



March 2022

# Exposure Draft

IFRS<sup>®</sup> Sustainability Disclosure Standard

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## **[Draft] IFRS S2 Climate-related Disclosures Appendix B Industry-based disclosure requirements**

Volume B36—Real Estate

Comments to be received by 29 July 2022

This industry from Appendix B Industry-based disclosure requirements accompanies the Exposure Draft ED/2022/S2 *Climate-related Disclosures* (published March 2022; see separate booklet). It is published by the International Sustainability Standards Board (ISSB) for comment only. Comments need to be received by 29 July 2022 and should be submitted by email to [commentletters@ifrs.org](mailto:commentletters@ifrs.org) or online at <https://www.ifrs.org/projects/open-for-comment/>.

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## Introduction

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*This volume is part of Appendix B of [draft] IFRS S2 Climate-related Disclosures and is an integral part of that [draft] Standard. It has the same authority as the other parts of that [draft] Standard.*

This volume sets out the requirements for identifying, measuring and disclosing information related to an entity's significant climate-related risks and opportunities that are associated with specific business models, economic activities and other common features that characterise participation in this industry.

The industry-based disclosure requirements are derived from SASB Standards (see paragraphs B10–B12 of [Draft] IFRS S2 *Climate-related Disclosures*). Amendments to the SASB Standards, described in paragraph B11, are marked up for ease of reference. New text is underlined and deleted text is struck through. The metric codes used in SASB Standards have also been included, where applicable, for ease of reference. For additional context regarding the industry-based disclosure requirements contained in this volume, including structure and terminology, application and illustrative examples, refer to Appendix B paragraphs B3–B17.

## Real Estate

### Industry Description

The Real Estate industry is composed of companies that own, develop, and generally operate income-producing real estate assets. Companies in this industry are commonly structured as real estate investment trusts (REITs) and operate in a wide range of segments within the real estate industry, including residential, retail, office, health care, industrial, and hotel properties. REITs typically focus on the direct ownership of real estate assets, thereby providing investors with the opportunity to obtain real estate exposure without direct asset ownership and management. Although REITs are often concentrated in one segment of the Real Estate industry, many REITs are diversified through investment in multiple property types.

For tax purposes, real estate companies in the U.S. often prefer to be structured as REITs. To be classified as a REIT, companies must maintain most of their assets in real estate, derive most income from these assets, and distribute a minimum threshold of their annual taxable income to shareholders as dividends, among other requirements. Most U.S.-listed companies in the industry operate exclusively within the U.S., while some companies have broadened their real estate portfolio exposure internationally.

### Sustainability Disclosure Topics & Metrics

**Table 1. Sustainability Disclosure Topics & Metrics**

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Energy Management	Energy consumption data coverage as a percentage of total floor area, by property subsector	Quantitative	Percentage (%) by floor area	IF-RE-130a.1
	(1) Total energy consumed by portfolio area with data coverage, (2) percentage grid electricity, and (3) percentage renewable, by property subsector	Quantitative	Gigajoules (GJ), Percentage (%)	IF-RE-130a.2
	Like-for-like percentage change in energy consumption for the portfolio area with data coverage, by property subsector	Quantitative	Percentage (%)	IF-RE-130a.3
	Percentage of eligible portfolio that (1) has an energy rating and (2) is certified to ENERGY STAR, by property subsector	Quantitative	Percentage (%) by floor area	IF-RE-130a.4
	Description of how building energy management considerations are integrated into property investment analysis and operational strategy	Discussion and Analysis	n/a	IF-RE-130a.5

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TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Water Management	Water withdrawal data coverage as a percentage of (1) total floor area and (2) floor area in regions with High or Extremely High Baseline Water Stress, by property subsector	Quantitative	Percentage (%) by floor area	IF-RE-140a.1
	(1) Total water withdrawn by portfolio area with data coverage and (2) percentage in regions with High or Extremely High Baseline Water Stress, by property subsector	Quantitative	Thousand cubic meters (m <sup>3</sup> ), Percentage (%)	IF-RE-140a.2
	Like-for-like percentage change in water withdrawn for portfolio area with data coverage, by property subsector	Quantitative	Percentage (%)	IF-RE-140a.3
	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	IF-RE-140a.4
Management of Tenant Sustainability Impacts	(1) Percentage of new leases that contain a cost recovery clause for resource efficiency-related capital improvements and (2) associated leased floor area, by property subsector	Quantitative	Percentage (%) by floor area, Square feet (ft <sup>2</sup> )	IF-RE-410a.1
	Percentage of tenants that are separately metered or submetered for (1) grid electricity consumption and (2) water withdrawals, by property subsector	Quantitative	Percentage (%) by floor area	IF-RE-410a.2
	Discussion of approach to measuring, incentivizing, and improving sustainability impacts of tenants	Discussion and Analysis	n/a	IF-RE-410a.3
Climate Change Adaptation	Area of properties located in 100-year flood zones, by property subsector	Quantitative	Square feet (ft <sup>2</sup> )	IF-RE-450a.1
	Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks	Discussion and Analysis	n/a	IF-RE-450a.2

**Table 2. Activity Metrics**

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Number of assets, by property subsector <sup>51</sup>	Quantitative	Number	IF-RE-000.A

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<sup>51</sup> Note to IF-RE-000.A – Number of assets shall include the number of distinct real estate property or building assets and is aligned with the 2018 GRESB Real Estate Assessment Reference Guide. Number of assets shall be disclosed separately for each portion of the entity's portfolio where properties are classified into subsectors that are aligned with the FTSE Nareit Classification Structure. The total number of assets reported across all subsectors can exceed the actual number of assets due to the fact that mixed-use assets can be reported in multiple subsectors.

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ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Leasable floor area, by property subsector <sup>52</sup>	Quantitative	Square feet (ft <sup>2</sup> )	IF-RE-000.B
Percentage of indirectly managed assets, by property subsector <sup>53</sup>	Quantitative	Percentage (%) by floor area	IF-RE-000.C
Average occupancy rate, by property subsector <sup>54</sup>	Quantitative	Percentage (%)	IF-RE-000.D

<sup>52</sup> Note to **IF-RE-000.B** – Leasable floor area shall be disclosed separately for each portion of the entity’s portfolio where properties are classified into subsectors that are aligned with the FTSE Nareit Classification Structure. Number of units may be used in place of floor area in the Apartments and Lodging/Resorts property subsectors when floor area is not available.

<sup>53</sup> Note to **IF-RE-000.C** –The definition of “indirectly managed assets” is solely based on the landlord/tenant relationship and is aligned with the 2018 GRESB Real Estate Assessment Reference Guide: “Where a single tenant has the sole authority to introduce and implement operating and/or environmental policies and measures, the tenant should be assumed to have operational control, so [the asset] should be considered to be an Indirectly Managed Asset.” Percentage of indirectly managed assets shall be disclosed separately for each portion of the entity’s portfolio where properties are classified into subsectors that are aligned with the FTSE Nareit Classification Structure.

<sup>54</sup> Note to **IF-RE-000.D** – Average occupancy rate shall be disclosed separately for each portion of the entity’s portfolio where properties are classified into subsectors that are aligned with the FTSE Nareit Classification Structure.

## Energy Management

### Topic Summary

Real estate assets consume significant amounts of energy, primarily related to space heating, ventilating, air conditioning, water heating, lighting, and the use of equipment and appliances. The type of energy used, magnitude of consumption, and strategies for energy management are highly dependent on the real estate asset class, among other factors. Generally, grid electricity consumption is the predominant form of consumed energy, though on-site fuel combustion and renewable energy production also serve an important roles. Energy costs may be borne by companies in the industry and/or the property occupants; either way, energy management is a significant industry issue. To the extent that the real estate owner assumes direct responsibility for energy costs, such costs often represent significant operating costs, inherently indicating the importance of energy management. Energy pricing volatility and a general trend of electricity price increases, energy-related regulations, wide variations in energy performance across the existing building stock, and opportunities for efficiency improvements through economically attractive capital investments all further point to the importance of energy management. Energy costs assumed by occupants, either in whole or in part, are nonetheless likely to significantly impact companies in the industry, albeit through differing channels. Building energy performance is a notable driver of tenant demand, as it allows them to control operating costs, mitigate the environmental impacts of operations, and, often just as importantly, maintain a reputation for resource conservation. Additionally, real estate owners may be exposed to energy-related regulations even when energy costs are the responsibility of occupants. Overall, companies in the industry that effectively manage the energy performance of their assets may see reduced operating costs and regulatory risks, as well as increased tenant demand, rental rates, and occupancy rates—all of which drive revenue and asset value appreciation. Improving the energy performance of assets is highly dependent on property type and location, target tenant market, local building codes, physical and legal opportunities to deploy distributed renewable energy, ability to measure consumption, and performance of existing building stock, among other factors.

### Metrics

#### *IF-RE-130a.1. Energy consumption data coverage as a percentage of total floor area, by property subsector*

- 1 The entity shall disclose the percentage of its portfolio, based on total gross floor area, with complete energy consumption data coverage.
  - 1.1 ~~Gross floor area is defined according to the U.S. Environmental Protection Agency (EPA) ENERGY STAR® definition as “the total property square footage, measured between the principal exterior surfaces of the enclosing fixed walls of the building(s).”~~
    - 1.1.1 Leasable floor area may be used in place of gross floor area when gross floor area is not available for the relevant area of the portfolio (e.g., a building with an unknown gross floor but a known leasable floor area).

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- 1.1.2 Number of units may be used in place of floor area in the Apartments and Lodging/Resorts property subsectors.
  - 1.2 Floor area is considered to have complete energy consumption data coverage when energy consumption data (i.e., energy types and amounts consumed) is obtained by the entity for all types of energy consumed in the relevant floor area during the reporting period, regardless of when such data was obtained.
    - 1.2.1 If such data is not available for one or more types of energy consumed, the relevant floor area shall not be considered to have complete energy consumption data coverage.
  - 1.3 The percentage shall be calculated as the portfolio gross floor area with complete energy consumption data coverage divided by the total portfolio gross floor area for which energy is used.
  - 1.4 The scope of energy consumption includes energy from all sources, including energy purchased from sources external to the entity and its tenants, and energy produced by the entity or its tenants (self-generated). For example, direct fuel usage, purchased electricity, and heating, cooling, and steam energy are all included within the scope of energy consumption.
- 2 The entity shall disclose energy consumption data coverage separately for each property type in its portfolio, where properties are classified into sectors ~~subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system~~Nareit Classification Structure~~, and include the following: ~~Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property subsector classifications).~~
- 3 The entity may discuss the comprehensiveness of data coverage if there are coverage variations by energy type. For example, if a portion of floor area consumes electricity and natural gas and the entity has energy consumption data coverage for electricity but not natural gas, the entity does not have complete energy consumption data coverage. However, the entity may disclose the portion of total portfolio gross floor area with partial energy consumption data coverage.
- 4 The entity may describe the variations in energy consumption data coverage, including the factors that influence it.
  - 4.1 Variations in energy consumption data coverage may occur based on distinctions including, but not limited to:
    - 4.1.1 Base Building, Tenant Space, and Whole Building
    - 4.1.2 Energy Purchased by the Landlord and energy Purchased by Tenants
    - 4.1.3 Managed Assets and Indirectly Managed Assets
    - 4.1.4 Geographical markets

- 4.2 Relevant factors that influence energy consumption data coverage may include, but are not limited to:
  - 4.2.1 Geographical markets and the applicable enabling or inhibiting laws, regulations, and policies within such markets, including those policies of utilities
  - 4.2.2 Administrative or logistical barriers to obtaining energy consumption data (e.g., lack of integration of utilities' data reporting systems)
  - 4.2.3 Tenant demands around the privacy or proprietary nature of energy consumption data
  - 4.2.4 Property subsectors or other more nuanced classifications of property types
  - 4.2.5 Lease structures, including the length in time of leases, the terms applicable to the access of energy consumption data by the entity, and the ability of the entity to influence energy management performance of Tenant Spaces
  - 4.2.6 The entity's perception that its obtainment of Tenant Space energy consumption data may negatively impact tenant demand
- 5 The following terms are defined according to the 2018 GRESB Real Estate Assessment Reference Guide:
  - 5.1 Base Building is defined as "Energy consumed in supplying central building services to lettable/leasable areas and common areas."
  - 5.2 Tenant Space is defined as "Lettable floor area (both vacant and let/leased areas) that is or can be occupied by tenants."
  - 5.3 Whole Building is defined as "Energy used by tenants and Base Building services to lettable/leasable and common spaces. This should include all energy supplied to the building for the operation of the building and the tenant space."
  - 5.4 Purchased by Landlord is defined as "Energy purchased by the landlord, but consumed by the tenant. This can include energy purchased by the landlord but used for vacant space."
  - 5.5 Purchased by Tenant is defined as "Energy purchased by the tenant. Typically this is data that is not within the participants' immediate control."
  - 5.6 Managed Assets and Indirectly Managed Assets are defined as follows: "This definition of Managed assets and the definition of Indirectly Managed assets are solely based on the landlord/tenant relationship. [Managed and Indirectly Managed Assets are] assets or buildings for which the landlord is determined to have 'operational control' where operational control is defined as having the ability to introduce and implement operating and/or environmental policies and measures. In case both the landlord and tenant have the authority to introduce and implement any or

all of the policies mentioned above, the asset or building should be reported as a Managed asset. Where a single tenant has the sole authority to introduce and implement operating and/or environmental policies and measures, the tenant should be assumed to have operational control, so it should be considered to be an Indirectly Managed asset.”

- 6 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-130a.2. (1) Total energy consumed by portfolio area with data coverage, (2) percentage grid electricity, and (3) percentage renewable, by property subsector*

- 1 The entity shall disclose (1) total energy consumption by the portfolio area for which there is energy consumption data coverage as an aggregate figure, in gigajoules (GJ) or their multiples, where:
- 1.1 The scope of disclosure includes all property area in the entity’s portfolio for which there is energy consumption data coverage, regardless of whether energy is consumed by the Tenant Space or Base Building (including outdoor, exterior, and parking areas) and which party pays for energy expenses.
  - 1.2 The scope of disclosure excludes the portion of energy consumed by the portfolio area for which energy consumption data is unavailable.
    - 1.2.1 If energy consumption data is not available for Tenant Space or Whole Building for a property but is available for the Base Building, then the entity shall disclose this energy consumption data.
  - 1.3 The scope of energy consumption includes energy from all sources, including energy purchased from sources external to the entity and its tenants, and energy produced by the entity or its tenants (self-generated). For example, direct fuel usage, purchased electricity, and heating, cooling, and steam energy are all included within the scope of energy consumption.
  - 1.4 In calculating energy consumption from fuels and biofuels, the entity shall use higher heating values (HHV), also known as gross calorific values (GCV), which are directly measured or taken from the Intergovernmental Panel on Climate Change (IPCC), the U.S. Department of Energy (DOE), or the U.S. Energy Information Administration (EIA).
- 2 The entity shall disclose (2) the percentage of energy it consumed that was supplied from grid electricity.
- 2.1 The percentage shall be calculated as purchased grid electricity consumption divided by total energy consumption.
- 3 The entity shall disclose (3) the percentage of energy it consumed that is renewable energy.

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- 3.1 Renewable energy is defined as energy from sources that are replenished at a rate greater than or equal to their rate of depletion, such as geothermal, wind, solar, hydro, and biomass.
- 3.2 The percentage shall be calculated as renewable energy consumed divided by total energy consumed.
- 3.3 The scope of renewable energy includes renewable fuel the entity consumed, renewable energy the entity directly produced, and renewable energy the entity purchased, if purchased through a renewable power purchase agreement (PPA) that explicitly includes renewable energy certificates (RECs) or Guarantees of Origin (GOs), a Green-e Energy Certified utility or supplier program, or other green power products that explicitly include RECs or GOs, or for which Green-e Energy Certified RECs are paired with grid electricity.
  - 3.3.1 For any renewable electricity generated on-site, any RECs and GOs must be retained (i.e., not sold) and retired or cancelled on behalf of the entity in order for the entity to claim them as renewable energy.
  - 3.3.2 For renewable PPAs and green power products, the agreement must explicitly include and convey that RECs and GOs be retained or replaced and retired or cancelled on behalf of the entity in order for the entity to claim them as renewable energy.
  - 3.3.3 The renewable portion of the electricity grid mix that is outside of the control or influence of the entity is excluded from the scope of renewable energy.
- 3.4 For the purposes of this disclosure, the scope of renewable energy from ~~hydro and biomass sources is limited to the following:~~
  - 3.4.1 ~~Energy from hydro sources is limited to those that are certified by the Low Impact Hydropower Institute or that are eligible for a state Renewable Portfolio Standard;~~
  - 3.4.2 ~~Energy from biomass sources is limited to~~ materials certified to a third-party standard (e.g., Forest Stewardship Council, Sustainable Forest Initiative, Programme for the Endorsement of Forest Certification, or American Tree Farm System), materials considered eligible sources of supply according to the *Green-e Framework for Renewable Energy Certification, Version 1.0* (2017) or Green-e regional standards, and/or materials that are eligible for an applicable state renewable portfolio standard.
- 4 The entity shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel usage (including biofuels) and conversion of kilowatt hours (kWh) to GJ (for energy data, including electricity from solar or wind energy).
- 5 Energy consumption data shall be disclosed by (a) Base Building and (b) Tenant Space, or (c) Whole Building, or a combination of these.

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- 6 The entity shall disclose (1) total energy consumption, (2) percentage grid electricity, and (3) percentage renewable energy, separately for each property type in its portfolio where properties are classified into sectors ~~subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure~~ and include the following: ~~Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/ Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property subsector classifications).~~
- 7 The entity may describe the variations in energy consumption.
- 7.1 Variations in energy consumption data coverage may occur based on distinctions including, but not limited to:
- 7.1.1 Base Building, Tenant Space, and Whole Building
- 7.1.2 Energy Purchased by the Landlord and energy Purchased by Tenants
- 7.1.3 Managed Assets and Indirectly Managed Assets
- 7.1.4 Geographical markets
- 8 The following terms are defined according to the 2018 GRESB Real Estate Assessment Reference Guide:
- 8.1 Base Building is defined as “Energy consumed in supplying central building services to lettable/leasable areas and common areas.”
- 8.2 Tenant Space is defined as “Lettable floor area (both vacant and let/leased areas) that is or can be occupied by tenants.”
- 8.3 Whole Building is defined as “Energy used by tenants and Base Building services to lettable/leasable and common spaces. This should include all energy supplied to the building for the operation of the building and the tenant space.”
- 8.4 Purchased by Landlord is defined as “Energy purchased by the landlord, but consumed by the tenant. This can include energy purchased by the landlord but used for vacant space.”
- 8.5 Purchased by Tenant is defined as “Energy purchased by the tenant. Typically this is data that is not within the participants' immediate control.”
- 8.6 Managed Assets and Indirectly Managed Assets are defined as follows: “This definition of Managed assets and the definition of Indirectly Managed assets are solely based on the landlord/tenant relationship. [Managed and Indirectly Managed Assets are] assets or buildings for which the landlord is determined to have 'operational control' where operational control is defined as having the ability to introduce and implement operating and/or environmental policies and measures. In case both the landlord and tenant have the authority to introduce and implement any or all of the policies mentioned above, the asset or building should be

reported as a Managed asset. Where a single tenant has the sole authority to introduce and implement operating and/or environmental policies and measures, the tenant should be assumed to have operational control, so it should be considered to be an Indirectly Managed asset.”

- 9 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-130a.3. Like-for-like percentage change in energy consumption for the portfolio area with data coverage, by property subsector*

- 1 The entity shall disclose the like-for-like percentage change in energy consumption for the portfolio area with data coverage.
  - 1.1 The percentage shall be calculated as energy consumed in the reporting period divided by the energy consumed in the immediately prior reporting period.
  - 1.2 The scope of energy consumption included in the calculation shall be aligned with that outlined in the 2018 GRESB Real Estate Assessment Reference Guide (“Like-for-like Comparison”) as including all energy consumed by properties that were in the entity’s portfolio for both the full reporting period and the immediately prior full reporting period.
    - 1.2.1 Energy consumed by properties that have been acquired, disposed of, under development, or have undergone a major renovation during the reporting period or the immediately prior reporting period shall be excluded.
    - 1.2.2 No correction for changes in the occupancy rate is needed and properties with a high variation in vacancy rates shall be included.
    - 1.2.3 If there is not energy consumption data coverage for either (or both) the reporting period or the immediately prior reporting period, the energy consumed by that relevant portfolio floor area is excluded from the numerator and the denominator in the calculation.
- 2 The scope, methodology, and calculations of energy consumption shall be consistent with IF-RE-130a.2.
- 3 Like-for-like change in energy consumption shall be disclosed by (a) Base Building and (b) Tenant Space, or (c) Whole Building, or a combination of these.
  - 3.1 If like-for-like change in energy consumption data is not available for Tenant Space or Whole Building for a property but is available for the Base Building, then the entity shall disclose this like-for-like change in energy consumption data.
- 4 The entity shall disclose like-for-like change in energy consumption separately for each property type in its portfolio where properties are classified into sectors ~~subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure~~ and include the following: ~~Health Care, Self Storage, Industrial, Office, Apartments,~~

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~~Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property subsector classifications).~~

- 5 The entity may disclose the floor area, in square feet, included in the scope of like-for-like percentage change in energy consumption if the scope significantly diverges from the floor area of energy consumption data coverage.
- 6 “Like-for-like” data collection, analysis, and disclosure may be consistent with the approach with which the entity discloses its financial reporting data.
  - 6.1 If the entity discloses its financial reporting data using a concept and methodology similar to “Like-for-like Comparison,” the entity shall describe divergences between the scope of assets and/or floor area used in its financial reporting and its like-for-like change in energy consumption. For example, if additional assets are excluded from the like-for-like change in energy consumption relative to like-for-like financial reporting as a result of data coverage limitations, such inconsistencies shall be described.
- 7 The entity may additionally present like-for-like percentage change in energy consumption on a normalized basis.
  - 7.1 Normalization factors and methodologies may include, but are not limited to, the following which are presented in the 2018 GRESB Real Estate Assessment Reference Guide:
    - 7.1.1 Air conditioning and/or natural ventilation
    - 7.1.2 Building age
    - 7.1.3 Degree days
    - 7.1.4 Footfall
    - 7.1.5 Occupancy rate
    - 7.1.6 Operational hours
    - 7.1.7 Weather conditions
    - 7.1.8 Other
  - 7.2 If the entity chooses to additionally disclose normalized like-for-like percentage change in energy consumption, the entity shall provide a brief description of the normalization factor and methodology or its use of a third-party methodology (e.g., “Weather Normalized Energy” as provided by ENERGY STAR Portfolio Manager<sup>®</sup>).
- 8 The entity may describe the variations in like-for-like percentage change in energy consumption.
  - 8.1 Variations in energy consumption may occur based on distinctions including, but not limited to:
    - 8.1.1 Base Building, Tenant Space, and Whole Building

- 8.1.2 Energy Purchased by the Landlord and energy Purchased by Tenant;
  - 8.1.3 Managed Assets and Indirectly Managed Assets; and
  - 8.1.4 Geographical markets.
- 9 The following terms are defined according to the 2018 GRESB Real Estate Assessment Reference Guide:
- 9.1 Base Building is defined as “Energy consumed in supplying central building services to lettable/leasable areas and common areas.”
  - 9.2 Tenant Space is defined as “Lettable floor area (both vacant and let/leased areas) that is or can be occupied by tenants.”
  - 9.3 Whole Building is defined as “Energy used by tenants and base building services to lettable/leasable and common spaces. This should include all energy supplied to the building for the operation of the building and the tenant space.”
  - 9.4 Purchased by Landlord is defined as “Energy purchased by the landlord, but consumed by the tenant. This can include energy purchased by the landlord but used for vacant space.”
  - 9.5 Purchased by Tenant is defined as “Energy purchased by the tenant. Typically this is data that is not within the participants’ immediate control.”
  - 9.6 Managed Assets and Indirectly Managed Assets are defined as follows: “This definition of Managed assets and the definition of Indirectly Managed assets are solely based on the landlord/tenant relationship. [Managed and Indirectly Managed Assets are] assets or buildings for which the landlord is determined to have ‘operational control’ where operational control is defined as having the ability to introduce and implement operating and/or environmental policies and measures. In case both the landlord and tenant have the authority to introduce and implement any or all of the policies mentioned above, the asset or building should be reported as a Managed asset. Where a single tenant has the sole authority to introduce and implement operating and/or environmental policies and measures, the tenant should be assumed to have operational control, so it should be considered to be an Indirectly Managed asset.”
- 10 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-130a.4. Percentage of eligible portfolio that (1) has an energy rating and (2) is certified to ENERGY STAR, by property subsector*

- 1 The entity shall disclose the percentage of the portfolio that has a valid or current energy rating, by gross floor area, where:

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- 1.1 ~~Gross floor area is defined according to the U.S. Environmental Protection Agency (EPA) ENERGY STAR® definition~~ as “the total property square footage, measured between the principal exterior surfaces of the enclosing fixed walls of the building(s).”
- 1.2 An energy rating is defined according to the 2018 GRESB Real Estate Assessment Reference Guide as a scheme that measures the energy performance of buildings, including schemes solely concerned with measuring energy efficiency performance as well as cases in which an energy rating is an element of a broader scheme measuring environmental performance.
- 1.3 The percentage shall be calculated as the portfolio gross floor area that has an energy rating divided by the total portfolio gross floor area.
  - 1.3.1 The entity may exclude from the denominator the portfolio gross floor area that is ineligible to receive an energy rating based on the property subsector, location (e.g., located in a region in which energy ratings are not an available service), or other specific use characteristics that cause the property to be ineligible.
- 1.4 The scope of energy rating schemes includes:
  - 1.4.1 ENERGY STAR® for operations in the U.S. and Canada
  - 1.4.2 EU Energy Performance Certificates (EPC) for operations in the European Union
  - 1.4.3 National Australian Built Environment Rating System (NABERS) Energy for operations in Australia
  - 1.4.4 NABERSNZ for operations in New Zealand
  - 1.4.5 Other energy rating schemes that can be demonstrated to have substantially equivalent criteria, methodology, and presentation of results as those schemes stated above
- 1.5 The scope of energy rating schemes is aligned with the 2018 GRESB Real Estate Assessment Reference Guide in that it “only include[s] energy ratings that were awarded before or during the reporting period (pre-assessments or other unofficial rating schemes are not valid). Some energy ratings are valid for a limited period only—the rating should be officially in effect during the reporting period.”
- 2 The entity may additionally disclose the percentage(s) by energy rating scheme.
- 3 The entity shall (2) disclose the percentage of its portfolio that is certified to ENERGY STAR®.
  - 3.1 The percentage shall be calculated as the portfolio gross floor area that is certified to ENERGY STAR® in the U.S. divided by the total portfolio gross floor area in the U.S.

- 3.1.1 For a property to qualify as certified to ENERGY STAR<sup>®</sup>, the certification must be officially in effect during the reporting period (as aligned with the 2018 GRESB Real Estate Assessment Reference Guide).
    - 3.1.2 The entity may exclude from the denominator the portfolio gross floor area that is ineligible to be certified to ENERGY STAR<sup>®</sup> based on the property subsector or other specific use characteristics that cause the property to be ineligible.
  - 3.2 If property is located in Canada, the entity may separately disclose the percentage of the portfolio in Canada that is certified to ENERGY STAR<sup>®</sup>.
    - 3.2.1 The percentage shall be calculated as the portfolio gross floor area that is certified to ENERGY STAR<sup>®</sup> in Canada divided by the total portfolio gross floor area in Canada.
- 4 The entity shall disclose (1) the percentage of its portfolio that has an energy rating, and (2) the percentage of its portfolio that is certified to ENERGY STAR<sup>®</sup>, separately for each property type in its portfolio where properties are classified into sectors-subsectors that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification-Nareit Classification Structure and include the following: Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property subsector classifications).
- 5 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-130a.5. Description of how building energy management considerations are integrated into property investment analysis and operational strategy*

- 1 The entity shall describe its strategic approach and the operational processes it uses to integrate energy-related considerations into its analysis of current and future property investments.
- 2 The entity shall describe the following elements of its strategic approach, where relevant:
  - 2.1 The use of energy-reduction targets and performance against those targets;
  - 2.2 The integration of property energy performance into its property acquisition due diligence process—such as if these measures are qualitative in nature (e.g., whether or not the building has an energy rating) or quantitative in nature (e.g., the entity adjusts occupancy rate projections based on energy performance data); and
  - 2.3 Entity-level energy consumption and management policies, applicable across the entity's portfolio (aligned with 2018 GRESB Real Estate Assessment Q8).

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- 3 The entity shall discuss the operational processes it uses, which may include, but are not limited to:
  - 3.1 Management of the technical energy performance of its portfolio; and
  - 3.2 The integration of renewable energy into its portfolio.
- 4 Relevant elements of its technical approach may include, but are not limited to:
  - 4.1 Use of technical building assessments to identify energy efficiency opportunities—including whether such assessments are in-house or external and the general portfolio coverage of such assessments during the last four years (aligned with 2018 GRESB Real Estate Assessment Q16);
  - 4.2 Measures implemented to improve the energy efficiency of the portfolio—including specific measures taken, general portfolio coverage of such measures, and estimated energy savings (aligned with 2018 GRESB Real Estate Assessment Q17);
  - 4.3 Approach to retrocommissionings—including their applicability to the entity’s portfolio, the comprehensiveness of retrocommissionings conducted, general portfolio coverage, and estimated energy savings;
  - 4.4 Use of environmental management systems to measure, manage, and improve the energy performance of buildings and such systems’ alignment with third-party standards or verification (aligned with 2018 GRESB Real Estate Assessment Q21, “Environmental Management Systems”); and
  - 4.5 Use of data management systems to monitor, analyze, and benchmark energy performance of individual buildings, and such systems’ alignment with third-party standards or verification (aligned with 2018 GRESB Real Estate Assessment Q22, “Data Management Systems”).
- 5 The entity shall discuss its strategies relating to energy ratings, benchmarking, and certifications, including their:
  - 5.1 Impact on tenant demand within the entity’s target market(s)
  - 5.2 Relevance to the property types in its portfolio, such as the subsector(s), locations, and construction (new versus existing stock)
  - 5.3 Costs and benefits associated with obtaining and maintaining an energy rating, benchmark, and certification
  - 5.4 If applicable, the entity shall discuss whether it prefers certifications that are based on ongoing performance (e.g., ENERGY STAR®) or those based on performance-modeled design objectives.
- 6 The entity shall describe its approach to renewable energy generation, which may include, but not is not limited to:
  - 6.1 The relevance of on-site and off-site renewable energy generation to the portfolio and energy management strategy
  - 6.2 Technical or legal limitations on the ability to incorporate renewable energy into the portfolio and energy management strategy

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- 6.3 The energy generated from on-site and off-site renewable energy (aligned with 2018 GRESB Real Estate Assessment Q25.3)
- 7 If the entity participates in new construction or major renovations, it shall discuss whether and how it incorporates energy efficiency strategies into design and development.
- 8 The entity shall consider the 2018 GRESB Real Estate Assessment as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

## Water Management

### Topic Summary

Buildings consume significant amounts of water in their operations, through water fixtures, building equipment, appliances, and irrigation. Operating costs resulting from water consumption may represent significant costs depending on property type, tenant operations, geographical locations, and other factors. Companies in the industry can be responsible for a building's water costs, or common area water costs, though it is common to allocate all, or a portion, of these costs to occupants. In these arrangements, water management continues to play an important role through tenant demand and regulatory exposure. Tenants may assess the water efficiency of real estate assets in an effort to control operating costs, mitigate environmental impacts of operations, and, often just as importantly, develop a reputation for resource conservation. Additionally, real estate owners may be exposed to water-related regulations even when water costs are the responsibility of occupants. Overall, companies in the industry that effectively manage water efficiency of assets, even when they don't face direct exposure to water costs, may see reduced operating costs and regulatory exposure, as well as increased tenant demand, rental rates, and occupancy rates—all of which drive revenue and asset value appreciation. Long-term historic increases in the costs of water—and expectations of continued increases due to overconsumption and constrained supplies resulting from population growth and shifts, pollution, and climate change—indicate the heightened importance of water management. The ability to improve asset water efficiency is highly dependent on the property type, locational water availability, target tenant market, local building codes, the ability to measure consumption, and the level of current efficiency of existing building stock, among other factors.

### Metrics

*IF-RE-140a.1. Water withdrawal data coverage as a percentage of (1) total floor area and (2) floor area in regions with High or Extremely High Baseline Water Stress, by property subsector*

- 1 The entity shall disclose (1) the percentage of its portfolio, based on total gross floor area, with complete water withdrawal data coverage.
  - 1.1 ~~Gross floor area is defined according to the U.S. Environmental Protection Agency (EPA) ENERGY STAR® definition as “the total property square footage, measured between the principal exterior surfaces of the enclosing fixed walls of the building(s).”~~
    - 1.1.1 Leasable floor area may be used in place of gross floor area when gross floor area is not available for the relevant area of the portfolio (e.g., a building with an unknown gross floor but a known leasable floor area).
    - 1.1.2 Number of units may be used in place of floor area in the Apartments and Lodging/Resorts property subsectors.
  - 1.2 Floor area is considered to have complete water withdrawal data coverage when water withdrawal data (i.e., amounts withdrawn) is obtained by the entity in the relevant floor area during the reporting period, regardless of when such data was obtained.

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- 1.3 The percentage shall be calculated as the portfolio gross floor area with complete water withdrawal data coverage divided by the total portfolio gross floor area for which water is used.
- 1.4 The scope of water withdrawals is aligned with the 2018 GRESB Real Estate Assessment Reference Guide, and includes water that was withdrawn from all sources.
  - 1.4.1 Water sources include surface water (including water from wetlands, rivers, lakes, and oceans), groundwater, rainwater collected directly and stored by the entity, and water and wastewater obtained from municipal water supplies, water utilities, or other entities.
- 2 The entity shall disclose (2) the percentage of its portfolio, based on gross floor area, located in regions classified as High (40–80 percent) or Extremely High (>80 percent) Baseline Water Stress with complete water withdrawal data coverage.
  - 2.1 High or Extremely High Baseline Water Stress shall be determined by the World Resources Institute’s (WRI) Water Risk Atlas tool, Aqueduct.
  - 2.2 The percentage shall be calculated as the portfolio gross floor area located in regions classified as High or Extremely High Baseline Water Stress and that have complete water withdrawal data coverage, divided by the total portfolio gross floor area for which water is used in regions with High or Extremely High Baseline Water Stress.
- 3 The entity shall disclose (1) water withdrawal data coverage, and (2) the percentage of water withdrawal data coverage in regions with High or Extremely High Baseline Water Stress, separately for each property type in its portfolio where properties are classified into sectors ~~subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure~~ and include the following: ~~Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property subsector classifications).~~
- 4 The entity may describe the variations in water withdrawal data coverage, including the factors that influence it.
  - 4.1 Variations in water withdrawal data coverage may occur based on distinctions including, but not limited to:
    - 4.1.1 Base Building, Tenant Space, and Whole Building
    - 4.1.2 Water Purchased by the Landlord and water Purchased by Tenants
    - 4.1.3 Managed Assets and Indirectly Managed Assets
    - 4.1.4 Geographical markets
  - 4.2 Relevant factors that influence water withdrawal data coverage may include, but are not limited to:

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- 4.2.1 Geographical markets and the applicable enabling or inhibiting laws, regulations, and policies within such markets, including those policies of utilities;
  - 4.2.2 Geographical markets and the applicability of risks related to water scarcity (and related current or future regulations);
  - 4.2.3 Administrative or logistical barriers to obtaining water withdrawal data (e.g., lack of integration of utilities' data reporting systems);
  - 4.2.4 Tenant demands around the privacy or proprietary nature of water withdrawal data;
  - 4.2.5 Property subsectors or other more nuanced classifications of property types;
  - 4.2.6 Lease structures, including the length in time of leases, the terms applicable to the access of water withdrawal data by the entity, and the ability of the entity to influence water management performance of Tenant Spaces; and
  - 4.2.7 The entity's perception that its obtainment of Tenant Space water withdrawal data may negatively impact tenant demand.
- 5 The following terms are defined according to the 2018 GRESB Real Estate Assessment Reference Guide:
- 5.1 Base Building is defined as water "consumed in supplying central building services to lettable/leasable areas and common areas."
  - 5.2 Tenant Space is defined as "Lettable floor area (both vacant and let/leased areas) that is or can be occupied by tenants."
  - 5.3 Whole Building is defined as water "used by tenants and base building services to lettable/leasable and common spaces. This should include all [water] supplied to the building for the operation of the building and the tenant space."
  - 5.4 Purchased by Landlord is defined as water "purchased by the landlord, but consumed by the tenant. This can include [water] purchased by the landlord but used for vacant space."
  - 5.5 Purchased by Tenant is defined as water "purchased by the tenant. Typically this is data that is not within the participants' immediate control."
  - 5.6 Managed Assets and Indirectly Managed Assets are defined as follows: "This definition of Managed assets and the definition of Indirectly Managed assets are solely based on the landlord/tenant relationship. [Managed and Indirectly Managed Assets are] assets or buildings for which the landlord is determined to have 'operational control' where operational control is defined as having the ability to introduce and implement operating and/or environmental policies and measures. In case both the landlord and tenant have the authority to introduce and implement any or all of the policies mentioned above, the asset or building should be

reported as a Managed asset. Where a single tenant has the sole authority to introduce and implement operating and/or environmental policies and measures, the tenant should be assumed to have operational control, so it should be considered to be an Indirectly Managed asset.”

- 6 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-140a.2. (1) Total water withdrawn by portfolio area with data coverage and (2) percentage in regions with High or Extremely High Baseline Water Stress, by property subsector*

- 1 The entity shall disclose (1) the total amount of water, in thousands of cubic meters, that was withdrawn by the portfolio area for which there is water withdrawal data coverage.
  - 1.1 The scope of disclosure includes all property area in the entity’s portfolio for which there is water withdrawal data coverage, regardless of whether water is consumed by the Tenant Space or Base Building (including outdoor, exterior, and parking areas) and which party pays for water expenses.
  - 1.2 The scope of disclosure excludes the portion of water consumed by the portfolio area for which water withdrawal data is unavailable.
    - 1.2.1 If water withdrawal data is not available for Tenant Space or Whole Building for a property but is available for the Base Building, then the entity shall disclose this water withdrawal data.
  - 1.3 The scope of water withdrawals is aligned with the 2018 GRESB Real Estate Assessment Reference Guide, and includes water that was withdrawn from all sources.
    - 1.3.1 Water sources include surface water (including water from wetlands, rivers, lakes, and oceans), groundwater, rainwater collected directly and stored by the entity, and water and wastewater obtained from municipal water supplies, water utilities, or other entities.
- 2 The entity shall disclose (2) the percentage of water withdrawn in regions with High (40–80 percent) or Extremely High (> 80 percent) Baseline Water Stress.
  - 2.1 High or Extremely High Baseline Water Stress shall be determined by the World Resources Institute’s (WRI) Water Risk Atlas tool, Aqueduct.
  - 2.2 The percentage shall be calculated as the amount of water withdrawn (by volume) in regions with High or Extremely High Baseline Water Stress divided by the total amount of water withdrawn (by volume).
- 3 Water withdrawal data shall be disclosed by (a) Base Building and (b) Tenant Space, or (c) Whole Building, or a combination of these.

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- 4 The entity shall disclose (1) total water withdrawn, and (2) percentage in regions with High or Extremely High Baseline Water Stress, separately for each property type in its portfolio where properties are classified into ~~sectors~~ ~~subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure~~ and include the following: ~~Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/ Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property sub-sector classifications).~~
- 5 The entity may describe the variations in water withdrawn.
  - 5.1 Variations in water withdrawn may occur based on distinctions including, but not limited to:
    - 5.1.1 Base Building, Tenant Space, and Whole Building
    - 5.1.2 Water Purchased by the Landlord and water Purchased by Tenant
    - 5.1.3 Managed Assets and Indirectly Managed Assets
    - 5.1.4 Geographical markets
- 6 The following terms are defined according to the 2018 GRESB Real Estate Assessment Reference Guide:
  - 6.1 Base Building is defined as, water “consumed in supplying central building services to lettable/leasable areas and common areas.”
  - 6.2 Tenant Space is defined as, “Lettable floor area (both vacant and let/leased areas) that is or can be occupied by tenants.”
  - 6.3 Whole Building is defined as, water “used by tenants and base building services to lettable/leasable and common spaces. This should include all [water] supplied to the building for the operation of the building and the tenant space.”
  - 6.4 Purchased by Landlord is defined as, water “purchased by the landlord, but consumed by the tenant. This can include [water] purchased by the landlord but used for vacant space.”
  - 6.5 Purchased by Tenant is defined as, water “purchased by the tenant. Typically this is data that is not within the participants' immediate control.”
  - 6.6 Managed Assets and Indirectly Managed Assets are defined as follows: “This definition of Managed assets and the definition of Indirectly Managed assets are solely based on the landlord/tenant relationship. [Managed and Indirectly Managed Assets are] assets or buildings for which the landlord is determined to have 'operational control' where operational control is defined as having the ability to introduce and implement operating and/or environmental policies and measures. In case both the landlord and tenant have the authority to introduce and implement any or all of the policies mentioned above, the asset or building should be reported as a Managed asset. Where a single tenant has the sole authority

to introduce and implement operating and/or environmental policies and measures, the tenant should be assumed to have operational control, so it should be considered to be an Indirectly Managed asset.”

- 7 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-140a.3. Like-for-like percentage change in water withdrawn for portfolio area with data coverage, by property subsector*

- 1 The entity shall disclose the like-for-like percentage change in water withdrawn for the portfolio area with data coverage.
  - 1.1 The percentage shall be calculated as water withdrawn (by volume) in the reporting period divided by the water withdrawn (by volume) in the immediately prior reporting period.
  - 1.2 The scope of water withdrawn included in the calculation shall be aligned with that outlined in the 2018 GRESB Real Estate Assessment Reference Guide (“Like-for-like Comparison”) as including all water withdrawn by properties that were in the entity’s portfolio for both the full reporting period and the immediately prior full reporting period.
    - 1.2.1 Water withdrawn by properties that have been acquired, disposed of, under development, or have undergone a major renovation during the reporting period or the immediately prior reporting period shall be excluded.
    - 1.2.2 No correction for changes in the occupancy rate is needed and properties with a high variation in vacancy rates shall be included.
    - 1.2.3 If there is not water withdrawal data coverage for either (or both) the reporting period or the immediately prior reporting period, the water withdrawn by that relevant portfolio floor area is excluded from the numerator and the denominator in the calculation.
- 2 The scope, methodology, and calculations of water withdrawn shall be consistent with IF-RE-140a.2.
- 3 Like-for-like change in water withdrawn shall be disclosed by (a) Base Building and (b) Tenant Space, or (c) Whole Building, or a combination of these.
  - 3.1 If like-for-like change in water withdrawal data is not available for Tenant Space or Whole Building for a property but is available for the Base Building, then the entity shall disclose this like-for-like water withdrawal data.
- 4 The entity shall disclose like-for-like percentage change in water withdrawn separately for each property type in its portfolio where properties are classified into ~~sectors~~ ~~subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure~~ and include the following: Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other

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~~(any other property type(s) that cannot be classified to any of the previous property subsector classifications).~~

- 5 The entity may disclose the floor area, in square feet, included in the scope of like-for-like percentage change in water withdrawn if the scope significantly diverges from the floor area of water withdrawal data coverage.
- 6 "Like-for-like" data collection, analysis, and disclosure may be consistent with the approach with which the entity discloses its financial reporting data.
  - 6.1 If the entity discloses its financial reporting data using a concept and methodology similar to "Like-for-like Comparison," the entity shall describe divergences between the scope of assets and/or floor area used in its financial reporting and its like-for-like change in water withdrawn. For example, if additional assets are excluded from the like-for-like change in water withdrawn relative to like-for-like financial reporting as a result of data coverage limitations, such inconsistencies shall be described.
- 7 The entity may additionally present like-for-like percentage change in water withdrawn on a normalized basis.
  - 7.1 Normalization factors and methodologies may include, but are not limited to, the following which are presented in the 2018 GRESB Real Estate Assessment Reference Guide:
    - 7.1.1 Air conditioning and/or natural ventilation
    - 7.1.2 Building age
    - 7.1.3 Degree days
    - 7.1.4 Footfall
    - 7.1.5 Occupancy rate
    - 7.1.6 Operational hours
    - 7.1.7 Weather conditions
    - 7.1.8 Other
  - 7.2 If the entity chooses to additionally disclose normalized like-for-like percentage change in water withdrawn, the entity shall provide a brief description of the normalization factor and methodology or its use of a third-party methodology.
- 8 The entity may describe the variations in like-for-like percentage change in water withdrawn.
  - 8.1 Variations in water withdrawn may occur based on distinctions including, but not limited to:
    - 8.1.1 Base Building, Tenant Space, and Whole Building
    - 8.1.2 Water Purchased by the Landlord and water Purchased by Tenant
    - 8.1.3 Managed Assets and Indirectly Managed Assets
    - 8.1.4 Geographical markets

- 9 The following terms are defined according to the 2018 GRESB Real Estate Assessment Reference Guide:
- 9.1 Base Building is defined as water “consumed in supplying central building services to lettable/leasable areas and common areas.”
  - 9.2 Tenant Space is defined as “Lettable floor area (both vacant and let/leased areas).”
  - 9.3 Whole Building is defined as water “used by tenants and base building services to lettable/leasable and common spaces. This should include all [water] supplied to the building for the operation of the building and the tenant space.”
  - 9.4 Purchased by Landlord is defined as water “purchased by the landlord, but consumed by the tenant. This can include [water] purchased by the landlord but used for vacant space.”
  - 9.5 Purchased by Tenant is defined as water “purchased by the tenant. Typically this is data that is not within the participants’ immediate control.”
  - 9.6 Managed Assets and Indirectly Managed Assets are defined as follows: “This definition of Managed assets and the definition of Indirectly Managed assets are solely based on the landlord/tenant relationship. [Managed and Indirectly Managed Assets are] assets or buildings for which the landlord is determined to have ‘operational control’ where operational control is defined as having the ability to introduce and implement operating and/or environmental policies and measures. In case both the landlord and tenant have the authority to introduce and implement any or all of the policies mentioned above, the asset or building should be reported as a Managed asset. Where a single tenant has the sole authority to introduce and implement operating and/or environmental policies and measures, the tenant should be assumed to have operational control, so it should be considered to be an Indirectly Managed asset.”
- 10 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-140a.4. Description of water management risks and discussion of strategies and practices to mitigate those risks*

- 1 The entity shall describe its water management risks associated with water withdrawals, water consumption, and discharge of water and/or wastewater.
- 1.1 Risks associated with water withdrawals and water consumption include risks to the availability of adequate, clean water resources, including, but not limited to:
    - 1.1.1 Environmental constraints—such as operating in water-stressed regions, drought, concerns of aquatic impingement or entrainment, interannual or seasonal variability, and risks due to the impact of climate change

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- 1.1.2 Regulatory and financial constraints—such as volatility in water costs, stakeholder perceptions and concerns related to water withdrawals (e.g., those from local communities, non-governmental organizations, and regulatory agencies), direct competition with and impact from the actions of other users (e.g., commercial and municipal users), restrictions to withdrawals due to regulations, and constraints on the entity’s ability to obtain and retain water rights or permits
  - 1.2 Risks associated with the discharge of water and/or wastewater, include, but are not limited to, the ability to obtain rights or permits related to discharges, compliance with regulations related to discharges, restrictions to discharges, the ability to maintain control over the temperature of water discharges, liabilities and/or reputational risks, and increased operating costs due to regulation, stakeholder perceptions and concerns related to water discharges (e.g., those from local communities, non-governmental organizations, and regulatory agencies).
- 2 The entity may describe water management risks in the context of:
  - 2.1 How risks may vary by withdrawal source, including surface water (including water from wetlands, rivers, lakes, and oceans), groundwater, rainwater collected directly and stored by the entity, and water and wastewater obtained from municipal water supplies, water utilities, or other entities; and
  - 2.2 How risks may vary by discharge destinations, including surface water, groundwater, or wastewater utilities.
- 3 The entity may discuss the potential impacts that water management risks may have on its operations and the timeline over which such risks are expected to manifest.
  - 3.1 Impacts may include, but are not limited to, those associated with costs, revenues, liabilities, continuity of operations, and reputation.
- 4 The entity shall discuss its short-term and long-term strategies or plan to mitigate water management risks, including, but not limited to:
  - 4.1 The scope of its strategy, plans, goals and/or targets, such as how they relate to different business units, geographies, or water-consuming operational processes.
  - 4.2 Any water management goals and/or targets it has prioritized, and an analysis of performance against those goals and/or targets.
    - 4.2.1 Goals and targets may include, but are not limited to, those associated with reducing water withdrawals, reducing water consumption, reducing water discharges, reducing aquatic impingements, improving the quality of water discharges, and regulatory compliance.

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- 4.3 The activities and investments required to achieve the plans, goals and/or targets, and any risks or limiting factors that might affect achievement of the plans and/or targets.
- 4.4 Disclosure of strategies, plans, goals, and/or targets shall be limited to activities that were ongoing (active) or reached completion during the reporting period.
- 5 For water management targets, the entity shall additionally disclose:
  - 5.1 Whether the target is absolute or intensity-based, and the metric denominator if it is an intensity-based target.
  - 5.2 The timelines for the water management plans, including the start year, the target year, and the base year.
  - 5.3 The mechanism(s) for achieving the target, including:
    - 5.3.1 Efficiency efforts, such as the use of water recycling and/or closed-loop systems;
    - 5.3.2 Product innovations such as redesigning products or services to require less water;
    - 5.3.3 Process and equipment innovations, such as those that enable the reduction of aquatic impingements or entrainments;
    - 5.3.4 Use of tools and technologies (e.g., the World Wildlife Fund Water Risk Filter, The Global Water Tool, and Water Footprint Network Footprint Assessment Tool) to analyze water use, risk, and opportunities; and
    - 5.3.5 Collaborations or programs in place with the community or other organizations.
  - 5.4 The percentage reduction or improvement from the base year, where the base year is the first year against which water management targets are evaluated toward the achievement of the target.
- 6 The entity shall discuss whether its water management practices result in any additional lifecycle impacts or tradeoffs in its organization, including tradeoffs in land use, energy production, and greenhouse gas (GHG) emissions, and why the entity chose these practices despite lifecycle tradeoffs.

## Management of Tenant Sustainability Impacts

### Topic Summary

Real estate assets generate significant sustainability impacts, including resource consumption—namely energy and water—waste generation, and impacts on occupant health through indoor environmental quality. While companies in the industry own real estate assets, it is the tenant operations of such assets that is a dominant driver of sustainability impacts produced by the built environment. Tenants may design and construct leased spaces according to their operating needs. In turn, their operations consume significant amounts of energy and water, generate waste, and impact the health of those living, working, shopping, or visiting the properties. While these sustainability impacts are often generated by tenant operations and activities, real estate owners have an important role in influencing tenant sustainability impacts. The manner in which companies in the industry structure their agreements, contracts, and relationships with tenants is instrumental in effectively managing the sustainability impacts of their tenants, and ultimately, the impacts of their assets. Managing tenant sustainability impacts may include mitigating the problem of split incentives by aligning both parties' financial interests with sustainability outcomes, establishing systematic measurement and communication of resource consumption data, creating shared performance goals, and mandating minimum sustainability performance or design requirements, among other strategies. Effective management of tenant sustainability impacts, particularly related to energy, water, and indoor environmental quality, may drive asset value appreciation, increase tenant demand and satisfaction, decrease direct operating costs, and/or decrease risks related to building codes and regulations.

### Metrics

*IF-RE-410a.1. (1) Percentage of new leases that contain a cost recovery clause for resource efficiency-related capital improvements and (2) associated leased floor area, by property subsector*

- 1 The entity shall disclose (1) the percentage of new leases that contain a cost recovery clause for resource efficiency-related capital improvements.
  - 1.1 A cost recovery clause for resource efficiency-related capital improvements is defined as a clause in a lease agreement that allows the entity to invest in capital improvements to the energy efficiency and/or water efficiency of properties, while recovering all or a proportion of associated expenditures from tenants, regardless of the mechanism of cost recovery. This definition is generally aligned with:
    - 1.1.1 The Green Lease Leaders application: "Tenant cost recovery clause that can be used for energy efficiency-related capital improvements. This typically means that the list of operating expenses is expanded to include capital expenses intended to save energy, with the annual pass-through amount most often determined either by an amortization schedule or projected savings."

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- 1.1.2 The 2018 GRESB Real Estate Assessment Reference Guide: “Cost recovery clause for energy efficiency-related capital improvements: Allows the landlord to implement energy-efficiency measures during the lease and to recover a proportion or all of those costs from the tenant.”
  - 1.2 The percentage shall be calculated as the portfolio newly leased floor area associated with leases that contain a cost recovery clause for resource efficiency-related capital improvements divided by total portfolio newly leased floor area.
    - 1.2.1 Number of units may be used in place of floor area in the Apartments and Lodging/Resorts property subsectors.
- 2 The entity shall disclose (2) the leased floor area, in square feet, associated with new leases that contain a cost recovery clause for resource efficiency-related capital improvements.
- 3 The scope of disclosure includes all of the properties in the entity’s portfolio that were newly leased during any part of the reporting period, and for which the associated lease was executed between the entity and the tenant.
  - 3.1 If the entity executed lease amendments or letter agreements during the reporting period that contain a cost recovery clause for resource efficiency-related capital improvements, the associated leased floor area shall be included within the scope of disclosure.
- 4 The entity shall disclose (1) the percentage of new leases that contain a cost recovery clause for resource efficiency-related capital improvements, and (2) the associated leased floor area, separately for each property type in its portfolio where properties are classified into ~~sectors-subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure and include the following: Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property subsector classifications).~~
- 5 The entity may describe whether its standard lease contracts include a cost recovery clause for resource efficiency-related capital improvements (aligned with 2018 GRESB Real Estate Assessment Q39).
- 6 The entity may additionally disclose the percentage of all leases (as opposed to new leases only) in effect as of the last day of the reporting period that contain a cost recovery clause for resource efficiency-related capital improvements, calculated in a manner consistent with the above calculation.
- 7 The entity may provide a brief description of instances when cost recovery clauses for resource efficiency-related capital improvements were exercised, including the extent throughout the portfolio and the financial implications.

- 8 The entity may additionally disclose the amount of actual capital expenditures associated with resource efficiency-related capital improvements that were recovered from tenants during the reporting period through the use of cost recovery clauses in leases.
- 9 The entity shall consider the 2018 GRESB Real Estate Assessment Reference Guide as a normative reference, thus any updates made year-on-year shall be considered updates to this guidance.

*IF-RE-410a.2. Percentage of tenants that are separately metered or submetered for (1) grid electricity consumption and (2) water withdrawals, by property subsector*

- 1 The entity shall disclose the percentage of tenants that are separately metered or submetered for (1) the grid electricity usage resulting from their exclusive electricity consumption.
  - 1.1 The percentage shall be calculated as the leasable floor area leased to tenants that are separately metered or submetered for the electricity consumption resulting from their exclusive consumption divided by the total portfolio leasable floor area.
- 2 The entity shall disclose the percentage of tenants that are separately metered or submetered for (2) the water usage resulting from their exclusive water withdrawals.
  - 2.1 The percentage shall be calculated as the leasable floor area leased to tenants that are separately metered or submetered for the water usage resulting from their exclusive withdrawals divided by the total portfolio leasable floor area.
- 3 Number of units may be used in place of floor area in the Apartments and Lodging/Resorts property subsectors.
- 4 The entity shall disclose the percentage of tenants that are separately metered or submetered for their exclusive (1) grid electricity consumption, and (2) water withdrawals, separately for each property type in its portfolio where properties are classified into ~~sectors-subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure~~ and include the following: Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous ~~property subsector classifications~~).

*IF-RE-410a.3. Discussion of approach to measuring, incentivizing, and improving sustainability impacts of tenants*

- 1 The entity shall discuss its strategy and process for integrating considerations of sustainability into its leases and tenant relationships (e.g., tenant communication, voluntary initiatives, and selection of a third-party property manager, if applicable) in order to measure, incentivize, and improve impacts.

- 2 For the purposes of this disclosure, the scope of sustainability topics includes the following: energy management, water management, and the impacts of properties on tenant health, including indoor environmental quality.
- 3 Relevant strategies to discuss include, but are not limited to:
  - 3.1 The following components, which are generally aligned with the 2018 GRESB Real Estate Assessment Q39.1:
    - 3.1.1 Whether the entity has agreements with its tenants to mutually share energy consumption and/or water withdrawal data
    - 3.1.2 Whether the entity has shared energy consumption and water withdrawal targets
    - 3.1.3 Whether the entity establishes requirements that any tenant works should meet standards provided by the entity related to energy consumption, water efficiency, and indoor environmental quality
    - 3.1.4 Whether the entity establishes requirements that its tenants provide accurate information required for mandatory energy rating schemes
    - 3.1.5 Whether the entity has the ability to prioritize sustainability requirements over minimizing the costs of improvements and adjustments
  - 3.2 Whether the entity prioritizes separately metering or submetering tenant energy consumption and water withdrawals, and if so, if the entity also prioritizes its own ability to measure the energy consumption and water withdrawals by its tenants
  - 3.3 Whether the entity prioritizes lease structures that require tenants to pay grid electricity and water utility expenses that are directly based on their actual and exclusive consumption of such resources
- 4 The entity shall include a discussion of its support, participation, and usage of third-party initiatives concerning green leases.
  - 4.1 Third-party initiatives concerning green leases include, but are not limited to, green lease templates, principles, requirements, strategies, and educational programs provided by organizations.
  - 4.2 Examples of third-party initiatives concerning green leases include, but are not limited to:
    - 4.2.1 Building Owners and Managers Association International, *Commercial Lease: Guide to Sustainable and Energy Efficient Leasing for High-Performance Buildings*
    - 4.2.2 California Sustainability Alliance, *Green Leases Toolkit*
    - 4.2.3 CMS, *Green Lease Clauses in Europe - A practical approach*
    - 4.2.4 Corporate Realty, Design & Management Institute, *Model Green Lease*

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- 4.2.5 Green Lease Leaders and Green Lease Library (programs jointly operated by the Institute for Market Transformation and the U.S. Department of Energy's Better Building Alliance)
- 4.2.6 Natural Resources Defense Council, *Energy Efficiency Lease Guidance*
- 4.2.7 Real Property Association of Canada, *Green Office Leases*
- 4.2.8 U.S. General Services Administration, *Green Lease Policies and Procedures*
- 4.2.9 U.S. Green Building Council, *Green Office Guide: Integrating LEED into Your Leasing Process* and *Greening Your Lease*
- 4.3 The entity shall describe whether third-party initiatives concerning green leases are integrated into its standard lease contracts (generally aligned with GRESB Real Estate Assessment Q39.1).
- 5 The entity shall describe how the lease types it uses (e.g., triple-net or full-service) and their provisions (e.g., cost recovery clauses, tenant fit out guides, utility information sharing, mandatory participation in energy ratings) may influence or incentivize tenant behavior related to sustainability impacts.
  - 5.1 The entity may provide a discussion of how such lease structures may impact property values—including tenant demand and the associated rental rates and occupancy rates—over the long term.

## Climate Change Adaptation

### Topic Summary

Climate change affects companies in the industry via frequent or high-impact extreme weather events and changing climate patterns. The manner in which a company's business model is structured to incorporate ongoing assessments of climate change risks, and the adaptation to such risks, is likely to be increasingly connected to company value over the long term. More specifically, investment strategies with assets located on floodplains and in coastal regions that are exposed to inclement weather may have increased needs around risk mitigation and business model adaptation to climate change over the long term. These strategies are especially important in light of the long-term challenges associated with flood insurance rates, the financial stability of government-subsidized flood insurance programs, and financing stipulations or other creditor concerns. Besides insurance, other risk mitigation measures include improvements to physical asset resiliency and lease terms that transfer risk to tenants, although these measures can create their own costs and risks for real estate companies. To ensure long-term growth and protection of shareholder value, companies need to implement climate change adaptation strategies that are comprehensive, account for trade-offs between various risk mitigation strategies, and integrate consideration of all projected costs and benefits over the long term.

### Metrics

#### *IF-RE-450a.1. Area of properties located in 100-year flood zones, by property subsector*

- 1 The entity shall disclose the total leasable floor area, in square feet, of properties in the entity's portfolio that are located in 100-year flood zones.
  - 1.1 100-year flood zones are defined as land areas subject to a one-percent or greater chance of flooding in any given year. Such areas may also be referred to as being subject to the one-percent annual chance flood, the one-percent annual exceedance probability flood, or the 100-year flood.
    - 1.1.1 Examples of 100-year flood zones may include, but are not limited to, coastal flood plains, flood plains along major rivers, and areas subject to flooding from ponding in low-lying areas.
  - 1.2 ~~For properties located in the U.S., 100-year flood zones shall include those land areas designated by the U.S. Federal Emergency Management Agency (FEMA) as special flood hazard areas (SFHA).~~
    - 1.2.1 ~~SFHAs are defined as land area in the flood plain subject to a one-percent or greater chance of flooding in any given year. The area may be designated in the applicable flood insurance rate map, as per the U.S. National Flood Insurance Program, as Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V. This definition is derived from U.S. 44 CFR 59.1.~~
  - 1.2.3 Number of units may be used in place of floor area in the Apartments and Lodging/Resorts property subsectors when floor area is not available.

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- 2 The scope of disclosure shall include all of the entity's properties that are located in 100-year flood zones, regardless of the country of their location.
- 3 The entity shall disclose the total leasable floor area of properties that are located in 100-year flood zones separately for each property type in its portfolio where properties are classified into ~~sectors~~~~subsectors~~ that are aligned with the FTSE EPRA Nareit Global Real Estate Index property sector classification system ~~Nareit Classification Structure~~ and include the following: Health Care, Self Storage, Industrial, Office, Apartments, Manufactured Homes, Single Family Homes, Shopping Centers, Regional Malls, Free Standing, Lodging/Resorts, Specialty, Data Centers, and Other (any other property type(s) that cannot be classified to any of the previous property-subsector classifications).
- 4 The entity may separately provide the planned leasable floor area of properties under development or construction that are located in 100-year flood zones.
- 5 The entity may disclose its risk perception and potential impacts resulting from reclassification of 100-year flood zones (e.g., FEMA SFHA reclassifications), including the risk of expansion of such areas into real estate property owned by the entity.

*IF-RE-450a.2. Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks*

- 1 The entity shall describe the significant risks and opportunities that are presented to its business by climate change scenarios.
  - 1.1 The entity shall identify each significant risk and opportunity.
    - 1.1.1 Risks and opportunities may include, but are not limited to, availability of water, extreme weather events, evolving regulation and legislation, impacts on regional infrastructure, impacts on tenant demand, and impacts on local economies and populations, regardless of the impact of physical risks presented to the entity's portfolio.
  - 1.2 The entity shall discuss:
    - 1.2.1 The timeline over which such risks and opportunities are expected to manifest;
    - 1.2.2 How such climate change scenarios may manifest (e.g., effects directly on the entity or effects on the entity's tenants);
    - 1.2.3 How risks and opportunities may differ by property subsector; and
    - 1.2.4 How risks and opportunities may differ by region.
  - 1.3 The entity shall disclose the climate change scenarios used to determine the risks and opportunities presented by climate change, where scenarios may include, but are not limited to, the New Policies Scenario, Sustainable Development Scenario, and Current Policies Scenario, as established by the International Energy Agency in its annual World Energy Outlook.

- 2 The entity shall describe efforts to assess and monitor the impacts of climate change and the related strategies to alleviate and/or adapt to any risks and/or utilize any opportunities.
  - 2.1 Alleviation strategies may include, but are not limited to, use of property insurance, flood insurance, lease structures, and lease durations.
  - 2.2 Adaptation strategies may include, but are not limited to, investments in physical asset resiliency and contingency plans.
  - 2.3 The entity shall discuss:
    - 2.3.1 How strategies may differ by property subsector; and
    - 2.3.2 How strategies may differ by region.
- 3 The discussion shall differentiate between physical asset risk and financial risk in order to focus on the risks, opportunities, and alleviation and/or adaptation strategies that are most likely to impact financial value.