions, organizations may follow the approach in the WRI and WBCSD 'GHG Protocol Corporate Accounting and Reporting Standard'.

When possible, organizations apply emission factors and GWP rates consistently for the data reported under the Emissions Aspect. Emission factors may originate from mandatory reporting requirements, voluntary reporting frameworks, or be developed by industry groups. Estimates of GWPs change over time as scientific research develops. Organizations may use the GWPs from *Assessment Reports* from the Intergovernmental Panel on Climate Change (IPCC). As the GWPs from the *Second Assessment Report* are used as the basis for international negotiations under the UN 'Kyoto Protocol', such rates may be used for disclosing GHG emissions where it does not conflict with national or regional reporting requirements. Organizations may also use the latest GWPs from the most recent IPCC *Assessment Report*. GWPs are expressed over a number of different time frames within the IPCC *Assessment Reports*. Organizations use the factors for the 100-year time span.

Definitions

See Glossary in *Implementation Manual*, p. 244

- Base year
- Carbon dioxide equivalent
- Energy indirect (Scope 2) GHG emissions
- Global warming potential (GWP)

Documentation sources

Potential sources of information on energy indirect (Scope 2) emissions include electricity, heating, cooling, and steam consumption reported in Indicator G4-EN3.

References

- Carbon Disclosure Project (CDP), *Investor CDP Information Request*, updated annually.
- Intergovernmental Panel on Climate Change (IPCC), *Climate Change 1995: The Science of Climate Change, Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change*, 1995.
- Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007.
- United Nations (UN) Protocol, 'Kyoto Protocol to the United Nations Framework Convention on Climate Change', 1997.
- World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Corporate Accounting and Reporting Standard', Revised Edition, 2004.