



# EPRA | REPORTING

European Public Real Estate Association

## Best Practices Recommendations on Sustainability Reporting

2<sup>nd</sup> EDITION

September 2014



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# 1. Introduction

We are pleased to publish the second edition of the EPRA Best Practices Recommendations on Sustainability Reporting (EPRA sBPR). Since the launch of the first edition of the EPRA sBPR in 2011 and of the EPRA sBPR awards, we have seen a steady increase in the number of EPRA members reporting on their environmental performance. Encouragingly, the quality of reporting has also improved, with more companies achieving Gold, Silver and Bronze awards for their sustainability reporting each year.

The second edition of the EPRA sBPR draw on the new Global Reporting Initiative (GRI G4 CRESSD) guidelines and still complement the existing and well established EPRA Financial BPR<sup>1</sup>. Furthermore, the second edition of the guidelines meets the following objectives:

- To provide further clarity, conciseness and support for companies wishing to disclose their performance in accordance with the EPRA sBPR guidelines.
- To raise the bar and further challenge those companies already reporting on the performance measures and overarching recommendations included in the first edition of the guidelines.

We hope that the process of reporting in line with the guidelines will facilitate a greater understanding of the environmental impacts associated with your company's activities, leading to efficiency gains and ultimately, lower operating costs.

**Olivier Elamine**

Chief Executive Officer, *alstria*  
Chairman, *EPRA Sustainability Reporting Committee*  
September 2014

**Fraser Hughes**

Deputy CEO, *EPRA*

<sup>1</sup> <http://www.epra.com/regulation-and-reporting/bpr/>

## 2. EPRA Sustainability Reporting Committee

Member	Company
Olivier Elamine (Chairman)	alstria
Sander-Paul van Tongeren	APG
Justin Snoxall	British Land
Filip Elland	Castellum
Marko Juhokas	Citycon
Jean Van Buggenhout	Cofinimmo
Alberto Alcober	Colonial
Jean-Eric Fournier	Foncière des Régions
Louise Ellison	Hammerson
Alexander Nicoll	Intu Properties
Christophe Moreaux	Klépierre
Paul Boreham	Land Securities
Hans Op't Veld	PGGM
Terry Clarke	SEGRO
François Cantin	Unibail-Rodamco

Public disclosure of data is a fundamental component of a sustainable approach to real estate. EPRA aims to bring greater consistency and clarity to companies' disclosure around their environmental performance. By releasing the updated second version of the EPRA Sustainability Best Practice Recommendations, we hope to further enhance stakeholders' access to quality environmental performance data that clearly states the positive direction of travel within the sector.

**Olivier Elamine**  
Chief Executive Officer  
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### 3. Executive Summary

#### 3.1 Introduction

The Sustainability Performance Measures and overarching recommendations of the EPRA Sustainability Best Practice Recommendations (sBPR) have been developed by the EPRA Sustainability Reporting Committee ('the Committee') in consultation with the wider EPRA membership. These measures are largely based on the GRI Construction and Real Estate Sector Supplement Disclosure (CRESSD).

This document contains a number of **CORE** recommendations for sustainability reporting which should be reported by all EPRA members, alongside **ADDITIONAL** recommendations which are based on the Committee's observations of good practice. These additional recommendations are especially relevant to companies with a long standing track record of sustainability reporting.

#### 3.2 Scope of EPRA sBPR

The scope of the EPRA sBPR covers companies' investment activities and own occupation (e.g. environmental impacts from a company's headquarters) as shown in Figure 1.

Figure 1 - Activities within the scope of EPRA Sustainability BPR



The EPRA sBPR do not currently cover real estate development activities (e.g. environmental impacts from construction sites)<sup>2</sup>.

<sup>2</sup> Should companies choose to report separately on their development activities in their sustainability reports, EPRA recommends that they consult the relevant sections of the GRI G4 CRESSD.

### 3.3 EPRA Sustainability Performance Measures

The EPRA Sustainability Performance Measures<sup>3</sup> should relate to the scope illustrated in Figure 1.

The following table outlines the performance measures that should be reported by EPRA members.

**Table 1 EPRA Sustainability Performance Measures**

Code	Performance Measure	GRI G4 (CRESSD) indicator	Unit(s) of measure
Elec-Abs	Total electricity consumption	G4-EN3	annual kWh
Elec-LfL	Like-for-like total electricity consumption	G4-EN3	annual kWh
DH&C-Abs	Total district heating & cooling consumption	G4-EN3	annual kWh
DH&C-LfL	Like-for-like total district heating & cooling consumption	G4-EN3	annual kWh
Fuels-Abs	Total fuel consumption	G4-EN3	annual kWh
Fuels-LfL	Like-for-like total fuel consumption	G4-EN3	annual kWh
Energy-Int	Building energy intensity	CRE1	kWh/appropriate denominator
GHG-Dir-Abs	Total direct greenhouse gas (GHG) emissions	G4-EN15	annual metric tonnes CO <sub>2</sub> e
GHG-Indir-Abs	Total indirect greenhouse gas (GHG) emissions	G4-EN16	annual metric tonnes CO <sub>2</sub> e
GHG-Dir-LfL	Like-for-like total direct greenhouse gas (GHG) emissions	G4-EN15	annual metric tonnes CO <sub>2</sub> e
GHG-Indir-LfL	Like-for-like total indirect greenhouse gas (GHG) emissions	G4-EN16	annual metric tonnes CO <sub>2</sub> e
GHG-Int	Greenhouse gas (GHG) intensity from building energy consumption	CRE3	kg CO <sub>2</sub> e / appropriate denominator
Water-Abs	Total water consumption	G4-EN8	annual cubic metres (m <sup>3</sup> )
Water-LfL	Like-for-like total water consumption	G4-EN8	annual cubic metres (m <sup>3</sup> )
Water-Int	Building water intensity	CRE2	m <sup>3</sup> /appropriate denominator
Waste-Abs	Total weight of waste by disposal route	G4-EN23	annual metric tonnes and proportion by disposal route
Waste-LfL	Like-for-like total weight of waste by disposal route	G4-EN23	annual metric tonnes and proportion by disposal route
Cert-Tot	Type and number of sustainably certified assets	CRE8	Total number by certification / rating / labelling scheme

<sup>3</sup> EPRA Sustainability Performance Measures are broadly based on GRI G4 CRESSD indicators; hence reference to the GRI G4 CRESSD indicators is used throughout the EPRA sBPR.

### 3.4 Overarching Recommendations

Section 5 of this document describes the 'Overarching Recommendations' - principles which should apply to the reporting of EPRA Sustainability Performance Measures. The following section briefly describes each of these principles. It is important that readers of this document familiarise themselves with Section 5 in detail before embarking on reporting on EPRA Sustainability Performance Measures since these principles underpin meaningful disclosure.

#### ***Organisational boundaries (see section 5.1)***

Organisational boundaries as defined by the GHG Protocol include *Operational Control*, *Financial Control* and *Equity-share*. Boundaries definition is important because it determines, amongst other things, which assets a reporter will include or exclude from its reporting. Companies should state the company's total investment in Real Estate, and what percentage of their investment portfolio is represented within the chosen organisational boundary. Defining organisational boundaries should be preceded by defining one's ownership structures (specifically, establishing whether assets are owned by subsidiaries, associates or joint ventures), in line with the GHG Protocol<sup>4</sup>. EPRA is not advocating at this stage for any specific organisational boundary (the Committee is aware that operational control is the most common approach).

#### ***Coverage (see section 5.2)***

Coverage shows the percentage of assets (within the organisational boundary) that are included in the data disclosed for each Sustainability Performance Measure. Ideally, 100% of assets within the organisation boundary should be included in each Sustainability Performance Measure. Data coverage for each Sustainability Performance Measure should be disclosed (as values or percentages) in terms of number, floor area, or financial value of assets within the organisational boundary.

#### ***Estimation of landlord-obtained utility consumption (see section 5.3)***

When landlord-obtained utility consumption data for some/all Performance Measures is partially unavailable or unreliable for an asset, it is possible to estimate missing data. Estimation should be carried out as little as possible. When estimating landlord-obtained utility consumption, a company should:

- Only estimate data to fill gaps for missing periods using known consumption from other periods for the metered supply in question.
- Disclose the proportion of total disclosed data that is estimated (as a percentage of the total disclosed for that Performance Measure).
- Disclose the method of estimation used.
- Use the same method of estimation for all Performance Measures and all assets.

#### ***Third party assurance (see section 5.4)***

The credibility of sustainability data increases when third party assurance is carried out by an objective and independent assurance provider.

<sup>4</sup> Please visit [www.ghgprotocol.org/](http://www.ghgprotocol.org/) for further information.

When undertaking third party assurance, reporters should consider the following:

- All EPRA sBPR Performance Measures should be verified - ideally to the same level.
- The level of verification for each Sustainability Performance Measure should be disclosed, and should ideally be to the same level as for financial reporting.
- The full verification statement should be publically available on the company's website, and a link should be provided if it is not included in the report.

***Boundaries - reporting on landlord and tenant consumption (see section 5.5)***

There is no single, optimal way to report on base (landlord only) or whole building consumption. However, companies should report as follows:

Absolute and like-for-like Performance Measures should include only landlord-obtained energy/water.

Where energy/water is obtained by the landlord but consumed in tenant areas, and sub-metered - such consumption should be reported separately (and should not be excluded from the totals).

For the purposes of intensity indicators only, if known, tenant-obtained consumption can be used in calculations, e.g. to achieve a situation where whole building consumption (tenant-obtained and landlord-obtained) is divided by the whole building floor area.

***Normalisation (see section 5.6)***

When calculating intensity indicators, companies should ensure that the denominator used and the associated consumption figures are as closely aligned as possible i.e. they should strive to achieve the 'matching numerator and denominator' scenario. Companies should clearly state how their intensity indicators are calculated and what numerators and denominators have been used and why. The most commonly used denominators are:

- Floor area
- Numbers of people
- Revenue

***Analysis - Segmental analysis (by property type, geography) (see section 5.7)***

This should be in line with companies' financial reporting, and include, where appropriate, analysis by geography/country and property types.

***Disclosure on own offices (see section 5.8)***

In addition to disclosing on their investment portfolio, the environmental impact of a company's own occupation should also be disclosed separately within a company's sustainability reporting.

***Narrative on performance*** (see section 5.9)

Companies should provide, where appropriate, additional information and commentary / explanation of past performance, and outline plans for managing future performance.

***Location of EPRA Sustainability Performance in companies' reports*** (see section 5.10)

It is not necessary for companies to report the entirety of the EPRA Sustainability Performance Measures in their Annual Report and Accounts nor Sustainability / Corporate Responsibility reports. However, companies should, as a minimum, include summary tables of EPRA Sustainability Performance Measures and a cross-reference (e.g. a reference or hyperlink) to the most comprehensive EPRA sBPR performance tables if these have been published elsewhere ( e.g. on the company's website).

## 4. EPRA Sustainability Performance Measures

### Elec-Abs (Total electricity consumption)

Annual kWh

#### Definition

Elec-Abs refers to the total amount of electricity consumed. It includes electricity from renewable and non-renewable sources, whether imported and generated onsite.

#### Issue

According to the United Nations Environment Programme Sustainable Buildings & Climate Initiative<sup>5</sup>, 40% of global energy use comes from buildings. Energy consumption represents a major source of an organisation's energy footprint and it is important to ensure consistent reporting of this indicator in order for companies to improve their energy efficiency. Electricity is classified as indirect energy, as any primary fuels used to generate it are combusted offsite.

#### Rationale

Reporting total energy consumption (such as purchased electricity) should encourage a company to measure and manage its energy use in a way that drives down consumption over time.

This performance measure enables the calculation of the electricity element of indirect greenhouse gas emissions which fall under Scope 2 and 3 (where sub-metered to tenants) of the WRI/WBCSD GHG Protocol<sup>6</sup>.

#### Recommendations

**CORE:** *Elec-Abs should be calculated as follows (based on GRI Indicator Protocol G4-EN3):*

- Identify the amount of electricity purchased and consumed from external utility suppliers (whether their generation is from non-renewable or renewable sources).
- Identify the amount of electricity self-generated by non-fuel sources:
  - Solar photovoltaic
  - Wind turbines
  - Hydro turbines
  - Geothermal turbines
- Add together the electricity identified above, and subtract any self-generated electricity that is exported/sold.

#### Further guidance

Please refer to relevant GRI G4 CRESSD sections covering G4-EN3: *Energy consumption within the organisation*.

<sup>5</sup> [www.unep.org/sbci/](http://www.unep.org/sbci/)

<sup>6</sup> [www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf](http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf)

## Elec-LfL (Like-for-like total electricity consumption)

Annual kWh

### Definition

Elec-LfL refers to the electricity consumption of a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 electricity consumption with the 2013 electricity consumption for a consistent portfolio.

### Rationale

Like-for-like performance measures are a necessary compliment to absolute performance measures, as disclosure on a like-for-like basis shows change in performance unrelated to fluctuations in portfolio size (through acquisitions, disposals, major refurbishments and developments).

### Recommendations

**CORE:** *This sustainability performance measure should be calculated in the following way:*

- Calculate the total electricity consumed for the like-for-like set of assets (i.e. those that have been consistently in operation, and not under development, during the most recent two full reporting years) using the same methodology used to calculate Elec-Abs. These calculations should be reported as total consumption figures not solely as a percentage change.
- Companies should disclose the basis and assumptions underlying the like-for-like information.
- High variation in vacancy rates: while companies can use significant changes in vacancy rates as an explanation (akin to 'special events') of unusual consumption trends, such cases should be explicitly stated and consumption should not be excluded from the totals due to variations in vacancy rates.

### Further guidance

For further guidance on this Sustainability Performance Measure, please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN3: *Energy consumption within the organisation*. This section should be read in conjunction with the Elec-Abs section of this document.

**DH&C-Abs (Total district heating & cooling consumption)**

Annual kWh

**Definition**

DH&C-Abs refers to the total amount of indirect energy consumed from district heating or cooling systems over a full reporting year. In this instance 'indirect' means energy generated off site and typically bought from an external energy supplier.

**Issue**

Although electricity and gas are often the only significant forms of indirect and direct energy for many companies, certain regions and countries may use other intermediate energy such as steam/hot water or chilled water provided from a district heating plant or chilled water plant.

**Rationale**

DH&C-Abs (total energy consumption from district heating & cooling) should encourage companies to measure and manage energy use in a way that drives down consumption over time. This indicator enables calculation of a district heating/cooling-related element of indirect greenhouse gas emissions which fall under Scope 2 and 3 (where sub-metered to tenants) of the WRI/WBCSD GHG Protocol<sup>7</sup>.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated as follows (based on GRI Indicator Protocol G4-EN3):*

- Identify the amount of heating and cooling purchased and consumed from sources external to the reporting company.
- If DH&C-Abs is not procured at any of the properties in the portfolio, the sustainability performance measure should be reported as 'Not applicable'.

**Further guidance**

Please refer to relevant GRI G4 CRESSD sections covering *G4-EN3: Energy consumption within the organisation*.

<sup>7</sup> [www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf](http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf)

**DH&C-LfL (Like-for-like total district heating & cooling consumption)**

Annual kWh

**Definition**

DH&C-LfL refers to the district heating & cooling consumption of a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 district heating & cooling consumption with the 2013 district heating & cooling consumption for a consistent portfolio.

**Rationale**

Like-for-like performance measures are a necessary compliment to absolute performance measures, as disclosure on a like-for-like basis shows change in performance unrelated to fluctuations in portfolio size (through acquisitions, disposals, major refurbishments and developments).

**Recommendations**

**CORE:** *This sustainability performance measure should be calculated in the following way:*

- Calculate the total district heating and cooling consumed for the like-for-like set of assets (i.e. those that have been consistently in operation, and not under development, during the most recent two full reporting years) using the same methodology used to calculate DH&C-Abs. These calculations should be reported as total consumption figures not solely as a percentage change.
- Companies should disclose the basis and assumptions underlying the like-for-like information.
- High variation in vacancy rates: while companies can use significant changes in vacancy rates as an explanation (akin to 'special events') of unusual consumption trends, such cases should be explicitly stated and consumption should not be excluded from the totals due to variations in vacancy rates.

**Further guidance**

Please refer to relevant GRI G4 CRESSD sections covering G4-EN3: *Energy consumption within the organisation*. This section should be read in conjunction with the DH&C-Abs section of this document.

**Fuels-Abs (Total fuel consumption)**

Annual kWh

**Definition**

Fuels-Abs refers to the total amount of fuel used from direct (renewable and non-renewable) sources ('direct' meaning that the fuel is combusted onsite) over a full reporting year.

**Issue**

According to the United Nations Environment Programme Sustainable Buildings & Climate Initiative<sup>8</sup>, 40% of global energy use comes from buildings. Alongside electricity, fuels (such as natural gas) are one of the most widespread types of energy consumed in buildings. Gas is classified as direct energy, as it is burned onsite.

**Rationale**

Reporting total energy consumption from fuels (classified as direct energy) such as purchased natural gas should encourage companies to identify and manage use of fuels in a way that drives down fuel consumption over time.

This performance measure enables the calculation of the fuels element of greenhouse gas emissions which fall under Scope 1 and 3 (where sub-metered to tenants) of the WRI/WBCSD GHG Protocol<sup>9</sup>.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated as follows (based on GRI Indicator Protocol EN3):*

- Identify the amount of fuel purchased or obtained and consumed within the organisation.
- If applicable, report non-renewable and renewable fuels separately.
- If electricity and thermals are self-generated by combusting fuels onsite, - only disclose the fuel consumed in Fuels-Abs, do not include the resulting electricity/thermals in Elec-Abs/DH&C-Abs - so as to avoid double-counting.

**Further guidance**

Please refer to the relevant draft GRI G4 CRESSD sections covering G4-EN3: *Energy consumption within the organisation*.

<sup>8</sup> [www.unep.org/sbci/](http://www.unep.org/sbci/)

<sup>9</sup> [www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf](http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf)

## Fuels-LfL (Like-for-like total fuel consumption)

annual kWh

### Definition

Fuels-LfL refers to the fuel consumption of a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 Fuels-Abs consumption with the 2013 Fuels-Abs consumption for a consistent portfolio.

### Rationale

Like-for-like performance measures are a necessary compliment to absolute performance measures, as disclosure on a like-for-like basis shows change in performance unrelated to fluctuations in portfolio size (through acquisitions, disposals, major refurbishments and developments).

### Recommendations

**CORE:** *This sustainability performance measure should be calculated in the following way:*

- Calculate the total fuels consumed for the like-for-like set of assets (i.e. those that have been consistently in operation, and not under development, during the most recent two full reporting years) using the same methodology used to calculate Fuels-Abs. These calculations should be reported as total consumption figures not solely as a percentage change.
- Companies should disclose the basis and assumptions underlying the like-for-like information.
- High variation in vacancy rates: while companies can use significant changes in vacancy rates as an explanation (akin to 'special events') of unusual consumption trends, such cases should be explicitly stated and consumption should not be excluded from the totals due to variations in vacancy rates.

### Further guidance

Please refer to relevant GRI G4 CRESSD sections covering G4-EN3: *Energy consumption within the organisation*. This section should be read in conjunction with the Fuels-Abs section of this document.

<sup>1</sup> Note that several reporters, when adding different types of energy together, report energy in terms of 'kWh electricity equivalent' (kWhe). 1 kWh electricity = 1kWhe; 1kWh fuels = 0.4kWhe; 1kWh district heating or cooling = 0.5kWhe. This enables consistent comparisons between countries and over time that takes account of the thermodynamic potential of different types of energy.

**Energy-Int (Building energy intensity)**kWh / person / year  
or kWh / m<sup>2</sup> / year or  
kWh/revenue/year**Definition**

Energy-Int refers to the total amount of direct and indirect energy used by renewable and non-renewable sources in a building over a full reporting year, normalised by an appropriate denominator.

**Issue**

Intensity indicators are widely used to report performance. However, the variety of approaches used by companies to calculate intensity indicators represents a challenge for stakeholders to understand how to interpret data provided by reporters. Please refer to section 5.5 and 5.6 of the overarching recommendations in this regard.

**Rationale**

Building energy intensity is one of the most effective measures of a building's overall energy efficiency during the occupation and operational phase of the building's lifecycle and enables analysis of performance over time without the need to exclude acquired or sold properties. This indicator can be used for the energy intensity for both those buildings occupied by the reporter and those held in investment portfolios. Building energy intensity is primarily intended to track changes over time for the reporter's assets.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated (based on GRI Indicator Protocol G4 CRE3) as the sum of GHG emissions calculated for the EPRA Sustainability Performance Measures Elec-Abs, DH&C-Abs & Fuels-Abs normalised using an appropriate denominator.*

Common methodologies to calculate energy consumption intensity include:

Energy intensity per person (kWh / person / year)

- Identify the number and type of buildings, total annual energy consumption (in kWh) and corresponding number of persons.

- Calculate:

$$\frac{\sum (\text{sum of}) \text{ annual kWh energy consumption}^1}{\sum (\text{sum of}) \text{ persons}}$$

- Companies should decide on the most appropriate measure of persons used in this Sustainability Performance Measure, clearly stating the rationale and calculation methodology. For example, current best practice for the use of per person denominators is as follows:

Property type	Suggested person denominator
Office	Number of workstations
Retail	Number of visitors per annum
Hotel	Number of guest-nights
Residential	Number of households

Energy intensity per floor area (kWh / m<sup>2</sup> / year )

- Identify the number and type of buildings, total annual energy consumption (in kWh) and corresponding floor area (m<sup>2</sup>).
- Calculate:  

$$\frac{\sum (\text{sum of}) \text{ annual kWh energy consumption}}{\sum (\text{sum of}) \text{ floor area (m}^2\text{)}}$$
- Companies should decide on the most appropriate measure of floor area used in this Sustainability Performance Measure, clearly stating the rationale and calculation methodology.
- It is fairly common for a landlord to supply tenant areas with Heating, Ventilation and Air Conditioning (HVAC) services but not for the rest of the energy used (i.e. tenants buy their own energy for lighting and small power supplies). In the absence of a standard approach, companies should include a note to state how they have treated buildings where this scenario applies, and what floor area they chose to apply to calculate intensity in such buildings. Outlined below are suggested types of floor area to be used while calculating intensity indicators – these suggestions are based on current best practice:

Coverage of known consumption data	Suggested floor area denominator
If energy supplied to common areas only	Common parts area
If landlord shared services, such as HVAC, are supplied to tenant demises but tenant-obtained energy is unknown*	<p><b>Companies should</b> state which floor area has been used where this applies – be it common parts area only or common parts plus lettable area, acknowledging that the intensity indicator is affected due to the mismatch between numerator and denominator.</p> <p><b>Where sub-metering</b> allows for this, companies should consider itemising HVAC intensity separate to building energy intensity.</p>
If energy known for whole building (even including tenant-obtained energy if applicable)	Whole building floor area (for example, common parts plus net lettable area).

- Energy intensity per revenue (kWh/revenue/year)
- Identify the number and type of buildings, total annual energy consumption (in kWh) and corresponding revenue (in EUR/GBP).
- Calculate:  

$$\frac{\sum (\text{sum of}) \text{ annual kWh energy consumption}}{\sum (\text{sum of}) \text{ revenue (EUR/GBP)}}$$

2 [www.ipcc-nggip.iges.or.jp/EFDB/main.php](http://www.ipcc-nggip.iges.or.jp/EFDB/main.php)

3 [www.iea.org/statistics/topics/CO2emissions/](http://www.iea.org/statistics/topics/CO2emissions/)

In regards to all three types of normalisation (i.e. per person, floor area and revenue):

- Reporting organisations should report the method used to ensure that numerators and denominators in the intensity indicator correspond - thereby taking account of different landlord and tenant metering scenarios. In particular, where the reporter does not know energy consumption data within the whole building (i.e. it is missing or not known to the reporter) it is important to ensure that the intensity indicator is consistent and accurate. Possible approaches include: excluding such properties from the aggregation; adjusting the overall consumption data to take account of unknown data (i.e. estimation); or adjusting the denominator to better correspond with the known consumption.
- For industrial properties and retail parks where the landlord only buys electricity for the purposes of external/street lighting, companies should not use internal building area for the purposes of intensity Performance Measures. Rather, they should normalise the consumption by either number of car park spaces, or m<sup>2</sup> area covering external areas (if available).

#### **Further guidance**

Please refer to relevant sections of the GRI G4 CRESSD guidance on CRE1: *Building energy intensity indicator*. This section should be read in conjunction with Sections Elec-Abs, DH&C-Abs and Fuels-Abs of this document.

4 [www.ipcc-nggip.iges.or.jp/EFDB/main.php](http://www.ipcc-nggip.iges.or.jp/EFDB/main.php)

5 [www.iea.org/statistics/topics/CO2emissions/](http://www.iea.org/statistics/topics/CO2emissions/)

6 [www.ghgprotocol.org/files/ghgp/tools/Appendix\\_F\\_Leased\\_Assets.pdf](http://www.ghgprotocol.org/files/ghgp/tools/Appendix_F_Leased_Assets.pdf)

**GHG-Dir-Abs (Total direct greenhouse gas (GHG) emissions)**

annual metric tonnes CO<sub>2</sub>e

**Definition**

GHG-Dir-Abs refers to the total amount of direct greenhouse gas emissions ('direct' meaning that GHG emissions are generated onsite through combustion of the energy source / fuel) over a full reporting year.

**Issue**

According to the United Nations Environment Programme Sustainable Buildings & Climate Initiative, buildings give rise to about a third of global GHG emissions. Companies should have some control of these emissions as they originate upon combusting fuels.

**Rationale**

Reporting GHG-Dir-Abs emissions should encourage an investment property company to identify and manage emissions from sources that are owned or controlled by the reporting company. For example, direct emissions related to combustion would arise from burning fuel for energy within the company's operational boundaries.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated as follows (based on GRI Indicator Protocol G4-EN15):*

- To calculate direct emissions, report kilograms of carbon dioxide equivalent (kgCO<sub>2</sub>e) emitted from fuels burned on site (please use the amount of fuels burned on site as reported in EPRA Performance Measure Fuels-Abs). Use recognised conversion factors such as:
- Calculation based on site specific data available from energy supplier (e.g. for fuel composition analysis etc.)
- Calculation based on default data for example by the recognised international bodies/ initiatives such as the Intergovernmental Panel on Climate Change<sup>2</sup> (IPCC) or International Energy Agency<sup>3</sup>.

**ADDITIONAL:** *Companies should be aware that the GRI G4-EN15 indicator requests that companies report fugitive emissions (such as refrigerant gases) and emissions from transportation of materials, products, and waste. Please refer to section 5.5 of this document for further guidance on EPRA's recommended approach to these additional emissions sources.*

**Further guidance**

Please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN15: *Total direct and indirect greenhouse gas emissions by weight.*

**GHG-Indir-Abs (Total indirect greenhouse gas (GHG) emissions)**annual metric tonnes CO<sub>2</sub>e**Definition**

GHG-Indir-Abs refers to the total amount of indirect greenhouse gas emissions ('indirect' meaning that GHG emissions are generated offsite during combustion of the energy source) over a full reporting year.

**Issue**

According to the United Nations Environment Programme Sustainable Buildings & Climate Initiative<sup>10</sup>, buildings give rise to about a third of global GHG emissions. The key issue related to accurately calculating indirect GHG emissions is that of ensuring that conversion of energy units to GHG emission units is undertaken using robust methodology/conversion factors.

**Rationale**

Reporting indirect emissions should encourage reporters to identify and manage the emissions that result from their activities, but are emitted at sites owned or controlled by another company. In the context of this Sustainability Performance Measure, indirect emissions refer to greenhouse gas emissions from the generation of electricity, heat, or steam that is imported and consumed by the reporting organisation.

As such, indirect emissions are sufficiently influenced by reporters that changes in their practices may lead to significant reductions. Measuring and reporting efforts to reduce indirect emissions can demonstrate leadership in combating climate change and can enhance the reporter's reputation.

Greenhouse gas emissions are the main cause of climate change and are governed by the United Nations Framework Convention on Climate Change (UNFCCC) and the subsequent Kyoto Protocol. As a result, different national and international regulations and incentive systems (such as trading climate certificates) aim to control the volume and reward the reduction of greenhouse gas emissions.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated as follows (based on GRI Indicator Protocol G4-EN16):*

- Identify indirect emissions of greenhouse gases resulting from the offsite generation of purchased electricity, heat, or steam (please use the amounts of purchased electricity, heat and steam as reported in EPRA Performance Measures Elec-Abs and DH&C-Abs.
- Report kilograms of carbon dioxide equivalent (kgCO<sub>2</sub>e) emitted by the offsite generation of electricity, heat or steam consumed. Use recognised conversion factors such as:
  - Calculation based on site specific data available from energy supplier (e.g. for fuel composition analysis etc.).
  - Calculation based on default data for example by the recognised international bodies/initiatives such as the Intergovernmental Panel on Climate Change<sup>4</sup> (IPCC) or International Energy Agency<sup>5</sup>.
- With regards to reporting on tenant and landlord emissions, the allocation of indirect GHG emissions between scope 1/2 and scope 3 is dependent on the metering and sub-metering arrangement in place between tenants and landlords. Reporters need to decide how to interpret Appendix F of the GHG protocol<sup>6</sup> - "Navigating through sustainability reporting standards", available from <http://bit.ly/JLLonBPR>, provides more guidance on this.

<sup>10</sup> [www.unep.org/sbci/](http://www.unep.org/sbci/)

**Further guidance**

Please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN16: *Total indirect greenhouse gas emissions by weight*.

Please also refer to section 5.5 and 5.6 of the overarching recommendations and "Navigating through sustainability reporting standards", available from <http://bit.ly/JLlonBPR>.

**GHG-Dir-LfL (Like-for-like total direct greenhouse gas (GHG) emissions)** annual metric tonnes CO<sub>2</sub>e**Definition**

GHG-Dir-LfL refers to the direct emissions of a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 GHG-Dir-Abs emissions with the 2013 GHG-Dir-Abs emissions for a consistent portfolio.

**Rationale**

Like-for-like performance measures are a necessary compliment to absolute performance measures, as disclosure on a like-for-like basis shows change in performance unrelated to fluctuations in portfolio size (through acquisitions, disposals, major refurbishments and developments).

**Recommendations**

**CORE:** *This sustainability performance measure should be calculated in the following way:*

- Calculate the total direct GHG emissions emitted at the like-for-like set of assets (i.e. those that have been consistently in operation, and not under development, during the most recent two full reporting years) using the same methodology used to calculate GHG-Dir-Abs. These calculations should be reported as total consumption figures not solely as a percentage change.
- Companies should disclose the basis and assumptions underlying the like-for-like information.
- High variation in vacancy rates: while companies can use significant changes in vacancy rates as an explanation (akin to 'special events') of unusual consumption trends, such cases should be explicitly stated and consumption should not be excluded from the totals due to variations in vacancy rates.

**Further guidance**

For further guidance on this Sustainability Performance Measure, please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN15: *Total direct greenhouse gas emissions by weight*. This section should be read in conjunction with the GHG-Dir-Abs section of this document.

## GHG-Indir-LfL (Like-for-like total indirect greenhouse gas (GHG) emissions) annual metric tonnes CO<sub>2</sub>e

### Definition

GHG-Indir-LfL refers to the indirect emissions of a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 GHG-Indir-Abs emission with the 2013 GHG-Indir-Abs emission for a consistent portfolio.

### Rationale

Like-for-like performance measures are a necessary compliment to absolute performance measures, as disclosure on a like-for-like basis shows change in performance unrelated to fluctuations in portfolio size (through acquisitions, disposals, major refurbishments and developments).

### Recommendations

**CORE:** *This sustainability performance measure should be calculated in the following way:*

- Calculate the total indirect GHG emissions produced at the like-for-like set of assets (i.e. those that have been consistently in operation, and not under development, during the most recent two full reporting years) using the same methodology used to calculate GHG-Indir-Abs. These calculations should be reported as total consumption figures not solely as a percentage change.
- Companies should disclose the basis and assumptions underlying the like-for-like information.
- High variation in vacancy rates: while companies can use significant changes in vacancy rates as an explanation (akin to 'special events') of unusual consumption trends, such cases should be explicitly stated and consumption should not be excluded from the totals due to variations in vacancy rates.

### Further guidance

For further guidance on this Sustainability Performance Measure, please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN16: *Total indirect greenhouse gas emissions by weight*. This section should be read in conjunction with the GHG-Indir-Abs section of this document.

**GHG-Int (Greenhouse gas (GHG) intensity from building energy consumption)**kg CO<sub>2</sub>e / m<sup>2</sup> / year  
kg CO<sub>2</sub>e / person / year  
kg CO<sub>2</sub>e / revenue / year**Definition**

GHG-Int refers to the total amount of direct and indirect GHG emissions generated from energy consumption in a building over a full reporting year, normalised by an appropriate denominator.

**Issue**

Intensity indicators have become widespread measures of performance (alongside the absolute consumption and like-for-like indicators). However, the variety of approaches used by companies to calculate intensity indicators represents a challenge for stakeholders to understand how to interpret these indicators. Please refer to section 5.5 and 5.6 of the overarching recommendations in this regard.

**Rationale**

GHG-Int is an effective measure of efficiency during the occupation and operation phase of the building lifecycle and allows analysis of performance over time without the need to exclude acquired or sold properties. This indicator provides the opportunity for reporters to disclose GHG intensity for both those buildings occupied by the reporter and investment properties. GHG intensity from building energy is primarily intended to track changes over time for the reporters' assets.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated (based on GRI Indicator Protocol CRE3) as the sum of GHG emissions calculated for the EPRA Sustainability Performance Measures GHG-Dir-Abs and GHG-Indir-Abs, normalised using an appropriate denominator.*

Common methodologies to calculate GHG emissions intensity include:

GHG intensity per person (kgCO<sub>2e</sub> / person / year)

- Identify the number and type of buildings, total annual kgCO<sub>2e</sub> emissions and corresponding total number of persons.
- Calculate:
 
$$\frac{\sum (\text{sum of}) \text{ annual kg CO}_2\text{e emissions}}{\sum (\text{sum of}) \text{ persons}}$$
- Companies should decide on the most appropriate measure of persons used in this Sustainability Performance Measure, clearly stating the rationale and calculation methodology. For example, current best practice for the use of per person denominators is as follows:

Property type	Suggested person denominator
Office	Number of workstations
Retail	Number of visitors per annum
Hotel	Number of guest-nights
Residential	Number of households

GHG intensity per floor area ( kgCO<sub>2</sub>e / m<sup>2</sup> /year )

- Identify the number and type of buildings, total annual kgCO<sub>2</sub>e emissions and corresponding total floor area (m<sup>2</sup>).
- Calculate:  

$$\frac{\sum (\text{sum of}) \text{ annual kgCO}_2\text{e emissions}}{\sum (\text{sum of}) \text{ floor area (m}^2\text{)}}$$
- Companies should decide on the most appropriate measure of floor area used in this Sustainability Performance Measure, clearly stating the rationale and calculation methodology.
- It is fairly common for a landlord to supply tenant areas with Heating Ventilation and Air Conditioning (HVAC) services but not the rest of energy (i.e. tenants buy their own energy for lighting and small power supplies). In the absence of a standard approach, companies should include a note to state how they have treated buildings where this scenario applies, and what floor area they chose to apply to calculate intensity in such buildings.

Coverage of known consumption data	Suggested floor area denominator
Outlined below are suggested types of floor area to be used while calculating intensity indicators - these suggestions are based on current best practice: <b>Coverage of known consumption data</b>	Suggested floor area denominator
Emissions cover energy supplied to common areas only	Common parts area.
If landlord shared services, such as HVAC, are supplied to tenant demises but emissions arising from tenant-obtained energy are unknown	Companies should state which floor area has been used where this applies - be it common parts area only or common parts plus lettable area, acknowledging that the intensity indicator is affected due to the mismatch between numerator and denominator. Where sub-metering allows for this, companies should consider itemising HVAC intensity separate to building GHG intensity.
If data available on emissions arising from energy for whole building (even including tenant-obtained energy if applicable)	Whole building floor area (for example, common parts plus net lettable area).

GHG intensity per revenue (kgCO<sub>2</sub>e /revenue/year)

- Identify the number and type of buildings, total annual kgCO<sub>2</sub>e emissions and corresponding revenue (in EUR/GBP).
- Calculate:  

$$\frac{\sum (\text{sum of}) \text{ annual kgCO}_2\text{e emissions}}{\sum (\text{sum of}) \text{ revenue (EUR/GBP)}}$$

In regards to all three types of normalisation (i.e. per person, floor area and revenue):

- Reporting organisations should report the method used to ensure that numerators and denominators in the intensity indicator correspond - thereby taking account of different landlord and tenant metering scenarios. In particular, where the reporter does not know GHG emission data within the whole building (i.e. it is missing or not known to the reporter) it is important to ensure that the intensity indicator is consistent and accurate. Possible approaches include: excluding such properties from the aggregation; adjusting the overall consumption data to take account of unknown data (i.e. estimation); or adjusting the denominator to better correspond with the known consumption.
- For industrial properties and retail parks where landlord only buys electricity for the purposes of external/street lighting, companies should not use internal building area for the purposes of GHG emission intensity Sustainability Performance Measures. Rather, they should normalise the consumption by either number of car park spaces, or m<sup>2</sup> area covering external areas (if available).

#### **Further guidance**

Please refer to relevant sections of the GRI G4 CRESSD guidance on CRE3: *Greenhouse gas intensity from building energy*. This section should be read in conjunction with Sections GHG-Indir-Abs and GHG-Dir-Abs of this document.

**Water-Abs (Total water consumption)**annual cubic metres (m<sup>3</sup>)**Definition**

Water-Abs refers to the total amount of water consumed within a portfolio, over a full reporting year.

**Issue**

The built environment is responsible for 20% of water consumption, according to the United Nations Environment Programme Sustainable Buildings & Climate Initiative<sup>11</sup>. However, water reporting by the real estate sector is often limited in scope, accuracy and detail.

**Rationale**

Reporting Water-Abs (total volume of water withdrawn by source) contributes to an understanding of the overall scale of potential impacts and risks associated with an investment company's water use. The total volume withdrawn provides an indication of the company's relative size and importance as a user of water, and provides a baseline figure for other calculations relating to efficiency and use.

The systematic effort to monitor and improve the efficient use of water in the reporting organisation is directly linked to water consumption costs. Total water use can also indicate the level of risk posed by disruptions to water supplies or increases in the cost of water. In regions where water sources are highly restricted, the company's water consumption patterns can also influence relations with other stakeholders.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated as follows (based on GRI Indicator Protocol G4-EN8):*

- Identify the total volume of water withdrawn from any water source (linked to metered or measured utility data) that was either withdrawn directly by the company or through intermediaries such as water utilities. This includes the abstraction of cooling water. It should cover all water purchased/sourced and reporters may itemise water reallocated (preferably metered) to other parties who are the end users.
- Report the total volume of water withdrawn in cubic metres per year (m<sup>3</sup>/year) from municipal water supplies or other water utilities.

<sup>11</sup> [www.unep.org/sbci/](http://www.unep.org/sbci/)

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**ADDITIONAL:** *The following sources may also be reported, provided reporters have accurate data and/or water collection installations on site:*

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- Surface water, sourced from wetlands, rivers, lakes, and oceans
- Ground water
- Rainwater collected directly and stored by the reporting organisation
- Waste water from another organisation
- Greywater
- Blackwater
- Treated waste water
- Desalination plant
- Other water sources

**Further guidance**

For further guidance on this Sustainability Performance Measure, please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN8: *Total water withdrawal by source*.

**Water-LfL (Like-for-like total water consumption)**annual cubic metres (m<sup>3</sup>)**Definition**

Water-LfL refers to the water consumption of a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 Water-Abs consumption with the 2013 Water-Abs consumption for a consistent portfolio.

**Rationale**

Like-for-like performance measures are a necessary compliment to absolute performance measures, as disclosure on a like-for-like basis shows change in performance unrelated to fluctuations in portfolio size (through acquisitions, disposals, major refurbishments and developments).

**Recommendations**

**CORE:** *This sustainability performance measure should be calculated in the following way:*

- Calculate the total water consumed for the like-for-like set of assets (i.e. those that have been consistently in operation, and not under development, during the most recent two full reporting years) using the same methodology used to calculate Water-Abs. These calculations should be reported as total consumption figures not solely as a percentage change.
- Companies should disclose the basis and assumptions underlying the like-for-like information.
- High variation in vacancy rates: while companies can use significant changes in vacancy rates as an explanation (akin to 'special events') of unusual consumption trends, such cases should be explicitly stated and consumption should not be excluded from the totals due to variations in vacancy rates.

**Further guidance**

For further guidance on this Sustainability Performance Measure, please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN8: *Total water withdrawal by source*. This section should be read in conjunction with the Water-Abs section of this document.

**Water-Int (Building water intensity)**

litres/ person/ day or  
m<sup>3</sup>/ m<sup>2</sup>/ year or (litres/m<sup>3</sup>)/revenue/year

**Definition**

Water-Int refers to the total amount of water consumption within a building over a full reporting year, normalised by an appropriate denominator.

**Issue**

Intensity indicators have become widespread measures of performance (alongside the absolute consumption and like-for-like indicators). However, the variety of approaches used by companies to calculate intensity indicators represents a challenge for stakeholders to understand how to interpret these indicators. Please refer to section 5.5 and 5.6 of the overarching recommendations in this regard.

**Rationale**

Int-Water is one of the most effective measures of a building's overall water efficiency during the occupation and operation phase of the building lifecycle and allows analysis of performance over time without the need to exclude acquired or sold properties. This indicator provides the opportunity for reporters to disclose water intensity for both those buildings occupied by the reporter and those held in investment portfolios. Water intensity is primarily intended to track changes over time for the reporters' assets.

**Recommendations**

**CORE:** *Calculated (based on GRI Indicator Protocol G4 CRE3) as the sum water consumption calculated as the total water consumption calculated for the EPRA Sustainability Performance Measures Total-Water (Total water withdrawal by source), normalised using an appropriate denominator.*

Common methodologies to calculate water intensity include:

Water intensity per person (litres / person / day)

Water use in some cases can be driven by building users or visitors. For this reason, intensity analysis may be based on the numbers of occupiers / users of a property.

- Identify the number and type of buildings, total annual litres water consumption and corresponding number of persons.
- Calculate:
 
$$\frac{\sum (\text{sum of}) \text{ annual litres water consumption}}{\sum (\text{sum of}) \text{ person-days}}$$
- Companies should decide on the most appropriate measure of persons used in this Sustainability Performance Measure, clearly stating the rationale and calculation methodology. For example, current best practice for the use of per person denominators is as follows:

Property type	Suggested person denominator
Office	Number of workstations
Retail	Number of visits per annum
Hotel	Number of guest-nights
Residential	Number of households

**Water intensity by floor area (m<sup>3</sup> / m<sup>2</sup> / year)**

- Identify the number and type of buildings, total annual m<sup>3</sup> water consumption and corresponding floor area (in m<sup>2</sup>).
- Calculate:  

$$\frac{\Sigma \text{ (sum of) annual m}^3 \text{ water consumption}}{\Sigma \text{ (sum of) floor area (m}^2\text{)}}$$
- Companies should decide on the most appropriate measure of floor area used, clearly stating the rationale and calculation methodology. Current good practice for the use of floor area denominators is as follows:

Coverage of known consumption data	Suggested floor area denominator
If water supplied to common areas only	Common parts area.
If water consumption known for whole building (even including tenant-obtained water if applicable)	Whole building floor area (for example, common parts plus net lettable area).

**Water intensity per revenue ((litres/m<sup>3</sup>)/revenue/year)**

- Identify the number and type of buildings, total annual litres/m<sup>3</sup> water consumption and corresponding revenue (in EUR/GBP).
- Calculate:  

$$\frac{\Sigma \text{ (sum of) annual litres/m}^3 \text{ water consumption}}{\Sigma \text{ (sum of) revenue (EUR/GBP)}}$$

In regards to all three types of normalisation (i.e. per person, floor area and revenue):

- Reporting organisations should report the method used to ensure that numerators and denominators in the intensity indicator correspond - thereby taking account of different landlord and tenant metering scenarios. In particular, where the reporter does not know water consumption data within the whole building (i.e. it is missing or not known to the reporter) it is important to ensure that the intensity indicator is consistent and accurate. Possible approaches include: excluding such properties from the aggregation; adjusting the overall consumption data to take account of unknown data (i.e. estimation); or adjusting the denominator to better correspond with the known water consumption.

**Further guidance**

Please refer to relevant sections of the GRI G4 CRESSD guidance on CRE2: *Building water intensity*. This section should be read in conjunction with Water-Abs of this document.

**Waste-Abs (Total weight of waste by disposal route)****annual metric tonnes  
and  
proportion by disposal route****Definition**

Waste-Abs refers to the total amount of waste produced and disposed of via various disposal methods routes, over a full reporting year.

**Issue**

The built environment is responsible for 40% of total solid waste generation, according to United Nations Environment Programme Sustainable Buildings and Climate Initiative<sup>12</sup>. However, waste reporting by the real estate sector is often limited in scope, accuracy and detail.

**Rationale**

Information about the disposal destination reveals the extent to which a company has managed the balance between disposal options and environmental impacts. For example, landfill and recycling create very different types of environmental impacts and residual effects. Most waste minimisation strategies prioritise options for recovery, reuse, or recycling over other disposal options.

Reporting data on waste generation figures over several years should encourage an investment property company to improve its waste management process (i.e. through more productive disposal routes) and reduce the amount of waste generated at its assets. From a financial perspective, the reduction of waste contributes directly to lower costs for materials, processing, and disposal.

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated as follows (based on GRI Indicator Protocol G4-EN23):*

- Identify the amount of waste created by its operations, by:
  - Hazardous waste (as defined by national legislation at the point of generation); and
  - Non-hazardous waste (all other forms of solid or liquid waste excluding wastewater).
  - If no weight data are available, estimate the weight using available information on waste density and volume collected, mass balances, or similar information. Estimation assumptions and methodology should be clearly stated.
- Report the total amount of waste in tonnes by immediate disposal route:
  - Reuse
  - Recycling
  - Composting
  - Recovery
  - Incineration (including with energy recovery)
  - Landfill
  - Other (e.g. Materials Recovery Facility)
- Report the proportion of waste in tonnes by immediate disposal route
  - Reuse
  - Recycling
  - Composting
  - Recovery
  - Incineration (including with energy recovery)
  - Landfill
  - Other (e.g. Materials Recovery Facility)

12 [www.unep.org/sbci/pdfs/sbci\\_2pager\\_eversion\\_Feb2011.pdf](http://www.unep.org/sbci/pdfs/sbci_2pager_eversion_Feb2011.pdf)

**Further guidance**

Please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN23: *Total weight of waste by type and disposal method.*

**Waste-LfL (Like-for-like total weight of waste by disposal route)**annual metric tonnes  
and  
proportion by disposal route**Definition**

Waste-LfL refers to the waste arising from a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 Waste-Abs with the 2013 Waste-Abs for a consistent portfolio.

**Rationale**

Like-for-like performance measures are a necessary compliment to absolute performance measures, as disclosure on a like-for-like basis shows change in performance unrelated to fluctuations in portfolio size (through acquisitions, disposals, major refurbishments and developments).

**Recommendations**

**CORE:** *This Sustainability Performance Measure should be calculated as follows (based on GRI Indicator Protocol G4-EN23):*

- Calculate the total waste created for the like-for-like set of assets (i.e. those that have been consistently in operation, and not under development, during the most recent two full reporting years) using the same methodology used to calculate Waste-Abs. These calculations should be reported as total figures not solely as a percentage change.
- Companies should disclose the basis and assumptions underlying the like-for-like information.
- High variation in vacancy rates: while companies can use significant changes in vacancy rates as an explanation (akin to 'special events') of unusual consumption trends, such cases should be explicitly stated and consumption should not be excluded from the totals due to variations in vacancy rates.

**Further guidance**

Please refer to the relevant sections of the GRI G4 CRESSD covering G4-EN23: *Total weight of waste by type and disposal method.*

## Cert-Tot (Type and number of sustainably certified assets)

Total number by certification / rating / labelling scheme

### Definition

Cert-Tot refers to the total number of assets within a portfolio that have formally obtained sustainability certification, rating or labelling at the end of a reporting year.

### Issue

Sustainable construction, management and redevelopment certification and labelling schemes exist worldwide for building and infrastructure assets, and vary from market to market. Each scheme uses its own methodology to assess the overall level of sustainability. These frameworks often look at issues regarding energy and water use, indoor air quality, materials use, and accessibility, among other factors.

### Rationale

The voluntary use of certification schemes can assist in assessing and communicating the sustainability credentials of an asset. Thus, provision of certification information may be of relevance to some report readers.

### Recommendations

**CORE:** *Companies should report the type and number of sustainability certification, rating or labelling schemes in at least one of the following ways:*

- By percentage of the portfolio's total value and level of certification attained.
- By percentage of the portfolio's total floor area and level of certification attained.

**ADDITIONAL:** *Reporters may additionally disclose sustainability certification, rating or labelling as follows (based on GRI Indicator Protocol G4 CRE8):*

- Total number of assets that have achieved a certification, rating or labelling within a portfolio and level of certification attained.
- Percentage of assets that have achieved a certification, rating or labelling within a portfolio within a portfolio.

### Further guidance

Please refer to the relevant sections of the GRI G4 CRESSD covering CRE8: *Type and number of sustainability certification, rating and labelling schemes for new construction, management, occupation and redevelopment.*

## 5. Overarching Recommendations

The following recommendations are overarching principles which should be applied to the Sustainability Performance Measures addressed in Section 3.

### 5.1 Organisational boundaries

#### Issue

Boundaries determine the extent of reporting according to assets or organisational activities that are owned or controlled by the reporting company. Boundary assessments allow a company to establish which operations should be in and out of reporting scope. It is important that reporters clearly articulate how boundaries are defined so that stakeholders can understand the extent of operations and activities included in the performance analysis.

#### Rationale

Definition of the company's organisational boundaries represents a key step in sustainability reporting. To date, the GHG Protocol, developed by the World Resources Institute and the World Business Council for Sustainable Development, has been a key reference for the companies to inform their decisions on what approach to adopt -- *Operational Control, Financial Control or Equity share*<sup>13</sup>.

EPRA's research has shown that the operational control approach has been the most frequently adopted by listed real estate companies in Europe. The operational control approach is defined as follows:

"...A company has operational control over an operation if the former or one of its subsidiaries [...] has the full authority to introduce and implement its operating policies at the operation..."<sup>14</sup>

The operational control approach should not be considered a default or 'perfect fit' for real estate companies. Indeed, there are justifications for other approaches such as equity share where the issue of co-ownership can be addressed by determining which assets are either included or excluded from reporting.

#### Recommendation

**CORE:** *It should be noted that prior to making a choice which type of boundary approach a company should choose, it should carefully consider the following:*

- Companies should map their organisational structure, specifically, due consideration should be made as to whether assets are subsidiaries, associates, incorporated or unincorporated joint ventures.
- Companies should disclose the value or number (absolute or % of portfolio) of buildings in the portfolio included in the organisational boundary approach taken.
- Companies should explain why they have chosen a certain boundary approach over others.
- The issue of financial/ operational leases is important to consider as part of the boundary approach definition. It should be noted that the GHG Protocol treats differently assets

<sup>13</sup> [www.ghgprotocol.org/standards/corporate-standard](http://www.ghgprotocol.org/standards/corporate-standard)

<sup>14</sup> Ibid.

leased on financial leases (as opposed to operational leases). It should be noted that under the current IASB proposal, financial leases may be phased out. Therefore, due consideration will need to be given to this issue in the future, including its impact on boundaries definitions.

- Although adopting operational approach is not mandatory, companies should aim to report 100% of all assets where they have operational control.

#### Further guidance

Please refer to the GRI Guidance on setting the organisational boundary and the GHG Protocol for further guidance on this<sup>15</sup>.

## 5.2 Coverage

### Issue

Coverage delineates what percentage or number of assets within the organisational boundary, are included in data disclosed for each Sustainability Performance Measure.

### Rationale

It may not be possible to collect data on Sustainability Performance Measure for all assets within the organisational boundary. A company may also prefer to exclude data for an asset if the data is not considered reliable. This may be the case for all or only some Sustainability Performance Measures for an asset.

### Recommendation

#### CORE:

- Ideally, 100% of all assets within the chosen organisation boundary should be included in each Sustainability Performance Measure.
- When this is not the case, the level of data coverage should be specified for each Sustainability Performance Measure.
- Data coverage for each Sustainability Performance Measure can be disclosed (as values or percentages) in any of the following ways:
  - number of assets included in Sustainability Performance Measure data
  - number of assets within organisational boundary approach taken
  - floor area included in Sustainability Performance Measure data  
floor area of assets within organisational boundary approach taken
  - financial value included in Sustainability Performance Measure data  
financial value of assets within organisational boundary approach taken

<sup>15</sup> [www.globalreporting.org/resource/library/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf](http://www.globalreporting.org/resource/library/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf) and the GHG Protocol recommendations on 'Setting Organisational Boundaries' in [www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf](http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf)

### 5.3 Estimation of landlord-obtained utility consumption

#### Issue

When landlord-obtained utility consumption data for a Sustainability Performance Measures is partially unavailable or unreliable for an asset, estimation may be necessary.

#### Rationale

Estimation allows complete annual data to be calculated for an asset where data is partially missing or unreliable - though this should not be used as a substitute for gathering complete and accurate data. This allows a company to increase its coverage against some Sustainability Performance Measures.

#### Recommendation

**CORE:** *Estimation should be carried out sparingly, as datasets should be as complete and accurate as possible. When estimating landlord-obtained utility consumption data, a company should:*

- Only estimate data to fill gaps for missing periods using known consumption from other periods for the metered supply in question.
- Disclose the proportion of total disclosed data that is estimated (as a percentage of the total disclosed for that Performance Measure).
- Disclose the method of estimation used.
- Use the same method of estimation for all Sustainability Performance Measures and all assets.
- If different methods of estimation must be used, this should be clearly indicated for each Sustainability Performance Measure.
- Assets should be excluded from the coverage of data being disclosed in the following cases:
  - Where data for one of more meters at an asset is missing for an entire year.
  - Where the only available data for the asset is unreliable.

### 5.4 Third Party Assurance

#### Issue

The choice to assure a sustainability report is not a legal requirement across all countries in Europe. However, assurance of sustainability reports by independent third-parties is likely to become increasingly common practice and EPRA encourages this.

#### Rationale

The credibility of sustainability data increases when third party assurance is carried out and the assurance provider is independent and objective.

**Recommendation**

**CORE:** *When undertaking third party assurance, reporters should consider the following:*

- All EPRA sBPR Performance Measures should be verified – ideally to the same level.
- The level of verification for each Sustainability Performance Measure should be disclosed, and should ideally be to the same level as for financial reporting.
- Companies can choose which verification standard to use and should disclose this in their reports.
- EPRA considers assurance credibility to be enhanced if it is undertaken in accordance with recognised standards such as AA1000 or ISAE3000.
- The full verification statement should be publically available on the company’s website, and a link should be provided if it is not included in the report.

**5.5 Boundaries - reporting on landlord and tenant consumption**

**Issue**

Data on tenant-obtained consumption is not always available to the landlord. Sub-metering of landlord-obtained consumption that services tenant demises is not always universally undertaken, and even where it is, the landlord has less control over such consumption than for landlord services for common parts.

**Rationale**

Clarity on what is being reported as part of overall consumption can help stakeholders to assess the level of control that a reporter has over performance.

**Recommendation**

**CORE:** *There is no single, optimal way to report on base (landlord only) or whole building consumption. As a minimum, companies should report on consumption that they are responsible for obtaining themselves. The longer-term goal should be to report the entire impact arising within a building, irrespective of the arrangements between landlord and tenant.*

- The following principles apply:
- Absolute and like-for-like Performance Measures should include only landlord-obtained<sup>7</sup> energy/water.
  - Where energy/water is obtained by the landlord but consumed in tenant areas, and is sub-metered – such consumption should be itemised (but should be included in the totals).
  - Exclusion of consumption that is obtained by the landlord but sub-metered to the tenant can present a number of issues, such as:
    - Distortions of intensity Performance Measures due to a likely mismatch between numerator (e.g. kWh) and denominator (e.g. floor area).
    - Distortions of the absolute and like-for-like Performance Measures required for regulatory compliance with legislation such as the CRC Energy Efficiency Scheme in the UK (this scheme looks at the total energy obtained by the landlord, irrespective of the end user).
    - However, for the purposes of corporate sustainability target setting and monitoring, several reporters assess performance for just the consumption over which the landlord has fuller control. Itemisation of total consumption as shown in the Appendix

<sup>7</sup> Landlord-obtained energy covers both that purchased (e.g. from the grid) and produced (e.g. onsite).

- sample table of EPRA Sustainability Performance Measures (section 8) enables this to be done whilst ensuring consistency with the EPRA sBPR.

- For the purposes of intensity Performance Measures only, if known, tenant-obtained consumption can be used in calculations, e.g. to achieve a situation where whole building consumption (tenant-obtained and landlord-obtained) is divided by the whole building floor area.
- Waste reporting should be in line with the reporter's operational control approach.

**ADDITIONAL:** *Where landlords wish to disclose tenant-obtained consumption this must be reported separately from landlord-obtained consumption (both absolute and like-for-like). A significant reason to assess tenant-obtained consumption is to compare the scale of scope 1&2 GHG emissions (that are under greater landlord control) with scope 3 (which includes both tenant-obtained consumption and consumption sub-metered to tenants). Such a comparison is often not done annually, rather every three to five years.*

Further:

- Landlords often have limited access to tenant-obtained utility data - and this varies between countries.
- Therefore, estimation of tenant-obtained consumption is more acceptable than for landlord-obtained consumption.
- To estimate tenant-obtained consumption, often a sample of tenant-obtained consumption data is used to estimate the total tenant-obtained consumption, alternatively, entirely theoretical modelling can be undertaken.
- Reporters must clearly state any methods of estimation used and the proportion of disclosed data that is estimated.

## 5.6 Normalisation

### Issue

Absolute consumption represents a good measure of a company's exposure to risk (including regulatory risks, fiscal liability etc.) and provides stakeholders with a measure of its environmental footprint. However, absolute Performance Measures are affected by increases and decreases in the size of a company's portfolio. This makes intensity (normalised) indicators a useful complementary tool for stakeholders to assess companies' performance.

### Rationale

Intensity is one of the most effective measures of a building's overall efficiency during the occupation and operational phase of the building lifecycle.

Some advantages of intensity Performance Measures include:

- Aggregated intensity measures enable changes over time to reflect the influence of acquisitions, disposals and developments/major refurbishments, without the need to exclude any properties from aggregation in any year.
- Ability to compare the relative intensity of different portfolios (e.g. an office portfolio versus a shopping centre portfolio).

**Recommendation**

Intensity indicators are best suited to compare a company's performance over time, rather than for comparison between companies over time.

Energy, GHG emissions, water and waste require different types of intensity indicators, as different factors may drive consumption.

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**CORE:** *As a general rule, companies should define the exact denominator used in the intensity indicator, as well as the method of matching numerator and denominator to account for different landlord and tenant metering scenarios.*

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- Recommended denominators are as follows:
  - Numbers of people

Reporters may use numbers of people as a denominator as long as they clearly state how they have defined and measured it. Please note that water benefits most from the use of a 'per person' indicator as its consumption is driven by people and users of the building.

- Floor area

Although floor areas used in sustainability reporting vary between and within different regions, these should be consistent with those used in financial reports (reporters should use the same type of area in their sustainability and financial reporting).

Companies should ensure that the type of floor area and the associated consumption figures are as closely aligned as possible in their coverage of the building's areas i.e. match numerator and denominator.

- Revenue

Revenue can be used as a basis for intensity indicators, as this might provide valuable insight when comparing the real estate industry to other industries. The revenue used to calculate the intensity indicator should be the "net rent" received as derived from the IFRS financial statement on the buildings associated with the consumption (i.e. excluding service charges revenues, asset sales proceeds etc.)

## 5.7 Analysis - Segmental analysis (by property type, geography)

**Issue**

Building types and their location may have a significant impact on environmental performance. Therefore aggregated environmental data can make it challenging for stakeholders to understand what region or asset class might be under/outperforming against other regions or assets groups in the portfolio.

**Rationale**

Comparison between geographies and property types can help explain trends in environmental performance.

- Geographical segmentation can be a helpful way to analyse resource consumption, although reporters should be mindful when making comparisons between absolute and intensity performance across geographical borders (e.g. explaining weather factors which affect consumption in the accompanying narrative).
- Property types provide another useful way to analyse consumption, as property types have different consumption patterns and drivers for resource use.

The GRI G4 CRESSD also encourages comparison by location (geographical position of a building according to climatic zone) and building types (function or form of a building and can include high level categorisations such as commercial and residential, as well as more detailed categorizations of these, such as commercial office, retail warehouse and shopping centre).

Please refer to the relevant sections in the GRI G4 CRESSD on *CRE1: Building energy intensity* for an example of the segmental analysis approach applied to energy reporting.

#### Recommendation

**CORE:** *It is important that segmental reporting and analysis is adopted in line with the approach selected by companies in their financial reporting.*

- Companies should use the property typologies adopted in their financial reporting. Where additional typologies are used, an explanation for this should be provided.
- Mixed use developments represent a special case where it should be clear whether mixed use properties are listed as one asset or broken down by types of use (e.g. office and retail unit element). In all cases, the approach towards mixed use developments should be in line with companies' financial reporting.
- Segmental reporting and analysis can be applied to both absolute and intensity Performance Measures.

## 5.8 Disclosure on own offices

### Issue

In addition to disclosing on their investment portfolio, the environmental impact of a company's own occupation should also be disclosed within a company's sustainability report.

### Rationale

Companies are responsible for the impact of their own occupation, in leased or owned offices. While this impact may seem minimal compared to the impact of their investment portfolio, it is important to demonstrate that sustainability principles are practiced at the corporate level too.

### Recommendation

**CORE:** *When reporting companies' own office(s) Performance Measures:*

- Own office(s) Performance Measures should be disclosed and reported separately from those of investment portfolios.
- The reporter must clearly state any methods of estimation used.
- The proportion of disclosed data that is estimated must be clearly stated.

## 5.9 Narrative on performance

### Issue

Similarly to financial performance, the environmental performance and position of real estate companies often requires additional narrative information.

### Rationale

Explaining the context of the company's operations and management decisions can enhance stakeholders' assessment and analysis of non-financial performance in the same way as it can help evaluate financial performance.

### Recommendation

CORE:

- Adjustments should not be made to EPRA absolute and like-for-like Performance Measures. Companies should provide, where appropriate, additional information and commentary or explanation of past performance, and outline plans for managing future performance.
- When looking at the environmental performance of a portfolio, it may be useful to understand what factors, other than building management and tenant behaviour, might explain consumption trends. The most frequently used factors which influence environmental performance include weather, levels of building occupancy, 'special uses' (e.g. higher consumption in buildings where tenants undertake trading activities) and age buildings.

## 5.10 Location of EPRA Sustainability Performance Measures in companies' reports

### Rationale

It is EPRA's view that companies should include Sustainability & Corporate Responsibility content in their Annual Report and Accounts, supporting the transition towards integrated reporting<sup>16</sup>.

However, it is not necessary for companies to report in detail on EPRA Sustainability Performance Measures in their annual Sustainability & Corporate Responsibility reports or that complete EPRA sBPR performance tables are disclosed in Annual Report & Accounts. A sample table for absolute and like-for like Performance Measures for energy and greenhouse gases is provided for illustrative purposes in section 8.

### Recommendation

CORE:

- Companies should, as a minimum, include summary tables of EPRA Sustainability Performance Measures in their sustainability and financial reports (Annual Report & Accounts) and a cross-reference (e.g. a reference or hyperlink) to the most comprehensive EPRA sBPR performance tables if these have been published elsewhere (e.g. on the company's website).

<sup>16</sup> Please visit [www.integratedreporting.org](http://www.integratedreporting.org) for more information on the rationale and current trends in integrated reporting.

## 6. Other issues to consider

Issues discussed in this section do not currently warrant separate Best Practices Recommendations. However, the topics below represent important issues to consider in the future, in light of the likely direction of reporting trends and stakeholder expectations.

### 6.1 Materiality

#### Issue

Materiality plays a crucial role in identifying what issues a company should focus on in their sustainability strategies and consequently in their sustainability reports. Materiality reviews are a pre-requisite for organisations using the Global Reporting Initiative's (GRI) G4 reporting guidelines, and a guiding principle underpinning the IIRC's Integrated Reporting <IR> Framework. In the GRI G4 Reporting guidelines, organisations must report against aspects that reflect their significant economic, environmental and social impacts, taking into account the views of internal and external stakeholders. In the case of real estate companies, stakeholders include tenants and investors (external stakeholders) and employees (internal stakeholders). The Integrated Reporting Framework provides a less prescriptive approach to materiality. Instead, material issues are identified based on their ability to create value, with providers of financial capital being the primary stakeholder group.

#### Likely future direction

As GRI G3.1 reporting guidelines will be completely replaced by the GRI G4 guidelines in 2015 and Integrated Reporting gains momentum, materiality reviews will become a standard 'first step' in developing sustainability strategies and in preparing sustainability reports.

EPRA may incorporate the requirement for a materiality review to be carried out in future versions of the EPRA sBPR. Currently, EPRA considers that an impact can only be legitimately accepted as non-material if shown to be so through a materiality review. In these cases, 'not material' should be stated in the EPRA Sustainability Performance Measures tables.

### 6.2 Emerging Indicator - Return On Carbon Emissions (ROCE)

#### Issue

There is a growing appetite amongst investors for companies to report their carbon emissions in relation to their financial performance. The industry is yet to establish a standard metric for a financial carbon intensity indicator as financial denominators tend to be subject to impacts from unrelated variables.

A more meaningful way of presenting financial carbon intensity metrics has been gaining prevalence among commentators. Return on Carbon Emissions (ROCE) represents the financial return on each tonne of carbon emitted. This is achieved by assessing how much carbon is emitted for every Euro of profit generated. Profit before tax (PBT) is being proposed as the most accurate financial metric because it is the most representative of the operational performance of an organisation. This is important because it is the operations of an organisation which is responsible for producing GHG emissions.

**Likely future direction**

It is expected that the use of this metric will become more widespread as it will allow investors to more accurately calculate the risk posed to a company from carbon pricing schemes. In addition, this metric will allow companies and investors to identify the cost benefits of carbon reduction programmes.

**6.3 Socio-Economic Indicators related to Sustainability Performance****Issue**

Socio-economic indicators seek to quantify the impact of a company's operations on surrounding communities and the wider society.

Real estate plays an important part in shaping local infrastructure and can provide vital facilities to local communities. Conversely real estate development can cause significant physical disruption and displacement which fragments existing communities. Striking the correct balance between these two opposing effects can help to dispel civic opposition and strengthen an organisation's licence to operate in different locations. In addition, initiatives that seek to enhance socio-economic development by supporting education, employment and entrepreneurship can increase local prosperity which in turn strengthens property value and local spend.

Leading real estate companies are already seeking to measure their contributions both at an asset and corporate level. At an asset level there is still significant variation in the metrics and indicators used to calculate an organisation's contribution or social return on investment (SROI). At a corporate level leading organisations are most frequently measuring their impact by capturing and reporting their financial, volunteering, pro-bono and in-kind contributions to NGO's and community groups.

**Likely future direction**

Given the interest that these metrics are receiving from planning authorities and an increasing social conscience from investors, it is likely that socio-economic metrics will become more widely reported. More sophisticated models and calculation tools are expected to be developed in the coming years, with some becoming standard practice within the sector.

In addition, real estate is likely to follow other sectors where companies are starting to report their 'total contribution'. As this happens, metrics are likely evolve so that they focus more on the outcomes of investments and initiatives rather than the scale of contributions.

**6.4 Transport****Issue**

The emissions from employee commuting and business travel patterns, and emissions arising from the end users of assets (e.g. visitors or occupiers) can often be significant although difficult to measure accurately on an ongoing basis.

**Likely future direction**

Transport emissions arising from a company's activities (such as staff travel) as well as emissions arising from the users of the buildings (tenants' staff and visitors) should be accounted for in the company's GHG statements as they cause indirect emissions.

Companies looking to report on transport emissions should consult the GRI G4 CRESSD guidance on *Total direct (G4-EN15) and indirect (G4-EN16) greenhouse gas emissions by weight*; *Other relevant indirect greenhouse gas emissions by weight (G4-EN17)*; and *Significant environmental impacts of transporting products and other goods and materials used for the organisation's operations, and transporting members of the workforce (G4-EN30)*.

EPRA will closely monitor the reporting trend on transport emissions and future versions of the EPRA sBPR may incorporate guidance on reporting transport related issues.

## 6.5 Refrigerant gases

### Issue

Fugitive emissions, such as refrigerant gases, remain difficult to measure accurately on an ongoing basis.

### Likely future direction

Fugitive emissions arising from a company's activities (such as building operation) should be accounted for in the company's GHG statements as they cause direct emissions.

Companies looking to report on refrigerant gases should consult the GRI G4 CRESSD guidance on *Total direct (G4-EN15) and indirect (G4-EN16) greenhouse gas emissions by weight*, which provides commentary on common fugitive emissions from real estate, including refrigerant gas from HVAC equipment.

EPRA will closely monitor the reporting trend on refrigerant gases and future versions of the EPRA sBPR may incorporate guidance on reporting refrigerant gases.

## 7. Definitions – Glossary of Terms

### Absolute energy

The total amount of energy consumed by an entity and those deemed to be within its organisational boundaries.

### Boundaries

The boundaries that determine the direct and indirect emissions associated with operations owned or controlled by the reporting company. This assessment allows a company to establish which operations and sources cause direct and indirect emissions, and to decide which indirect emissions to include that are a consequence of its operations. See also the following definitions on financial control, operational control and equity share.

### Building energy intensity

The amount of energy used per unit of an appropriate denominator (e.g. floor area, persons).

### Building GHG intensity

The amount of carbon emitted per unit of an appropriate denominator (e.g. floor area, persons).

### Building types

Categorisation based on the function or form of a building for example: offices, shopping centres, retail warehouses, industrial, multi-family housing, hotels.

### Building water intensity

The amount of water used per unit of an appropriate denominator (e.g. floor area, persons).

### Carbon Disclosure Project

The Carbon Disclosure Project (CDP) works with shareholders and corporations to disclose the greenhouse gas emissions of major corporations.

### Carbon trading

Carbon emissions trading (also known as cap and trade) is a market-based approach used to control pollution by providing economic incentives for achieving reductions in the emissions of pollutants.

### Common parts

Areas which are shared with other occupants in multi-let buildings, including entrance areas, corridors, lifts, staircases, waste storage stores, communal kitchen or breakout facilities and any other parts within the asset and outside which are intended for the use of the occupiers of that asset.

### District heating and cooling

District heating and cooling is a system for distributing hot or cold steam and water generated in a centralised location for residential and commercial heating requirements such as space heating and water heating. The heat is often obtained from a cogeneration plant burning fossil fuels but increasingly biomass. Heat-only boiler stations, geothermal heating and central solar heating are also used.

**Equity-share**

Used to define organisational boundaries for financial and sustainability (and especially GHG emissions) reporting. Equity share reflects economic interest, which is the extent of rights a company has to the risks and rewards flowing from an operation. Typically, the share of economic risks and rewards in an operation is aligned with the company's percentage ownership of that operation, and equity share will normally be the same as the ownership percentage.

**Floor area**

Codes for defining floor areas vary by location, building type and landlord-tenant arrangement, for example: common parts area, lettable / leasable area, internal area, usable area, occupied area, conditioned/treated area.

**Financial control**

Used to define organisational boundaries for financial and sustainability (and especially GHG emissions) reporting. Financial control relates to where the organisation has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities.

**Fugitive emissions**

Fugitive emissions are emissions of gases or vapours from pressurised equipment such as air conditioning due to leaks and various other unintended or irregular releases of gases.

**Greenhouse gas (GHG) emissions**

Greenhouse gases (sometimes abbreviated to GHG) are gases in the Earth's atmosphere that cause the greenhouse effect which can greatly affect the temperature of the Earth. GHGs are the six gases listed in the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF<sub>6</sub>). Since the beginning of the Industrial revolution, the burning of fossil fuels has substantially increased carbon dioxide (CO<sub>2</sub>) emissions into the atmosphere thereby contributing to the greenhouse gas effect.

**HVAC - Heating, Ventilation and Air Conditioning****Like-for-Like**

Consumption of a portfolio that has been consistently in operation, and not under development, during the most recent two full reporting years (this like-for-like definition is aligned with the EPRA Financial BPR like-for-like definition for rental growth reporting). For example, the 2014 like-for-like change compares the 2014 Elec-Abs consumption with the 2013 Elec-Abs consumption for a consistent portfolio. This is the simplest way to take account of changes in the size and composition of a portfolio.

**Mandatory disclosure requirements**

Legally binding reporting requirements for listed or non-listed companies. In the EU, these requirements include the European Accounts Modernisation Directive, which is interpreted in different ways by different countries.

**Materiality**

Material topics for a reporting organisation include those topics that have a direct or indirect impact on an organisation's ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society at large.

**Operational control**

Used to define organisational boundaries for financial and sustainability (and especially GHG emissions) reporting. Operational control relates to where the organisation or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation.

**Persons**

The average number of persons used as a denominator of a building energy intensity indicator. For example: visits in shopping centres, workstations in offices, workers in industrial warehouses, residents in multi-family housing, guests in hotels.

**Renewable energy**

Energy sources that can be replenished in a short time through ecological cycles. Renewable energy sources include: Geothermal, Wind, Solar, Hydro, and Biomass.

**Total direct GHG emissions**

Direct GHG emissions come from sources that are owned or controlled by the reporting organisation. All direct emission sources are classified as scope 1 under the GHG Protocol.

**Total indirect GHG emissions**

Indirect GHG emissions are those that are a consequence of the activities of the organisation, but that occur at sources owned or controlled by another organisation or company. Indirect emission sources are classified as either scope 2 or scope 3 under the GHG Protocol.

**Vacancy rates**

The proportion of lettable / leasable area that is unoccupied.

**Waste by disposal route**

The method by which waste is treated or disposed, including reuse, recycling, composting, recovery, incineration, landfill, deep well injection and on-site storage.

## 8. **Appendix - sample table of EPRA Sustainability Performance Measures**

Below is a sample a sample table for absolute (Abs) and like-for-like (LFL) Performance Measures for energy and greenhouse gases - for illustrative purposes.

Impact area	EPRA Sustainability Performance Measures				Absolute measures (Abs) (as portfolio stood each year)	
	EPRA Code	Units of measure	Indicator		EuroREIT plc	
					2013	2014
Energy	Elec-Abs, Elec-LfL	MWh	Electricity	for landlord shared services	355.474	330.001
				(sub)metered exclusively to tenants	59.758	55.476
				<b>Total landlord-obtained electricity</b>	<b>415.232</b>	<b>385.477</b>
	DH&C-Abs, DH&C-LfL		District heating and cooling	for landlord shared services	47.341	43.948
				(sub)metered exclusively to tenants	18.847	17.497
				<b>Total landlord-obtained district heating and cooling</b>	<b>66.188</b>	<b>61.445</b>
	Fuels-Abs, Fuels-LfL		Fuels	for landlord shared services	35.384	32.848
				(sub)metered exclusively to tenants	1.415	1.314
				<b>Total landlord-obtained fuels</b>	<b>36.799</b>	<b>34.162</b>
	of applicable properties			Energy and associated GHG disclosure coverage	85 of 99	81 of 86
%			Proportion of energy and associated GHG estimated	9%	5%	
Green-house gas emissions	GHG-Dir-Abs, GHG-Dir-LfL	tonnes CO <sub>2</sub> e	Direct	Scope 1	6.553	6.084
	GHG-Indir-Abs, GHG-Indir-LfL		Indirect	Scope 2	146.924	136.395
			Indirect	Scope 3*	68.079	63.201

**Data Qualifying Note**

In this disclosure, estimation refers to filling invoice gaps, not to whether invoices are based on “estimated” or “actual” readings.

Scope 1 can include refrigerants.

\* Scope 3 includes landlord-obtained consumption (only if sub-metered to tenants) and all transmission & distribution losses.

Like-for-like (Lfl) by property type												
	Shopping Centres			Offices			Industrial			EuroREIT plc Lfl Total		
	2013	2014	% change	2013	2014	% change	2013	2014	% change	2013	2014	% change
	116.320	110.173	-5,3%	161.004	158.644	-1,5%	23.943	24.517	2,4%	301.267	293.334	-2,6%
	2.675	3.305	23,5%	43.471	46.007	5,8%				46.146	49.312	6,9%
	<b>118.995</b>	<b>113.478</b>	<b>-4,6%</b>	<b>204.475</b>	<b>204.651</b>	<b>0,1%</b>	<b>23.943</b>	<b>24.517</b>	<b>2,4%</b>	<b>347.413</b>	<b>342.646</b>	<b>-1,4%</b>
	4.729	4.641	-1,9%	31.768	34.424	8,4%				36.497	39.065	7,0%
	1.277	1.439	12,7%	11.754	14.114	20,1%				13.031	15.553	19,3%
	<b>6.006</b>	<b>6.080</b>	<b>1,2%</b>	<b>43.522</b>	<b>48.537</b>	<b>11,5%</b>				<b>49.528</b>	<b>54.617</b>	<b>10,3%</b>
	26.665	29.198	9,5%							26.665	29.198	9,5%
	1.333	1.168	-12,4%							1.333	1.168	-12,4%
	<b>27.998</b>	<b>30.366</b>	<b>8,5%</b>							<b>27.998</b>	<b>30.366</b>	<b>8,5%</b>
	15 of 17			28 of 30			29 of 30			72 of 77		
	6%	3%	-50%	5%	2%	-60%	13%	11%	-15%	5%	2%	-60%
	4.939	5.408	9,5%							4.939	5.408	9,5%
	47.001	44.533	-5,2%	67.578	66.900	-1,0%	9.577	9.807	2,4%	124.156	121.240	-2,3%
	14.403	14.194	-1,4%	37.865	39.601	4,6%	2.327	2.383	2,4%	54.595	56.178	2,9%



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