

GRI 302: ENERGY
2016

GRI

302

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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	<i>GRI 302: Energy</i> sets out reporting requirements on the topic of energy. 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 <u>underlined</u> .
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.

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 302: Energy 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.

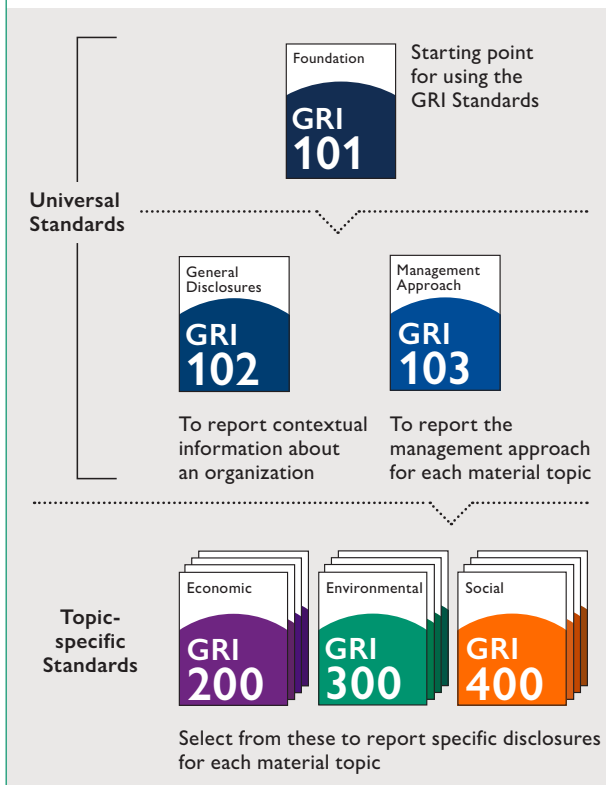
1. The GRI Standards can be used as a set to prepare a sustainability report that is in accordance with the Standards. There are two options for preparing a report in accordance (Core or Comprehensive), depending on the extent of disclosures included in the report.

An organization preparing a report in accordance with the GRI Standards uses this Standard, *GRI 302: Energy*, 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.

Figure 1
Overview of the set of GRI Standards



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 302 addresses the topic of energy.

An organization can consume energy in various forms, such as fuel, electricity, heating, cooling or steam. Energy can be self-generated or purchased from external sources and it can come from renewable sources (such as wind, hydro or solar) or from non-renewable sources (such as coal, petroleum or natural gas).

Using energy more efficiently and opting for renewable energy sources is essential for combating climate change and for lowering an organization's overall environmental footprint.

Energy consumption can also occur throughout the upstream and downstream activities connected with an organization's operations. This can include consumers' use of products the organization sells, and the end-of-life treatment of these products.

The disclosures in this Standard can provide information about an organization's impacts related to energy, and how it manages them.

GRI 302: Energy

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 302-1 Energy consumption within the organization
- Disclosure 302-2 Energy consumption outside of the organization
- Disclosure 302-3 Energy intensity
- Disclosure 302-4 Reduction of energy consumption
- Disclosure 302-5 Reduction in energy requirements of products and services

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 energy using *GRI 103: Management Approach*.

Guidance

When reporting its management approach for energy, the reporting organization can also explain whether it is subject to any country, regional, or industry-level energy regulations and policies. Additionally, it can provide examples of these regulations and policies.

2. Topic-specific disclosures

Disclosure 302-1

Energy consumption within the organization

Reporting requirements

The reporting organization shall report the following information:

- a. Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used.
- b. Total fuel consumption within the organization from renewable sources, in joules or multiples, and including fuel types used.
- c. In joules, watt-hours or multiples, the total:
 - i. electricity consumption
 - ii. heating consumption
 - iii. cooling consumption
 - iv. steam consumption
- d. In joules, watt-hours or multiples, the total:
 - i. electricity sold
 - ii. heating sold
 - iii. cooling sold
 - iv. steam sold
- e. Total energy consumption within the organization, in joules or multiples.
- f. Standards, methodologies, assumptions, and/or calculation tools used.
- g. Source of the conversion factors used.

Disclosure
302-1

- 2.1 When compiling the information specified in Disclosure 302-1, the reporting organization shall:
 - 2.1.1 avoid the double-counting of fuel consumption, when reporting self-generated energy consumption. If the organization generates electricity from a non-renewable or renewable fuel source and then consumes the generated electricity, the energy consumption shall be counted once under fuel consumption;
 - 2.1.2 report fuel consumption separately for non-renewable and renewable fuel sources;
 - 2.1.3 only report energy consumed by entities owned or controlled by the organization;
 - 2.1.4 calculate the total energy consumption within the organization in joules or multiples using the following formula:

Disclosure 302-1

Continued

$$\begin{aligned} & \text{Total energy consumption within the organization} \\ & = \\ & \quad \text{Non-renewable fuel consumed} \\ & \quad + \\ & \quad \text{Renewable fuel consumed} \\ & \quad + \\ & \quad \text{Electricity, heating, cooling, and steam purchased for consumption} \\ & \quad + \\ & \quad \text{Self-generated electricity, heating, cooling, and steam,} \\ & \quad \text{which are not consumed (see clause 2.1.1)} \\ & \quad - \\ & \quad \text{Electricity, heating, cooling, and steam sold} \end{aligned}$$

Reporting recommendations

- 2.2 When compiling the information specified in Disclosure 302-1, the reporting organization should:
- 2.2.1 apply conversion factors consistently for the data disclosed;
 - 2.2.2 use local conversion factors to convert fuel to joules, or multiples, when possible;
 - 2.2.3 use the generic conversion factors, when local conversion factors are unavailable;
 - 2.2.4 if subject to different standards and methodologies, describe the approach to selecting them;
 - 2.2.5 select a consistent topic Boundary for energy consumption. When possible, the Boundary should be consistent with that used in [Disclosures 305-1](#) and [305-2](#) of *GRI 305: Emissions*;
 - 2.2.6 where it aids transparency or comparability over time, provide a breakdown of energy consumption data by:
 - 2.2.6.1 business unit or facility;
 - 2.2.6.2 country;
 - 2.2.6.3 type of source (see definitions for the listing of non-renewable sources and renewable sources);
 - 2.2.6.4 type of activity.

Guidance

Background

For some organizations, electricity is the only significant form of energy they consume. For others, energy sources such as steam or water provided from a district heating plant or chilled water plant can also be important.

Energy can be purchased from sources external to the organization or produced by the organization itself (self-generated).

Non-renewable fuel sources can include fuel for combustion in boilers, furnaces, heaters, turbines, flares, incinerators, generators and vehicles that are owned or controlled by the organization. Non-renewable fuel sources cover fuels purchased by the organization. They also include fuel generated by the organization's activities – such as mined coal, or gas from oil and gas extraction.

Renewable fuel sources can include biofuels, when purchased for direct use, and biomass in sources owned or controlled by the organization.

Consuming non-renewable fuels is usually the main contributor to direct (Scope 1) GHG emissions, which are reported in [Disclosure 305-1](#) of *GRI 305: Emissions*. Consuming purchased electricity, heating, cooling, and steam contributes to the organization's energy indirect (Scope 2) GHG emissions, which are reported in [Disclosure 305-2](#) of *GRI 305: Emissions*.

Disclosure 302-2

Energy consumption outside of the organization

Reporting requirements

Disclosure
302-2

The reporting organization shall report the following information:

- a. Energy consumption outside of the organization, in joules or multiples.
- b. Standards, methodologies, assumptions, and/or calculation tools used.
- c. Source of the conversion factors used.

2.3 When compiling the information specified in Disclosure 302-2, the reporting organization shall exclude energy consumption reported in Disclosure 302-1.

Reporting recommendations

2.4 When compiling the information specified in Disclosure 302-2, the reporting organization should:

- 2.4.1 if subject to different standards and methodologies, describe the approach to selecting them;
- 2.4.2 list energy consumption outside of the organization, with a breakdown by upstream and downstream categories and activities.

Guidance

Guidance for Disclosure 302-2

The reporting organization can identify energy consumption outside of the organization by assessing whether an activity's energy consumption:

- contributes significantly to the organization's total anticipated energy consumption outside of the organization;
- offers potential for reductions the organization can undertake or influence;
- contributes to climate change-related risks, such as financial, regulatory, supply chain, product and customer, litigation, and reputational risks;
- is deemed material by stakeholders, such as customers, suppliers, investors, or civil society;
- results from outsourced activities previously performed in-house, or that are typically performed in-house by other organizations in the same sector;
- has been identified as significant for the organization's sector;
- meets 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 (Scope 3) Accounting and Reporting Standard' for identifying relevant energy consumption outside of the organization (see reference 2 in the [References section](#)):

Upstream categories

1. Purchased goods and services
2. Capital goods
3. Fuel- and energy-related activities (not included in Disclosure 302-1)
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

Disclosure 302-2

Continued

For each of these categories and activities, the organization can calculate or estimate the amount of energy consumed.

The organization can report energy consumption separately for non-renewable sources and renewable sources.

Background

Energy consumption can occur outside an organization, i.e., throughout the organization's upstream and downstream activities associated with its operations.

This can include consumers' use of products the organization sells, and the end-of-life treatment of products.

Quantifying energy consumption outside of the organization can provide a basis for calculating some of the relevant other indirect (Scope 3) GHG emissions in [Disclosure 305-3](#) of *GRI 305: Emissions*.

Disclosure 302-3

Energy intensity

Reporting requirements

Disclosure 302-3

The reporting organization shall report the following information:

- a. Energy intensity ratio for the organization.
- b. Organization-specific metric (the denominator) chosen to calculate the ratio.
- c. Types of energy included in the intensity ratio; whether fuel, electricity, heating, cooling, steam, or all.
- d. Whether the ratio uses energy consumption within the organization, outside of it, or both.

2.5 When compiling the information specified in Disclosure 302-3, the reporting organization shall:

- 2.5.1 calculate the ratio by dividing the absolute energy consumption (the numerator) by the organization-specific metric (the denominator);
- 2.5.2 if reporting an intensity ratio both for the energy consumed within the organization and outside of it, report these intensity ratios separately.

Reporting recommendations

2.6 When compiling the information specified in Disclosure 302-3, the reporting organization should, where it aids transparency or comparability over time, provide a breakdown of the energy intensity ratio by:

- 2.6.1 business unit or facility;
- 2.6.2 country;
- 2.6.3 type of source (see definitions for the listing of non-renewable sources and renewable sources);
- 2.6.4 type of activity.

Guidance

Guidance for Disclosure 302-3

Intensity ratios can be provided for, among others:

- products (such as energy consumed per unit produced);
- services (such as energy consumed per function or per service);
- sales (such as energy consumed per monetary unit of sales).

Organization-specific metrics (denominators) can include:

- units of product;
- production volume (such as metric tons, liters, or MWh);
- size (such as m² floor space);
- number of full-time employees;
- monetary units (such as revenue or sales).

Background

Energy intensity ratios define energy consumption in the context of an organization-specific metric.

These ratios express the energy required per unit of activity, output, or any other organization-specific metric. Intensity ratios are often called normalized environmental impact data.

In combination with the organization's total energy consumption, reported in Disclosures 302-1 and 302-2, energy intensity helps to contextualize the organization's efficiency, including in relation to other organizations.

See references 1 and 3 in the [References section](#).

Disclosure 302-4

Reduction of energy consumption

Reporting requirements

Disclosure
302-4

The reporting organization shall report the following information:

- a. Amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives, in joules or multiples.
- b. Types of energy included in the reductions; whether fuel, electricity, heating, cooling, steam, or all.
- c. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.
- d. Standards, methodologies, assumptions, and/or calculation tools used.

2.7 When compiling the information specified in Disclosure 302-4, the reporting organization shall:

- 2.7.1 exclude reductions resulting from reduced production capacity or outsourcing;
- 2.7.2 describe whether energy reduction is estimated, modeled, or sourced from direct measurements. If estimation or modeling is used, the organization shall disclose the methods used.

Reporting recommendations

2.8 When compiling the information specified in Disclosure 302-4, the reporting organization should, if subject to different standards and methodologies, describe the approach to selecting them.

Guidance

Guidance for Disclosure 302-4

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;
- changes in behavior;
- operational changes.

The organization can report reductions in energy consumption by combining energy types, or separately for fuel, electricity, heating, cooling, and steam.

The organization can also provide a breakdown of reductions in energy consumption by individual initiatives or groups of initiatives.

Disclosure 302-5

Reductions in energy requirements of products and services

Reporting requirements

Disclosure
302-5

The reporting organization shall report the following information:

- a. Reductions in energy requirements of sold products and services achieved during the reporting period, in joules or multiples.
- b. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.
- c. Standards, methodologies, assumptions, and/or calculation tools used.

Reporting recommendations

- 2.9 When compiling the information specified in Disclosure 302-5, the reporting organization should:
- 2.9.1 if subject to different standards and methodologies, describe the approach to selecting them;
 - 2.9.2 refer to industry use standards to obtain this information, where available (such as fuel consumption of cars for 100 km at 90 km/h).

Guidance

Guidance for Disclosure 302-5

Use-oriented figures can include, for example, the energy requirements of a car or a computer.

Consumption patterns can include, for example, 10 percent less energy use per 100 km travelled or per time unit (hour, average working day).

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.

conservation and efficiency initiative

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

Note: Conservation and efficiency initiatives include process redesign, the conversion and retrofitting of equipment such as energy-efficient lighting, or the elimination of unnecessary energy use due to changes in behavior.

energy reduction

amount of energy no longer used or needed to carry out the same processes or tasks

Note: Energy reduction does not include overall reduction in energy consumption from reducing production capacity or outsourcing organizational activities.

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.

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

Note: Non-renewable energy sources can include fuel distilled from petroleum or crude oil, such as gasoline, diesel fuel, jet fuel, and heating oil; natural gas, such as compressed natural gas (CNG), and liquefied natural gas (LNG); fuels extracted from natural gas processing and petroleum refining, such as butane, propane, and liquefied petroleum gas (LPG); coal; and nuclear power.

renewable energy source

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

Note: Renewable energy sources can include geothermal, wind, solar, hydro, and biomass.

topic Boundary

description of where the impacts occur for a material topic, and the organization's involvement with those impacts

Note: Topic Boundaries vary based on the topics reported.

References

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

Relevant references:

1. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Corporate Accounting and Reporting Standard', Revised Edition, 2004.
2. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard', 2011.
3. 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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