Priority Data Fields for the Building Performance Database

(Updated 2014-12)

Below is list of data fields ranked as the the priority fields in data collection for the purposes of BPD. These field names use the the Building Energy Data Exchange Specification 1.0 terms in order to clearly communicate the content of the fields and to facilitate easier data transfer. These fields have been determined to provide enough information to compare building energy performance. Mandatory fields are highlighted in green. All records require at a minimum these mandatory fields in order to be included in the database.

For the complete list of field names and definitions accepted by the BPD please contact the LBNL BPD team or refer to the BEDES 1.0 dictionary.

Building Information: These are fields used to characterize each building/facility/premises in general terms such as location, vintage, and climate zone, etc.

BEDES Term	Definition
Identifier Value	Unique alphanumeric identifier for individual premises.
Premises Level	Level category of the premises, pertaining to a unique record, with respect to other premises in the portfolio. Refer to BEDES 1.0 for enumerated values.
City	The city where the premises is located.
State	The state where the premises is located.
Postal Code	Five-digit postal code of the premises.
Climate Zone	The climate zone designation of the premises as defined by the Climate Zone Type. Refer to BEDES 1.0 for enumerated values.
Occupancy Classification	Main use of the premises by building occupants. Refer to BEDES 1.0 for enumerated values.
Date Completed	Date in which premises construction was completed.
Gross Floor Area Value	The sum of the floor areas of all the spaces within the premises. Gross Floor Area is required for calculating the building performance metrics.
Occupant Quantity Type	Type of quantitative measure for capturing occupant information about premises. Refer to BEDES 1.0 for enumerated values.
Occupant Quantity	The value associated with the occupant quantity type.

Energy Information: These are fields that characterize the energy consumption of the building/facility/premises. These fields are used to calculate the performance metrics in the database.

BEDES Term	Definition
Complete Resource	Indicates the level a resource is used at a premise. Complete = Record includes only the data consumed at a premises. Partial = Record includes the data consumed at a premise and includes other consumption that's attributable to another premises
Complete Total Resource	Indicates the level of availability of total resource consumption data for a premises. Complete = Indicates if all the resources types used at a premise are available Partial = Indicates if some of the resource types used at a premise are unavailable e.g., natural gas is missing
End Use	End use that the resource primarily applies to. This can be applied at the premises or individual system or equipment level. Refer to BEDES 1.0 for enumerated values.
Resource	Type of resource that is consumed or generated in the premises. Refer to BEDES 1.0 for enumerated values.
Resource Units	Units for resource consumption or generation. Refer to BEDES 1.0 for enumerated values.
Interval Frequency	Indicates frequency of data that is available for a given variable. This interval frequency can be applied to resource or other time series data like weather. Refer to BEDES 1.0 for enumerated values.
Energy Use	The annual amount of all the energy the premises consumes.
Energy Use Intensity (EUI)	The Energy Use divided by the premises gross floor area.This term can be associated with one or more Resource Qualifiers in the BEDES 1.0 constrained list.
Start Time Stamp	The timestamp that marks the beginning of the time step for a time series data set. Format is CCYY-MM-DD hh:mm:ss in 24 hour clock time.
End Time Stamp	The timestamp that marks the end of the time step for a time series data set. Format is CCYY-MM-DD hh:mm:ss in 24 hour clock time.
Interval Reading	The numerical value of the reading. This has to be paired with Meter Reading Type to specify whether this reading is mean, point, median, peak or minimum.
Reading Time Zone Code	The 3 letter code for the time zone where the reading was taken. Refer to BEDES 1.0 for enumerated values.
Meter Reading Type	Type of data recorded by the meter. Refer to BEDES 1.0 for enumerated values.

Building Systems or Asset Information: These are fields that characterize the HVAC and plug-loads in the building/facility/premises. These are nice to have data that would enrich the database and improve the models used in compare building performance.

BEDES Term	Definition
Lighting	
Lamp Type	A lamp is a replaceable component, or bulb, which is designed to produce light from electricity, though, non-electric lamps also exist. Refer to BEDES 1.0 for enumerated values.
Lighting Control Technology	Technological device that enables control of the lighting system. Refer to BEDES 1.0 for enumerated values.
Lighting Percentage of Total Installed Capacity	Portion of maximum, peak or rated installed capacity of a lighting system.
Lighting Efficacy	The amount of light (luminous flux) produced by a light source, usually measured in lumens, as a ratio of the amount of power consumed to produce it, usually measured in watts.
Lighting Percentage of Total Floor Area Served	Portion of the total floor area within a defined zone that is being served by the lighting system.
Lighting Quantity	The number of lighting units on the premises.
Lighting Quantity of Modules per System	Number of lighting units in each system.
Air Distribution	
Duct Configuration	Configuration of ducts. Refer to BEDES 1.0 for enumerated values.
Air Distribution Type	Basic configuration of air-distribution equipment. Refer to BEDES 1.0 for enumerated values.
Flow Control Type	Type of air flow control. Refer to BEDES 1.0 for enumerated values.
Air Distribution Quantity	The number of air distribution units on the premises.
Air Distribution Quantity of Modules per System	Number of air distribution units in each system.
Heating	
Heating Type	Source of heat. Heating delivery is recorded in a separate data field. Use of fans or blowers by themselves without heated air or water is not included in this definition of heating. Refer to BEDES 1.0 for enumerated values.
Heating Efficiency	A ratio of energy output to input for heating system. For a list of heating efficiency qualifiers and metric qualifiers, refer to BEDES 1.0.
Input Capacity	The rate of energy consumption of the heating plant at full load.
Capacity Units	Output capacity of equipment.

Heating Percentage of Total Installed Capacity	Portion of maximum, peak or rated installed capacity of a heating system.
Heating Percentage of Total Floor Area Served	Portion of the total floor area within a defined zone that is being served by the heating system.
Heating Quantity	The number of heating units of the same heating type on the premises.
Heating Quantity of Modules per System	Number of heating units of the same type in each system.
Cooling	
Cooling Type	Source of cooling. Cooling delivery is recorded in a separate data field. Use of fans or blowers by themselves without chilled air or water is not included in this definition of cooling. Stand-alone dehumidifiers are also not included. Refer to BEDES 1.0 for enumerated values.
Cooling Efficiency	A ratio of energy output to input for cooling system. For a list of cooling efficiency qualifiers and metric qualifiers, refer to BEDES 1.0.
Capacity	Capacity of the equipment or system at rated conditions.
Cooling Percentage of Total Installed Capacity	Portion of maximum, peak or rated installed capacity of a cooling system.
Cooling Percentage of Total Floor Area Served	Portion of the total floor area within a defined zone that is being served by the heating system.
Cooling Quantity	The number of cooling units of the same cooling type on the premises.
Cooling Quantity of Modules per System	Number of cooling units of the same type in each system.
Domestic Hot Water	
Domestic Hot Water Type	Type of water heating equipment for hot running water. Refer to BEDES 1.0 for enumerated values.
Domestic Hot Water Efficiency	A ratio of energy output to input for domestic hot water system. For a list of domestic hot water efficiency qualifiers and metric qualifiers, refer to BEDES 1.0.
Building Envelope	
Wall Construction	The general description of the main structural construction method used for premises wall. Refer to BEDES 1.0 for enumerated values.
Wall R-Value	A unit of thermal resistance used for comparing insulating values of different materials, for the specific thickness of the material. The higher the R-value number, a material, the greater its insulating properties and the slower the heat flow through it.
Wall Effective R-Value	The R-value of a complete wall construction including all material layers as well as the interior and exterior air film coefficients.
Wall Insulation Application	A description of the type of insulation and how it is applied.

Wall Insulation Application Thickness	Dimension of the thickness of wall insulation.
Roof Construction	The general description of the main structural construction method used for premises roof. Refer to BEDES 1.0 for enumerated values.
Roof R-Value	A unit of thermal resistance used for comparing insulating values of different materials, for the specific thickness of the material. The higher the R-value number, a material, the greater its insulating properties and the slower the heat flow through it.
Roof Effective R-Value	The R-value of a complete roof construction including all material layers as well as the interior and exterior air film coefficients.
Roof Insulation Application Thickness	Dimension of the thickness of roof insulation.
Window Glass Layer Description	A description of the number of layers of glass in a fenestration glazing system. Refer to BEDES 1.0 for enumerated values.
Window Glazing Type	Type of glazing material used in the window. Refer to BEDES 1.0 for enumerated values.
Window to Wall Ratio	Ratio of total window area to total wall area, where the total wall area is calculated using the floor to floor height, rather than the floor to ceiling height.