# Building Energy Data Exchange Specification (BEDES) Compliant Mapping

| | |
|---|---|
| **Date** | 3/16/2016 |
| **Implementation** | GRESB |
| **Implementation Version** | |
| **BEDES Version** | V1.3 |

For more information about BEDES, please visit [https://bedes.lbl.gov/bedes-online](https://bedes.lbl.gov/bedes-online)

| GRESB Data Category | GRESB Data Field | GRESB Enumerations | GRESB Definition | GRESB Units | BEDES Term | BEDES Mapping | Bedes definition | BEDES Unit | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Building Characteristics | | | | | | | | | |
| | Property Type | | | | Occupancy Classification | | Classification main utilization of the premises by building occupants. Can be used to describe a complex, building, or spaces within the building. | n/a | |
| | | Retail, High Street | Retail buildings located on the high street in a particular area, usually terraced buildings located in the city centre or other high-traffic pedestrian zones. | | Retail | Occupancy Classification = "Retail" | Premises include retailing merchandise such as furniture and home furnishings stores, electronics and appliance stores, food and beverage stores, health and personal care stores, clothing and clothing accessories stores, sporting goods, hobby, book and music stores, and office supplies, stationery and gift stores. Excludes malls. | n/a | |
| | | Retail, Shopping Center | Enclosed centres for retail purposes. Examples can include, but are not limited to: regional malls and shopping malls. | | Retail mall | Occupancy Classification = "Retail-Mall" | Premises located in one or more buildings comprised of small to large retailers, restaurants, and entertainment establishments located indoor or outdoor. | n/a | |
| | | Retail, Warehouse | | | Retail warehouse | | Premises include retailing merchandise such as furniture and home furnishings stores, electronics and appliance stores, food and beverage stores, health and personal care stores, clothing and clothing accessories stores, sporting goods, hobby, book and music stores, and office supplies, stationery and gift stores. Excludes malls. | n/a | |
| | | | Refers to buildings in an unenclosed retail space, otherwise known as a strip centre or strip mall, whereby buildings are usually stand-alone and situated side-by-side with their entrance facing a main street or carpark. | | | Occupancy Classification = "Retail" | Premises with warehousing and storage facilities excluding refrigerated spaces such as bulk farm products. | n/a | |
| | | Office | Examples can include, but are not limited to: freestanding office, office terrace, unattributed office buildings, and office parks. | | Office | Occupancy Classification = "Warehouse"  Occupancy Classification = "Office" | Administrative and professional office premises that manage other establishments of the company. | n/a | |
| | | Industrial, Business Park | An industrial business park is an area zoned for the purpose of industrial development, where (light-weight) industrial buildings are grouped together with offices. Examples can include, but are not limited to: industrial estate, trading estate, and enterprise zone. | | Industrial | Occupancy Classification = "Industrial" | Industrial premises including food processing, manufacturing, high tech, metal processing, and pulp and paper firms. Premises may have fixed pieces of equipment, buildings or complexes used to produce goods as part of any process or system such as voltage optimization, water and wastewater systems, transport processing or other activity involving farm products off-farm. | n/a | |
| | | Industrial, Distr. Wareho | Industrial buildings used for the purpose of storing, processing, and distribution of goods to wholesalers, retailers, and/or consumers. | | Industrial warehouse | Occupancy Classification = "Industrial"  Occupancy Classification = "Warehouse" | Industrial designs are meant to accommodate the making of a profit by providing a service or product to the commercial sector.  Premises with warehousing and storage facilities excluding refrigerated spaces such as bulk farm products. | n/a | |
| | | Industrial, Manufacturing | Industrial buildings used for the purpose of manufacturing. Otherwise known as a factory or manufacturing plant. | | Industrial manufacturing plant | Occupancy Classification = "Industrial manufacturing plant" | A premises with a manufacturing production facility of merchandise using labor, machines, chemical and biological processing, or formulation that transforms raw materials into finished goods at large scales. | n/a | |
| | | Residential, Multi-family | Refers to multiple residential dwelling spaces contained within one building, otherwise known as a multi-dwelling unit. This includes low-, mid- and high-rise apartment blocks. | | Residential | Occupancy Classification = "Residential" | Residential designs are meant to accommodate the needs of people residing on the premises. | n/a | |
| | | Residential, Family Hom | Includes both single-family homes and multi- dwelling units not including apartment blocks. A single-family home is a separate, free-standing residential building. A multi-dwelling family home includes those such as two-flats, duplex, semi-detached, and townhouses. Synonyms include: Single-family home, single-detached dwelling, detached house, single-family residence, separate house, free-standing house, townhouse, duplex, condo, semi-detached, villa. | | Residential | Occupancy Classification = "Residential" | Residential designs are meant to accommodate the needs of people residing on the premises. | n/a | |
| | | Residential, Senior Hom | Residential buildings used for the purpose of housing seniors, otherwise known as senior assisted living homes, retirement homes/apartments, retirement villages, old-age homes. | | Residential | Occupancy Classification = "Residential" | Residential designs are meant to accommodate the needs of people residing on the premises. | n/a | |
| | | Residential, Student Hou | Residential buildings used for the purpose of housing students, otherwise known as student apartments, student houses, student residence, student quarters, and student accommodation. Hotel: Examples can include, but are not limited to: hotels, motels, youth hostels, lodging, and resorts. | | Residential | Occupancy Classification = "Residential" | Residential designs are meant to accommodate the needs of people residing on the premises. | n/a | |
| | | Hotel | Examples can include, but are not limited to: hotels, motels, youth hostels, lodging, and resorts. | | Hotel | Occupancy Classification = "Lodging with extended amenities" | Lodging premises including hotels and resort. | n/a | |
| | | Healthcare | Buildings used for the purpose of primary healthcare. Examples can include, but are not limited to: hospitals, clinics, physical therapy centers and mental health centers. | | Health care | Occupancy Classification = "Health care" | Premises that host heath care services for the maintenance and improvement of physical and mental health. | n/a | |
| | | Medical Office | Examples can include, but are not limited to: offices specifically used for the purpose of medical administration, secondary research or other purposes, exclusive of the property types specified for Healthcare. | | Health care | Occupancy Classification = "Health care" | Premises that host heath care services for the maintenance and improvement of physical and mental health. | n/a | |
| | | Leisure | Indoor center used for the purpose of leisure and recreation. Examples can include, but are not limited to: exercise facilities, indoor sports courts, studios, and artificial pitches, swimming centers, and saunas/steam rooms. | | Recreation | Occupancy Classification = "Recreation" | Recreation premises including roller skating rinks, climbing gym, bowling alleys, basketball courts, ping pong, racquetball, handball, and batting cages. | n/a | |
| | | Data Centers | Building used for the purpose of data storage, processing, and/or distribution. Examples can include, but are not limited to: telecommunications centers and data storage centers. | | Data center | Occupancy Classification = "Data center" | A data center is a place that houses computer systems and backup power supply, data communication connections, environmental controls, and security devices such as telecommunications and storage systems. | n/a | |
| | | Self-storage | Indoor building or warehouse used for the purpose of self- storage for individuals and/or organizations, otherwise known as self-service storage. | | Warehouse self storage | Occupancy Classification = "Warehouse self storage" | Self-storage providing secure premises where clients can store and retrieve their goods. | n/a | |
| | | Parking (indoors) | Enclosed, indoor vehicle parking space, usually made up of numerous levels of which vehicles can be parked. Otherwise known as multi-story car park, parking building, parking garage, stacked car parking, and indoor parking. | | Parking | Occupancy Classification = "Parking" | Enclosed, partially enclosed, or open parking premises including attached garage, underground parking, uncovered driveways or lots, and covered carports. | n/a | |
| | | Other | State the property type. Other answers must be outside the options listed in the question as well as the pre-defined options within other. They can include kindergarten, community halls, service stations, etc. Only use this option if your investments do not fit in to any of the options given. | | Other | Occupancy Classification = "Other" | | n/a | |
| | Asset Name | | | | Premises Name | Contact Label = "Premises"  Contact Name = [value] | Unique identifier for a given premises. A premises can be any part of a building or land, such as a store in a mall, or a whole campus. | | |
| | Location Country | | | | Country Name | Country Name = [value] | The name of the country in which the address is located. | n/a | |

| GRESB Data Category | GRESB Data Field | GRESB Enumerations | GRESB Definition | GRESB Units | BEDES Term | BEDES Mapping | Bedes definition | BEDES Unit | Notes |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | n/a | GRESB: BEDES requires separate portions of an Address rather than one field containing the entire address. So the GRESB value would have to be parsed. |
| | Address | | | | Address Line 1 | Address Line 1 = [value] | This address represents a complete street address, including street number, street name, prefixes, suffixes, modifiers, and unit number. | | |
| | | | | | City | City = [value] | The city for the Address associated with this contact. | n/a | |
| | | | | | State | State = [value] | The state for the address associated with this contact. | n/a | |
| | | | | | ZIP Code | ZIP Code = [value] | A system of 5-digit codes that identifies the individual Post Office or metropolitan area delivery station associated with an address. | n/a | |
| | Area | | The size of a floor surface. Definitions of floor areas vary by location, building type and landlord-tenant arrangement. Examples include: common parts area, lettable/leasable area, internal area, usable area, occupied area, conditioned/treated area. For reporting to GRESB, you should be consistent in the floor area calculation that you use (GRI, CRESS 4). | | Premises Area | Contact Label = "Premises" Area = [value] Ownership Status = "Owned" Interval Duration = [value] | An area is a section within a building that serves a specific activity and could stand alone, such as a restaurant inside a hotel. An area could also be section of a building that has distinctly different equipment densities, occupancies, energy-use patterns, operating characteristics, or HVAC configurations. | ft2 | GRESB: Note that BEDES has qualifiers that would help be more precise here such as Gross vs. Net. Also note that BEDES Area values are in units of ft2. |
| | Period of ownership in months | | | | Owned Interval Duration | Unit Of Measure = "Month" | Length of interval reading | Month | |
| **Asset Management** | | | | | | | | | |
| | Managed Assets | | 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. | | Landlord And Tenant Managed | Operational Control Actor = "Landlord" Operational Control Actor = "Tenant" Operational Mode = "Custom" Custom Operational Mode = "Managed" | N/A | n/a | |
| | Indirectly Managed Assets | | The definition is solely based on the landlord/tenant relationship and is relevant to asset or building-level data collection and aggregation. For Indirectly Managed assets or buildings, the single tenant 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 and measures mentioned above, the asset or building should be reported as a Managed asset or building. GRESB recognizes that in the case of Indirectly Managed assets or buildings, increasing coverage of consumption data collected is typically a long-term rather than a short-term goal. | | Tenant Managed | Operational Control Actor = "Tenant" Operational Mode = "Custom" Custom Operational Mode = "Managed" | N/A | n/a | |
| **Reporting Building Area Categorization** | | | | | | | | | |
| | **Base Building** | | | | | | | | |
| | Common Areas | | Areas shared with other building occupants, including entrance areas, corridors, lifts, staircases, waste storage stores, communal kitchen, breakout facilities, etc. | | Common area | Occupancy Classification = "Common area" | A common area is an area for use by more than one person, and often exist in apartments, gated communities, condominiums, cooperatives and shopping malls. | n/a | |
| | Shared Services/Central Plant | | Shared Services/Central Plant is a central source providing energy for the whole building, including common areas and shared services for tenants. If consumption cannot be separated between common areas and shared services, provide both here. | | Central Plant | Occupancy Classification = "Central plant" | A central plant is the energy center of a campus, producing and distributing primary utilities from the central location. | n/a | |
| | Outdoor/Exterior areas/Parking | | | | Exterior | Location = "Exterior" | The outdoor space that is exposed to outside conditions. This can also be applied to Opaque Surfaces to describe the fact that one side of the surface is next to outside conditions. | | |
| | **Tenant Space** | | Lettable floor area (both vacant and let/leased). | | | | | | |
| | Purchased by Landlord | | | | N/A | N/A | N/A | n/a | The total consumption is purchased by the landlord, but consumed by the tenant |
| | Purchased by Tenant | | | | N/A | N/A | N/A | n/a | |
| | **Whole Building** | | 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. For reporting to GRESB, use this section to report consumption data in the case no separate data for Common areas and Tenant space is available. | | | | | | |
| | Combined consumption common areas + tenant space | | | | Total consumption for the whole building | Energy Metered Premises = "Total consumption for the whole building" | N/A | n/a | |
| **Reporting Floor Area Categorization** | | | | | | | | | |
| | Data Coverage | | The part of the portfolio for which data is available, per area of the building, and per fuel type. The floor area reported as Maximum Coverage should reflect the total floor area of the asset of that particular area of the building. | m2/sq.ft. | Data Coverage Percentage of Total Area | Floor Area Qualifier = "Custom" Custom Floor Area Qualifier = "Data Coverage" Percentage of Total Area = [value] | N/A | % | Transformation: Data Coverage Percentage of Total Area = (GRESB Data Coverage / GRESB Maximum Coverage) * 100 |
| | Maximum Coverage | | For reporting to GRESB, participants can choose either to report in gross floor area or in net floor area. Be consistent in the floor area calculation that you use. | m2/sq.ft. | Maximum Coverage Area | Floor Area Qualifier = "Custom" Custom Floor Area Qualifier = "Maximum Coverage" Area = [value] | N/A | ft2 | GRESB: BEDES unit of measurement for Area is ft2. GRESB should specify what unit they use so that it can be accurately converted if necessary. |
| | Maximum Coverage Type | | | | Maximum Coverage Floor Area Qualifier | Floor Area Qualifier = "Custom" Custom Floor Area Qualifier = "Maximum Coverage" Floor Area Qualifier = [value] | N/A | n/a | |

| GRESB Data Category | GRESB Data Field | GRESB Enumerations | GRESB Definition | GRESB Units | BEDES Term | BEDES Mapping | Bedes definition | BEDES Unit | Notes |
|---|---|---|---|---|---|---|---|---|---|
| | Average vacancy rate | | | | Annual Average Vacancy Capacity Percentage | Interval Frequency = "Annual" Interval Measure = "Average" Sensor Type = "Vacancy" Occupant Quantity Type = "Capacity percentage" | Capacity percentage: A percentage reflecting the occupancy level of the property. The occupancy is measured as the percentage of the property that is occupied and operational. For example, the average annual occupancy should be based on the number of rooms filled in a hotel. Occupancy is transformed to Vacancy for GRESB. | % | Transformation: Annual Average Vacancy Capacity Percentage = 100 - GRESB Average vacancy rate |
| **Energy** | | | | | | | | | |
| | Fuels | | | kWh | Energy Resource Value | Resource = "Energy" Resource Value = [value] Unit Of Measure = "kWh" | The amount of resource consumed, generated, or exported from the premises, where Resource = "Energy" | kWh | |
| | District Heating & Cooling | | | kWh | District Heating And Cooling Resource Value | Resource = "Custom" Custom Resource = "District Heating And Cooling" Resource Value = [value] Unit Of Measure = "kWh" | The amount of resource consumed, generated, or exported from the premises, whereCustom Resource = "District Heating And Cooling" | kWh | |
| | Electricity | | | kWh | Electricity Resource Value | Resource = "Electricity" Resource Value = [value] Unit Of Measure = "kWh" | The amount of resource consumed, generated, or exported from the premises, where Resource = "Electricity" | kWh | |
| **Greenhouse Gas Emissions** | | | | | | | | | |
| | Scope 1 | | GHG emission from greenhouse gas sources (greenhouse gas source physical unit or process that releases a GHG into the atmosphere) owned or controlled by the organization. Direct GHG emissions: GRI Indicator G4-EN15. | tonnes | Direct Emissions Value | Emission Boundary = "Direct" Emissions Value = [value] | Emissions that result in gases that trap heat in the atmosphere. Direct = This is used in association with GHG emissions, associated with on-site fuel combustion (e.g., combustion of natural gas or fuel oil). | kgCO2e | |
| | Scope 2 | | Energy indirect greenhouse gas emission GHG emission from the generation of imported electricity, heat or steam consumed by the organization. Energy indirect GHG emissions: GRI Indicator G4-EN16. | tonnes | Indirect Emissions Value | Emission Boundary = "Indirect" Emissions Value = [value] | Emissions that result in gases that trap heat in the atmosphere. Indirect = This is used in association with GHG emissions, associated with purchases of fuel, such as from a utility plant. | kgCO2e | |
| | Scope 3 | | Other indirect greenhouse gas emission. GHG emission, other than energy indirect GHG emissions, which is a consequence of an organization's activities, but arises from greenhouse gas sources that are owned or controlled by other organizations. Other indirect GHG emissions: GRI Indicator G4-EN17. | tonnes | Other Indirect Emissions Value | Emission Boundary = "Other" Emission Boundary = "Indirect" Emissions Value = [value] | Emissions that result in gases that trap heat in the atmosphere. Other Indirect = No BEDES definition. | kgCO2e | |
| | GHG offsets purchased | | Greenhouse gas offsets can be purchased to compensate for the GHG emissions of the portfolio. | tonnes | NO MAPPING | | N/A | | |
| **Water** | | | | | | | | | |
| | Water | | | m3 | Water Resource Value | Resource = "Water" Resource Value = [value] | | m3 | |
| **Waste** | | | | | | | | | |
| | Total weight of hazardous waste in metric tonnes | | | tonnes | NO MAPPING | | | | |
| | Total weight of non-hazardous waste in metric tonnes | | | tonnes | NO MAPPING | | | | |
| | % asset covered (based on floor area) | | | % | NO MAPPING | | | | |
| | Recycling Proportion of waste by disposal route (% of total waste) | | | % | NO MAPPING | | | | |
| | Incineration Proportion of waste by disposal route (% of total waste) | | | % | NO MAPPING | | | | |
| | Landfill Proportion of waste by disposal route (% of total waste) | | | % | NO MAPPING | | | | |
| **Building Certifications** | | | | | | | | | |
| | Green building certificate | | | | Assessment Program | Assessment Program = [value] | Program which issues energy labels, ratings, or sustainability certifications. | n/a | GRESB: See BEDES list of "Assessment Program" for matching intended values |
| | Scheme name & Sub-scheme name | | | | Assessment Recognition, Assessment level | Assessment Recognition = [value], Assessment Level = [value] | Different Rating Programs within a Certification, if applicable. Value from certification programs that produce a descriptive (rather than numeric) rating, such as LEED or NGBS. | n/a | GRESB: See BEDES list of "Assessment Recognition" for matching intended values |
| | Score | | | | Assessment Value | Assessment Value = [value] | The property value as of the last assessment made by the taxing authority. | n/a | GRESB: See BEDES "Assessment Value" and/or "Assessment Level" for matching intended Score |
| **Energy ratings** | | | | | | | | | |
| | Energy Rating Name | | | | Assessment Program | Assessment Program = [value] | Program which issues energy labels, ratings, or sustainability certifications. | n/a | GRESB: See BEDES list of "Assessment Program" for matching intended values |
| | Scheme name & Sub-scheme name | | | | Assessment Recognition, Assessment Level | Assessment Recognition = [value], Assessment Level = [value] | Assessment Recognition: Different Rating Programs within a Certification, if applicable. Assessment Level: Value from certification programs that produce a descriptive (rather than numeric) rating, such as LEED or NGBS. | n/a | GRESB: See BEDES list of "Assessment Recognition" for matching intended values |
| | Score | | | | Assessment Value | Assessment Value = [value] | Value from certifications that produce a numeric metric, such as Energy Star Score, Home Energy Rating System (HERS) Index Score, Home Energy Score | n/a | GRESB: See BEDES "Assessment Value" and/or "Assessment Level" for matching intended Score |