GRI STANDARDS

GRI 103: Energy 2025

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TOPIC STANDARD

GRI 103: Energy 2025

Topic Standard

Effective Date
This Standard is effective for reports or other materials published on or after 1 January 2027.

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Introduction

GRI 103: Energy 2025 contains disclosures for organizations to report information about their energy-related impacts, and how they manage these impacts.

The Standard is structured as follows:

- Section 1 contains one disclosure, which provides information about how the organization manages its energy-related impacts.
- Section 2 contains four disclosures, which provide information about the organization's energy-related impacts.
- The Glossary contains defined terms with a specific meaning when used in the GRI Standards. The terms are underlined in the text of the GRI Standards and linked to the definitions.
- The Bibliography lists authoritative intergovernmental instruments and additional references used in developing this Standard.

The rest of the Introduction section provides a background on the topic, an overview of the system of GRI Standards, and further information on using this Standard.

Background on the topic

This Standard addresses the topic of energy.

The use of energy leads to greenhouse gas (GHG) emissions that contribute to climate change.

Most countries worldwide have committed to combating climate change, as outlined in the Paris Agreement [2]. According to the Intergovernmental Panel on Climate Change (IPCC) [1], global warming should be limited to 1.5ºC above pre-industrial levels. This is not possible without rapid and deep reductions in energy system GHG emissions by 2050. Organizations will, therefore, be required to make significant changes in how they consume energy, including transitioning to renewable energy, electrifying end-use sectors, and phasing out fossil fuels.

Organizations consume energy in various forms, such as fuel, electricity, heating, cooling, or steam. Energy can be self-generated or purchased from third parties and come from renewable or non-renewable sources. Energy consumption also occurs throughout activities upstream and downstream of organizations' operations. This can include consumers' use and the end-of-life treatment of organizations' products.

Energy consumption and the transition to renewable energy can have negative or positive impacts on the environment and people, including their human rights. As such, measures are required across the value chain that support workers, local communities, and other stakeholders, and ensure the protection of the environment.

Negative environmental impacts can include climate change, driven by GHG emissions from energy consumption, biodiversity loss due to energy infrastructure affecting soil and other natural resources, and pollution from waste, such as exhausted batteries. Negative impacts on people can occur throughout the value chain and include job losses and limited access to affordable, reliable, and sustainable energy. Positive impacts include improving quality of life through energy access and enhancing employment opportunities through training and reskilling workers.

System of GRI Standards

This Standard is part of the GRI Sustainability Reporting Standards (GRI Standards). The GRI Standards enable an organization to report information about its most significant impacts on the economy, environment, and people, including impacts on their human rights, and how it manages these impacts.

The GRI Standards are structured as a system of interrelated standards that are organized into three series: GRI Universal Standards, GRI Sector Standards, and GRI Topic Standards (see Figure 1 in this Standard).

Universal Standards: GRI 1, GRI 2 and GRI 3

GRI 1: Foundation 2021 specifies the requirements that the organization must comply with to report in accordance with the GRI Standards. The organization begins using the GRI Standards by consulting *GRI 1*.

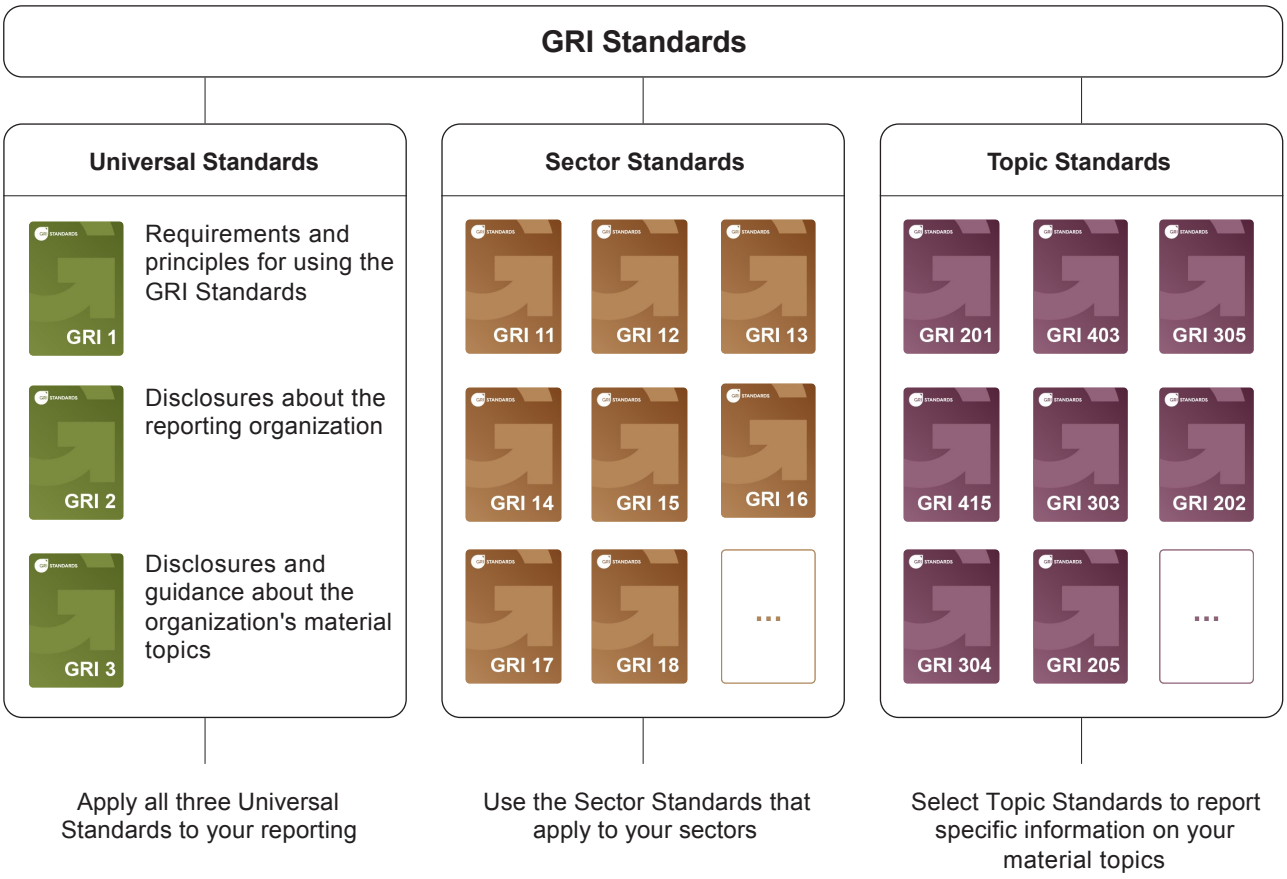
GRI 2: General Disclosures 2021 contains disclosures that the organization uses to provide information about its reporting practices and other organizational details, such as its activities, governance, and policies.

GRI 3: Material Topics 2021 provides guidance on how to determine material topics. It also contains disclosures that the organization uses to report information about its process of determining material topics, its list of material topics, and how it manages each topic.

Sector Standards
The Sector Standards provide information for organizations about their likely material topics. The organization uses the Sector Standards that apply to its sectors when determining its material topics and when determining what to report for each material topic.

Topic Standards
The Topic Standards contain disclosures that the organization uses to report information about its impacts in relation to particular topics. The organization uses the Topic Standards according to the list of material topics it has determined using *GRI 3*.

Figure 1. GRI Standards: Universal, Sector and Topic Standards



Using this Standard

This Standard can be used by any organization – regardless of size, type, sector, geographic location, or reporting experience – to report information about its energy-related impacts. In addition to this Standard, disclosures that relate to this topic can be found in *GRI 101: Biodiversity 2024* and *GRI 102: Climate Change 2025*.

An organization reporting in accordance with the GRI Standards is required to report the following disclosures if it has determined climate change to be a material topic:

- Disclosure 3-3 in *GRI 3: Material Topics 2021*.
- Any disclosures from this Topic Standard that are relevant to the organization's climate change-related impacts (Disclosure 103-1 through Disclosure 103-5).

See Requirements 4 and 5 in *GRI 1: Foundation 2021*.

Reasons for omission are permitted for these disclosures.

If the organization cannot comply with a disclosure or with a requirement in a disclosure (e.g., because the required information is confidential or subject to legal prohibitions), the organization is required to specify the disclosure or the requirement it cannot comply with, and provide a reason for omission together with an explanation in the GRI content index. See Requirement 6 in *GRI 1* for more information on reasons for omission.

If the organization cannot report the required information about an item specified in a disclosure because the item

(e.g., committee, policy, practice, process) does not exist, it can comply with the requirement by reporting this to be the case. The organization can explain the reasons for not having this item or describe any plans to develop it. The disclosure does not require the organization to implement the item (e.g., developing a policy), but to report that the item does not exist.

If the organization intends to publish a standalone sustainability report, it does not need to repeat information that it has already reported publicly elsewhere, such as on web pages or in its annual report. In such a case, the organization can report a required disclosure by providing a reference in the GRI content index as to where this information can be found (e.g., by providing a link to the web page or citing the page in the annual report where the information has been published).

Requirements, guidance and defined terms
The following apply throughout this Standard:

Requirements are presented in **bold font** and indicated by the word 'shall'. An organization must comply with requirements to report in accordance with the GRI Standards.

Requirements may be accompanied by guidance.

Guidance includes background information, explanations, and examples to help the organization better understand the requirements. The organization is not required to comply with guidance.

The Standards may also include recommendations. These are cases where a particular course of action is encouraged but not required.

The word ‘should’ indicates a recommendation, and the word ‘can’ indicates a possibility or option.

Defined terms are underlined in the text of the GRI Standards and linked to their definitions in the Glossary. The organization is required to apply the definitions in the Glossary.

1. Topic management disclosures

An organization reporting in accordance with the GRI Standards is required to report how it manages each of its its material topics.

An organization that has determined energy to be a material topic is required to report how it manages the topic using Disclosure 3-3 in *GRI 3: Material Topics 2021*. The organization is also required to report any disclosure from this section (Disclosure 103-1) that is relevant to its energy-related impacts.

This section is therefore designed to supplement – and not replace – Disclosure 3-3 in *GRI 3*.

Disclosure 103-1 Energy policies and commitments

REQUIREMENTS

The organization shall:

a. describe how its energy-related policies and commitments contribute to energy consumption reduction, energy efficiency, and the transition to renewable energy sources;

b. describe the impacts on the economy, environment, and people that may result from its energy consumption and the transition to renewable energy sources.

GUIDANCE

Guidance to 103-1-a

This requirement covers policies and commitments that apply to the organization's activities and its upstream and downstream value chain.

Examples of energy-related policies that contribute to energy efficiency and the transition to renewable energy sources include policies on:

- energy efficiency (e.g., promoting energy-saving practices in the workplace);
- the use of renewable energy, including purchasing contractual instruments (e.g., energy attribute certificates [EACs], renewable electricity certificates [RECs], power purchase agreements, and green electricity products);
- suppliers' use of renewable energy;
- just transition (e.g., training workers on land rights).

The organization should explain how its energy-related policies and commitments relate to applicable country, regional, or industry-level energy regulations.

In addition, the organization should report whether and how its energy-related policies and commitments are in line with the latest scientific evidence on the effort needed to limit global warming to 1.5°C.

The organization should report its short-, medium-, and long-term targets aimed at:

- reducing energy consumption;
- increasing energy efficiency; and
- transitioning to renewable energy sources, including whether and how contractual instruments are taken into account in renewable energy target setting and monitoring.

The organization should also describe how engagement with stakeholders informs its energy-related policies and commitments, including:

- how it identifies stakeholders, including whether it has performed a social impact assessment, whose human rights, health, socio-economic well-being, or other interests could be affected, including at-risk or vulnerable groups;
- how it engages with identified stakeholders, credible stakeholder representatives, or proxy organizations to understand their concerns and interests;
- how insights from stakeholder engagement, including from workers, trade unions, worker representatives, suppliers, Indigenous Peoples, local communities, and governments, have informed actions to prevent or mitigate negative impacts and maximize positive impacts.

Disclosure 2-29 in *GRI 2: General Disclosures 2021* covers the organization's approach to engaging with its stakeholders. If the organization has described how engagement with its stakeholders has informed the development and implementation of its energy-related policies and commitments under Disclosure 2-29, it can provide a reference to this information.

The organization should report any investments allocated for energy consumption reduction, energy efficiency (e.g., heating, refrigeration, and air conditioning improvements), and the transition to renewable energy sources (e.g., investment in energy transition technologies, renewable energy, and redesign of products, processes, or services).

Guidance to 103-1-b
This requirement enables the organization to describe the impacts on the economy, environment, and people that may result from its energy consumption and the transition to renewable energy sources across its activities and business relationships. These impacts can be the result of energy generation.

In the case of self-generation, the impacts are the result of an organization's activities. In the case of purchased energy, the impacts are the result of an organization's business relationships with suppliers (e.g., energy providers).

Impacts on people include those on workers, local communities, and vulnerable groups, such as Indigenous Peoples. Positive impacts on people can include improving quality of life through providing heat, light, and mobility, recruiting workers, or creating skills by training workers to support the transition to renewable energy consumption. Negative impacts can include job loss from the shift to renewable energy, health and safety risks from air pollution caused by burning fossil fuels, and land rights violations during land acquisition for energy generation.

Impacts on the environment can include those on biodiversity and pollution. Positive impacts can include energy-related infrastructure, such as offshore wind farms, acting as refuges for fish and marine mammals. Negative impacts of energy-related infrastructure development can include damage to species' habitats due to land and sea use changes and pollution – including dust, waste, noise, and light – from construction, decommissioning, and repowering of infrastructure, such as solar plants.

For further information on impacts on biodiversity, see reference [3] in the Bibliography.

The organization should describe actions taken to manage impacts that may result from its energy consumption and the transition to renewable energy sources.

Examples of actions taken by the organization to manage impacts that are a result of energy generation include:

- using or increasing the organization's leverage by enforcing contractual requirements on energy supply;
- implementing incentives such as future orders;
- active collaboration with other actors to motivate the energy provider to prevent or mitigate potential negative impacts.

Examples of actions to manage impacts on biodiversity include:

- careful project siting and planning and using already converted or disturbed land;
- implementing measures on wind farms to reduce the risk of turbine blade collisions, such as using acoustic deterrents for birds and increasing wind turbine visibility.

The organization can use Disclosure 101-2 in *GRI 101: Biodiversity 2024* to report the actions taken to manage its impacts on biodiversity.

2. Topic disclosures

An organization reporting in accordance with the GRI Standards is required to report any disclosures from this section (Disclosure 103-2 through Disclosure 103-5) that are relevant to its energy-related impacts.

Disclosure 103-2 Energy consumption and self-generation within the organization

REQUIREMENTS

The organization shall:

a. report total fuel consumption within the organization in joules, watt-hours, or multiples, and a breakdown of this total by:

i. renewable and non-renewable energy sources;
ii. each activity in which the fuel is consumed for each renewable and non-renewable energy source;

b. report total purchased electricity, heating, cooling, and steam consumption within the organization in joules, watt-hours, or multiples, and a breakdown of this total by:

i. renewable and non-renewable energy sources;
ii. electricity, heating, cooling, and steam consumption for each renewable and non-renewable energy source;

c. report total self-generated renewable electricity, heating, cooling, and steam consumption within the organization in joules, watt-hours, or multiples, and a breakdown of this total by electricity, heating, cooling, and steam consumption for each activity in which it is consumed for each renewable energy source;

d. report total self-generated electricity, heating, cooling, and steam sold in joules, watt-hours, or multiples, and a breakdown of this total by:

i. renewable and non-renewable energy sources;
ii. electricity, heating, cooling, and steam sold for each renewable and non-renewable energy source;

e. report whether contractual instruments are used to disclose information on purchased electricity, heating, cooling, and steam consumption, and if so, describe how the contractual instruments adhere to quality criteria to ensure accuracy and consistency;

f. report standards, methodologies, assumptions, and calculation tools used, including the source of the conversion factors used.

GUIDANCE

Throughout this guidance, electricity, heating, cooling, and steam are collectively referred to as 'electricity' in alignment with the *GHG Protocol Scope 2 Guidance* [5]. In other frameworks, 'electricity' can be referred to as 'non-fuel'.

An organization can consume energy in the form of fuel (103-2-a) or electricity, whereby an organization separately reports energy consumption from electricity purchased (103-2-b) and electricity self-generated from renewable sources (103-2-c).

Energy can be purchased from third parties or produced by the organization (self-generated). Energy can come from renewable or non-renewable sources.

For an example of how to present information on requirements in Disclosure 103-2, see Table 1 and Table 2.

The organization can report the total energy consumption within the organization as the sum of 103-2-a, 103-2-b, and 103-2-c. The organization can also report the total net energy consumption by subtracting the electricity sold (103-2-d) from the total energy consumption within the organization (103-2-a + 103-2-b + 103-2-c).

Organizations can also store or purchase energy through specific energy carriers (e.g., hydrogen) and energy storage systems (e.g., batteries). When the organization consumes energy from energy carriers or storage systems, this consumption is reported under 103-2-a, 103-2-b, or 103-2-c. If the organization sells electricity from energy carriers or storage systems, this is reported under 103-2-d. When the organization consumes or sells energy from energy carriers or storage systems, it reports the information required in this disclosure as per their primary energy source. For example, if a carrier's primary energy source is natural gas and the carrier is consumed as fuel, energy consumption from the carrier will be reported as fuel consumption from non-renewable sources. The organization should report any contextual information on the energy carriers' primary energy source, for example, governmental programs (e.g., subsidies for hydrogen production) that supported its production or associated contractual instruments.

Where it aids transparency or comparability over time, the organization can provide a breakdown of the energy consumption by, for example:

- business unit or facility;
- country.

Guidance to 103-2-a

This requirement covers fuel consumption from fuels purchased by the organization and fuels self-generated, such as coal mined, oil and gas extracted, or biofuel produced. The organization can report the consumption of fuel purchased and fuel self-generated separately.

Fuel consumption from non-renewable energy sources usually contributes to the organization's Scope 1 GHG emissions, which are reported under Disclosure 102-5 in *GRI 102: Climate Change 2025*.

Self-generated electricity consumption from fuel is counted under fuel consumption (103-2-a). For example, if an organization has a co-generator that burns non-renewable fuels to produce electricity and then consumes the generated electricity, this is counted once under fuel consumption.

Guidance to 103-2-a-i

Fuel consumption from renewable sources can include biofuels purchased or self-generated from biomass owned or controlled by the organization (also comprising industrial waste of biological origin).

Fuel consumption from non-renewable sources can include gasoline and liquefied petroleum gas (LPG) used for combustion in boilers, furnaces, heaters, turbines, flares, incinerators, generators, and vehicles owned or controlled by the organization.

Guidance to 103-2-a-ii

This requirement aims to identify the main drivers of fuel consumption within the organization. To comply with this requirement, the organization can, for example, report a breakdown of the top five fuel-consuming activities and combine the remaining activities into an 'other' category.

Examples of activities where fuel is consumed include manufacturing processes, operating office equipment, operating a car fleet, heating buildings, and conducting research and development.

Guidance to 103-2-b, 103-2-c, and 103-2-d

In line with the *GHG Protocol Scope 2 Guidance* [5], definitions of electricity, heating, cooling, and steam can include:

- Electricity used for operating machines, lighting, electric vehicle charging, or heating and cooling systems.
- Heating commercial or industrial buildings to control interior climates and heat water. Many industrial processes also require heat for specific equipment.
- Cooling produced through the distribution of cooled air or water.
- Steam used for mechanical work, heat, or directly as a process medium.

Electricity consumption from renewable sources can include wind and solar. Electricity consumption from non-renewable sources can include coal, oil, and natural gas.

Guidance to 103-2-b
This requirement covers purchased electricity consumption from renewable and non-renewable energy sources.

In this requirement, consumption of purchased electricity also refers to circumstances where the organization indirectly acquires and consumes electricity (e.g., as a tenant of a property).

Contractual instruments can provide information on the breakdown of purchased electricity by renewable and non-renewable sources under 103-2-b-i. Examples of contractual instruments include energy attribute certificates (EACs), renewable electricity certificates (RECs), power purchase agreements, and green electricity products. This can be helpful when variations in accounting methods across countries make it difficult to report this breakdown consistently.

The organization should report whether the consumption of purchased electricity from renewable sources was calculated based on grid-average data (location-based data) or contractual instruments (market-based data). The organization should report how it purchases electricity from the grid (e.g., from a utility, retail service provider, or wholesale procurements). In addition, the organization should report the percentage of energy sources in the grid mix in which they are purchasing electricity, for example, 50% from wind and 50% from natural gas. If applicable, the organization should report which types of contractual instruments it uses (e.g., power purchase agreements, utility green tariffs, or unbundled certificates) and the amount and percentage of the total purchased electricity covered by each instrument.

Based on the *GHG Protocol Scope 2 Guidance* [5], quality criteria apply to all contractual instruments to ensure accuracy and consistency of reporting (see Guidance to 102-6-a for further information).

The organization can report additional information on the contractual instruments, for example:
- the date that a renewable generation facility was commissioned or repowered;
- whether a renewable generation facility receives government subsidies or other support;
- the length of the contract for contractual instruments;
- whether the contract was signed before the investment decision to build a renewable generation facility.

Consumption of purchased electricity contributes to the organization's Scope 2 GHG emissions, which are reported under Disclosure 102-6 in *GRI 102: Climate Change 2025*.

Guidance to 103-2-c
This requirement covers self-generated electricity consumption from renewable energy sources (e.g., wind, solar).

When the organization generates electricity from fuel consumed and then uses the generated electricity, the energy consumption is counted once under 103-2-a.

Self-generated renewable electricity consumption does not include electricity whose contractual instruments have been sold off.

The required breakdown by activity aims to identify the main drivers of electricity consumption within the organization. To comply with this requirement, the organization can, for example, report a breakdown of the top five electricity-consuming activities and combine the remaining activities into an 'other' category.

Examples of activities where electricity is consumed include manufacturing processes, operating office equipment, operating a car fleet, heating buildings, and conducting research and development.

Guidance to 103-2-d
When the organization sells self-generated renewable electricity, it should report whether it has sold off any linked contractual instruments. The organization should also report a breakdown of self-generated renewable electricity sold with:
- contractual instruments; or
- attributes retained.

Table 2 offers an example of how to present information on self-generated electricity sold. The organization can amend the table according to its practices.

Guidance to 103-2-e
The following quality criteria, built on the *GHG Protocol Scope 2 Guidance* [5], apply to contractual instruments (e.g., EACs):

- Contractual instruments must convey the GHG emission rate attribute associated with the electricity produced. Attributes are defined as descriptive or performance characteristics of a particular generation resource. Each contractual instrument must be the only source of a GHG emission rate attribute claim associated with its quantity of energy generation.
- Contractual instruments must be tracked and redeemed, retired, or canceled by or on behalf of the reporting organization.
- Contractual instruments must be issued and redeemed as close as possible to the energy consumption period the contractual instrument applies to.
- Contractual instruments must be sourced from the same market to which the contractual instrument is applied.

The organization should also describe how it strives for the temporal and physical connection between contractual instruments and their associated energy consumption. For example, the contractual instrument can be sourced from the same grid or country where it is applied, and the contractual instrument can be issued with hourly matching.

If the organization uses data from contractual instruments (e.g., EACs) to report self-generated electricity sold, it should report how it ensures that contractual instruments adhere to applicable quality criteria.

For further information on the quality criteria and how to support accurate accounting if an organization cannot meet them, see reference [5] in the Bibliography.

Guidance to 103-2-f
The organization should explain why the standards, methodologies, assumptions, and calculation tools used were chosen.

The organization should:

- apply conversion factors consistently for all data disclosed;
- use conversion factors that best represent the specific energy content of the fuel to convert to joules, watt-hours, or multiples. For example, the organization should use conversion factors for bituminous coal instead of generic coal when reporting energy consumption from bituminous coal.

Table 1 offers an example of how to present information on energy consumption within the organization. The organization can amend the table according to its practices.

Disclosure 103-3 Upstream and downstream energy consumption

REQUIREMENT

The organization shall:

a. report total significant energy consumption in its upstream and downstream value chain in joules, watt-hours, or multiples, and list the upstream and downstream categories in which significant energy consumption occurs;

b. report standards, methodologies, assumptions, and calculation tools used, including the source of the conversion factors used.

GUIDANCE

This disclosure covers energy consumption from activities outside the organization and includes the upstream and downstream value chain.

Consumption of non-renewable energy sources upstream and downstream in the organization's value chain contributes to the organization's Scope 3 GHG emissions, which are reported under Disclosure 102-7 in *GRI 102: Climate Change 2025*.

Guidance to 103-3-a
To compile the information required under 103-3-a, the organization can use the following steps:

- Identify which activities in its upstream and downstream value chain have significant energy consumption.
- Add up the energy consumption for these activities.
- Attribute the activities that have significant energy consumption to the upstream and downstream categories listed below.
- List the upstream and downstream categories.

The organization should provide a breakdown of the total significant energy consumption in its upstream and downstream value chain by upstream and downstream categories in which significant energy consumption occurs. To compile this information, the organization can use the following steps:

- Refer to the list of upstream and downstream categories in which significant energy consumption occurs.
- For each category, report the energy consumption.

The organization can identify which activities in its upstream and downstream value chain have significant energy consumption by assessing whether an activity's energy consumption:

- contributes significantly to the organization's total energy consumption in its upstream and downstream value chain;
- offers potential for reductions the organization can undertake or influence;
- contributes to climate change as high-emitting activity;
- is deemed material by stakeholders, such as civil society organizations, customers, investors, or suppliers;
- results from outsourcing a previously performed in-house activity or that is typically performed in-house by other organizations in the same sector;
- has been identified as significant for the organization's sector;
- meets additional criteria for determining relevance developed by the organization or its sector.

The significant energy consumption in the organization's upstream and downstream value chain includes the significant energy consumption for each of the following upstream and downstream categories from the *GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard* [4]:

Upstream categories

1. Purchased goods and services
2. Capital goods
3. Fuel- and energy-related activities (not included in Disclosure 103-2)
4. Upstream transportation and distribution
5. Waste generated in operations

6. Business travel
7. Employee commuting
8. Upstream leased assets

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

The organization should use all reasonable and supportable information at the reporting date to measure upstream and downstream energy consumption.

The organization should report upstream and downstream energy consumption separately for renewable and non-renewable energy sources.

If the organization cannot use primary data to calculate significant upstream and downstream energy consumption, it can estimate the consumption. Primary data is obtained from suppliers or other value chain entities related to the organization's activities. The organization should report for which upstream and downstream categories estimations are used and the percentage of data estimated for each category.

Guidance to 103-3-b

The organization should explain why the standards, methodologies, assumptions, and calculation tools used were chosen.

The organization should:

- apply conversion factors consistently for all data disclosed;
- use conversion factors that best represent the specific energy content of the fuel to convert to joules, watt-hours, or multiples. For example, when reporting on energy consumption from bituminous coal, the organization should use conversion factors for bituminous coal instead of generic coal.

Disclosure 103-4 Energy intensity

REQUIREMENTS

The organization shall:

a. report energy intensity ratio(s), including the energy consumption in joules, watt-hours, or multiples (the numerator) and the organization-specific metric (the denominator) chosen to calculate the ratio(s);

b. report whether the energy intensity ratio(s) include energy consumption within the organization, in its upstream and downstream value chain, or both;

c. report the types of energy consumption included in the energy intensity ratio(s), whether fuel, electricity, heating, cooling, or steam.

GUIDANCE

Energy intensity ratios are obtained by dividing the energy consumption (the numerator) by an organization-specific metric (the denominator). Many organizations track environmental performance with intensity ratio(s).

Energy intensity ratios express the amount of energy consumed per unit of activity, output, or any other organization-specific metric.

Energy intensity ratios can help stakeholders and the organization understand energy efficiency in relation to other organizations while supporting investment decisions for energy reduction and efficiency.

The organization should use data on energy consumption reported under Disclosures 103-2 and 103-3 to calculate the energy intensity ratio(s).

The organization should select a consistent organizational boundary for the numerator and denominator in the energy intensity ratio.

For an example of how to present information on requirements in Disclosure 103-4, see Table 3.

Guidance to 103-4-a

Examples of energy intensity ratios can include:

- [amount of] fuel consumption within the organization in MWh (numerator) per 100 full-time equivalent employees (denominator);
- [amount of] electricity consumption within the organization and upstream and downstream in the value chain in megajoules (numerator) per EUR 1 million revenue (denominator).

Types of 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 equivalent employees;
- monetary units (such as revenue or sales).

Relevant denominators differ between industries or business units within an organization. Therefore, the organization should choose a denominator relevant to its industry and aligned with current industry standards. For example, the energy intensity of building performance according to a recognized standard or the energy intensity of a given process per the process' output, such as crude refining or cement production. When using recognized industry standards to calculate energy intensity ratio(s), the organization should report the industry standards according to which it calculated the ratio(s) and provide details on the methodologies used and assumptions made.

Where it aids transparency or comparability over time, the organization should provide a breakdown of the energy intensity ratios by:

- business unit or facility;
- country;
- energy source;

- type of activity;
- upstream and downstream category.

Guidance to 103-4-b
This requirement aims to report what the energy intensity ratio covers, allowing the organization to select the scope of the energy consumption data.

Disclosure 103-5 Reduction in energy consumption

REQUIREMENTS

The organization shall:

a. report the reduction in energy consumption achieved in joules, watt-hours, or multiples, including whether and how it is due to:

i. reductions from the organization's conservation and efficiency initiatives;
ii. other factors;

b. report the types of energy consumption included in the reduction, whether fuel, electricity, heating, cooling, or steam;

c. report whether the reduction in energy consumption was achieved within the organization, in its upstream and downstream value chain, or both, and list the upstream and downstream categories in which reduction was achieved;

d. report whether the reduction in energy consumption is estimated, modeled, or sourced from direct measurements and, if applicable, the estimations or modeling methods used;

e. report the base year or baseline for calculating the reduction in energy consumption, including:

i. the rationale for choosing it;
ii. energy consumption in the base year or baseline;

f. report standards, methodologies, assumptions, and calculation tools used.

GUIDANCE

Reductions in energy consumption can be related to target setting. For further information on energy target reporting, see Guidance to 103-1-a.

Guidance to 103-5-a
The reduction in energy consumption can be calculated by comparing the energy consumption in the reporting period to:

- energy consumption in the base year; or
- projected energy consumption in the absence of any reduction activity (baseline).

Energy conservation and efficiency initiatives can include:

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

Examples of other factors include reduced production capacity or outsourcing, changes in organizational boundaries, and weather fluctuations that affect energy supply.

The organization should report the percentage of the reduction in energy consumption compared to the energy consumption in the base year or baseline.

The organization can provide a breakdown of the reduction in energy consumption by individual conservation and efficiency initiatives.

Guidance to 103-5-b
The organization can provide a breakdown of the reduction in energy consumption by energy type: fuel, electricity, heating, cooling, and steam.

Guidance to 103-5-c
This requirement aims to report what the energy consumption reduction covers, allowing the organization to select the scope of the energy consumption data included.

The reduction in energy consumption achieved in the organization's upstream and downstream value chain includes the reduction achieved for each of the following upstream and downstream categories from the *GHG Protocol Corporate Value Chain (Scope 3)*

Accounting and Reporting Standard [4]:

Upstream categories
1. Purchased goods and services
2. Capital goods
3. Fuel- and energy-related activities (not included in Disclosure 103-2)
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased assets

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

The organization should provide a breakdown of the reduction in energy consumption achieved in the organization's upstream and downstream value chain by upstream and downstream categories in which the reduction was achieved.

It is important to consider the whole life cycle of products and services when assessing energy consumption reduction. This is particularly important for products and services with high energy consumption during their use phase due to their potential to affect energy demand, such as electronic equipment and vehicles.

If applicable, the organization can report reductions in energy requirements during the use phase of products and services, for example, a product that consumes 10% less energy per hour.

Guidance to 103-5-f
The organization should explain why the standards, methodologies, assumptions, and calculation tools used were chosen.

The organization should describe any changes in standards, methodologies, assumptions, and calculation tools used compared to the previous reporting period(s), including the updates of the energy consumption models developed to keep up with technological improvements.

Glossary

This glossary provides definitions for terms used in this Standard. The organization is required to apply these definitions when using the GRI Standards.

The definitions included in this glossary 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.

B

base year
historical datum (a specific year or an average over multiple years) against which a measurement is tracked over time

Source: World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), *GHG Protocol Corporate Accounting and Reporting Standard, Revised Edition*, 2004; modified

baseline
starting point used for comparisons

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

business partner
entity with which the organization has some form of direct and formal engagement for the purpose of meeting its business objectives

Source: Shift and Mazars LLP, *UN Guiding Principles Reporting Framework*, 2015; modified

Examples: affiliates, business-to-business customers, clients, first-tier suppliers, franchisees, joint venture partners, investee companies in which the organization has a shareholding position

Note: Business partners do not include subsidiaries and affiliates that the organization controls.

business relationships
relationships that the organization has with business partners, with entities in its value chain including those beyond the first tier, and with any other entities directly linked to its operations, products, or services

Source: United Nations (UN), *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, 2011; modified

Note: Examples of other entities directly linked to the organization's operations, products, or services are a non-governmental organization with which the organization delivers support to a local community or state security forces that protect the organization's facilities.

C

child
person under the age of 15 years, or under the age of completion of compulsory schooling, whichever is higher

Note 1: Exceptions can occur in certain countries where economies and educational facilities are insufficiently developed, and a minimum age of 14 years applies. These countries of exception are specified by the International Labour Organization (ILO) in response to a special application by the country concerned and in consultation with representative organizations of employers and workers.

Note 2: The ILO *Minimum Age Convention,* 1973, (No. 138), refers to both child labor and young workers.

conservation and efficiency initiative

organizational or technological modification that allows a defined process or task to be carried out using less energy

Examples: conversion and retrofitting of equipment such as energy-efficient lighting, elimination of unnecessary energy use due to changes in behavior, process redesign

E

employee
individual who is in an employment relationship with the organization according to national law or practice

energy reduction
amount of energy no longer used or needed to carry out the same processes or tasks relative to the energy used or needed in the base year or baseline

G

greenhouse gas (GHG)
gas that contributes to the greenhouse effect by absorbing infrared radiation

Note: GHGs are the seven gases covered by the Kyoto Protocol: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF_6); and nitrogen trifluoride (NF_3).

H

human rights
rights inherent to all human beings, which include, at a minimum, the rights set out in the *United Nations (UN) International Bill of Human Rights* and the principles concerning fundamental rights set out in the *International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work*

Source: United Nations (UN), *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, 2011; modified

Note: See Guidance to 2-23-b-i in *GRI 2: General Disclosures 2021* for more information on 'human rights'.

I

impact
effect the organization has or could have on the economy, environment, and people, including on their human rights, which in turn can indicate its contribution (negative or positive) to sustainable development

Note 1: Impacts can be actual or potential, negative or positive, short-term or long-term, intended or unintended, and reversible or irreversible.

Note 2: See section 2.1 in *GRI 1: Foundation 2021* for more information on 'impact'.

Indigenous Peoples
Indigenous Peoples are generally identified as:

- tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations;
- peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

Source: International Labour Organization (ILO), *Indigenous and Tribal Peoples Convention*, 1989 (No. 169)

L

local community
individuals or groups of individuals living or working in areas that are affected or that could be affected by the organization's activities

Note: The local community can range from those living adjacent to the organization's operations to those living at a distance.

M

material topics
topics that represent the organization's most significant impacts on the economy, environment, and people, including impacts on their human rights

Note: See section 2.2 in *GRI 1: Foundation 2021* and section 1 in *GRI 3: Material Topics 2021* for more information on 'material topics'.

mitigation
action(s) taken to reduce the extent of a negative impact

Source: United Nations (UN), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, 2012; modified

Note: The mitigation of an actual negative impact refers to actions taken to reduce the severity of the negative impact that has occurred, with any residual impact needing remediation. The mitigation of a potential negative impact refers to actions taken to reduce the likelihood of the negative impact occurring.

N

non-renewable energy source
energy source that cannot be replenished, reproduced, grown or generated in a short time period through ecological cycles or agricultural processes

Examples: coal; fuels distilled from petroleum or crude oil, such as gasoline, diesel fuel, jet fuel, and heating oil; fuels extracted from natural gas processing and petroleum refining, such as butane, propane, and liquefied petroleum gas (LPG); natural gas, such as compressed natural gas (CNG), and liquefied natural gas (LNG); nuclear power

R

remedy / remediation
means to counteract or make good a negative impact or provision of remedy

Source: United Nations (UN), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, 2012; modified

Examples: apologies, financial or non-financial compensation, prevention of harm through injunctions or guarantees of non-repetition, punitive sanctions (whether criminal or administrative, such as fines), restitution, restoration, rehabilitation

renewable energy source
energy source that is capable of being replenished in a short time through ecological cycles or agricultural processes

Examples: biomass, geothermal, hydro, solar, wind

reporting period
specific time period covered by the reported information

Examples: fiscal year, calendar year

S

Scope 1 GHG emissions
greenhouse gas (GHG) emissions from sources that are owned or controlled by the organization

Source: World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), *GHG Protocol Scope 2 Guidance,* 2015 and *GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, 2011

Examples: CO_2 emissions from fuel consumption

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

Scope 2 GHG emissions

indirect greenhouse gas (GHG) emissions from the generation of purchased or acquired electricity, heating, cooling and steam consumed by the organization

Source: World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), *GHG Protocol Scope 2 Guidance,* 2015 and *GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, 2011

Scope 3 GHG emissions
indirect greenhouse gas (GHG) emissions (not included in Scope 2 GHG emissions) that occur in the organization's upstream and downstream value chain

Source: World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), *GHG Protocol Scope 2 Guidance,* 2015 and *GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, 2011

severity (of an impact)
The severity of an actual or potential negative impact is determined by its scale (i.e., how grave the impact is), scope (i.e., how widespread the impact is), and irremediable character (how hard it is to counteract or make good the resulting harm).

Source: Organisation for Economic Co-operation and Development (OECD), *OECD Due Diligence Guidance for Responsible Business Conduct*, 2018; modified
United Nations (UN), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, 2012; modified

Note: See section 1 in *GRI 3: Material Topics 2021* for more information on 'severity'.

stakeholder
individual or group that has an interest that is affected or could be affected by the organization's activities

Source: Organisation for Economic Co-operation and Development (OECD), *OECD Due Diligence Guidance for Responsible Business Conduct*, 2018; modified

Examples: business partners, civil society organizations, consumers, customers, employees and other workers, governments, local communities, non-governmental organizations, shareholders and other investors, suppliers, trade unions, vulnerable groups

Note: See section 2.4 in *GRI 1: Foundation 2021* for more information on 'stakeholder'.

supplier
entity upstream from the organization (i.e., in the organization's supply chain), which provides a product or service that is used in the development of the organization's own products or services

Examples: brokers, consultants, contractors, distributors, franchisees, home workers, independent contractors, licensees, manufacturers, primary producers, sub-contractors, wholesalers

Note: A supplier can have a direct business relationship with the organization (often referred to as a first-tier supplier) or an indirect business relationship.

supply chain
range of activities carried out by entities upstream from the organization, which provide products or services that are used in the development of the organization's own products or services

sustainable development / sustainability
development that meets the needs of the present without compromising the ability of future generations to meet their own needs

Source: World Commission on Environment and Development, *Our Common Future*, 1987

Note: The terms 'sustainability' and 'sustainable development' are used interchangeably in the GRI Standards.

V

value chain
range of activities carried out by the organization, and by entities upstream and downstream from the organization, to bring the organization's products or services from their conception to their end use

Note 1: Entities upstream from the organization (e.g., suppliers) provide products or services that are used in the development of the organization's own products or services. Entities downstream from the organization (e.g., distributors, customers) receive products or services from the organization.

Note 2: The value chain includes the supply chain.

vulnerable group
group of individuals with a specific condition or characteristic (e.g., economic, physical, political, social) that could experience negative impacts as a result of the organization's activities more severely than the general population

Examples: children and youth; elderly persons; ex-combatants; HIV/AIDS-affected households; human rights defenders; Indigenous Peoples; internally displaced persons; migrant workers and their families; national or ethnic, religious and linguistic minorities; persons who might be discriminated against based on their sexual orientation, gender identity, gender expression, or sex characteristics (e.g., lesbian, gay, bisexual, transgender, intersex); persons with disabilities; refugees or returning refugees; women

Note: Vulnerabilities and impacts can differ by gender.

W

waste
anything that the holder discards, intends to discard, or is required to discard

Source: United Nations Environment Programme (UNEP), *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, 1989

Note 1: Waste can be defined according to the national legislation at the point of generation.

Note 2: A holder can be the reporting organization, an entity in the organization's value chain upstream or downstream (e.g., supplier or consumer), or a waste management organization, among others.

worker
person that performs work for the organization

Examples: employees, agency workers, apprentices, contractors, home workers, interns, self-employed persons, sub-contractors, volunteers, and persons working for organizations other than the reporting organization, such as for suppliers

Note: In the GRI Standards, in some cases, it is specified whether a particular subset of workers is required to be used.

worker representative
person who is recognized as such under national law or practice, whether they are:

- a trade union representative, namely, a representative designated or elected by trade unions or by members of such unions; or
- an elected representative, namely, a representative who is freely elected by the workers of the undertaking in accordance with provisions of national laws, regulations, or collective agreements, whose functions do not include activities which are recognized as the exclusive prerogative of trade unions in the country concerned.

Source: International Labour Organization (ILO), *Workers' Representatives Convention*, 1971 (No. 135)

Bibliography

This section lists authoritative intergovernmental instruments and additional references used in developing this Standard.

Authoritative instruments:

1. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, 2022.
2. United Nations Framework Convention on Climate Change (UNFCCC), *Paris Agreement*, 2016.

Additional references:

3. The Biodiversity Consultancy and WWF, *Nature-safe Energy: Linking energy and nature to tackle the climate and biodiversity crises*, 2023.
4. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), *GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, 2011.
5. 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.

Appendix

Table 1. Example template for presenting information for 103-2-a, 103-2-b, and 103-2-c

Table 2. Example template for presenting information for 103-2-d

Table 3. Example template for presenting information on energy intensity ratio(s)

Table 1. Example template for presenting information for 103-2-a, 103-2-b, and 103-2-c

			Renewable energy sources		Non-renewable energy sources		**Total**
			Energy source 1	Energy source N	Energy source 1	Energy source N	
Fuel consumption (103-2-a)		Activity 1					
		Activity N					
		Total					
Purchased electricity consumption (103-2-b)	Electricity						
	Heating						
	Cooling						
	Steam						
	Total						
Self-generated renewable electricity consumption (103-2-c)	Electricity	Activity 1					
		Activity N					
	Heating	Activity 1					
		Activity N					
	Cooling	Activity 1					
		Activity N					
	Steam	Activity 1					
		Activity N					

Note: Gray cells indicate non-applicable items. ‘N’ represents the organization’s additional energy sources or activities.

Table 2. Example template for presenting information for 103-2-d

		Renewable energy sources		Non-renewable energy sources		**Total**
		Energy source 1	Energy source N	Energy source 1	Energy source N	
Self-generated electricity sold (103-2-d)	Electricity					
	Heating					
	Cooling					
	Steam					
	Total					

Note: Gray cells indicate non-applicable items. 'N' represents the organization's additional energy sources or activities.

Table 3. Example template for presenting information on energy intensity ratio(s)

Energy consumption (joules, watt-hours, or multiples)	Scope(s) of energy consumption (within the organization, upstream and downstream in the value chain, or both)	Types of energy consumption (fuel, electricity, heating, cooling or steam)	Organization-specific metric	Energy intensity ratio

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