

Glossary

The following key terms are used throughout the Building Emissions Calculator and its supporting documentation.

Annual Period Ending Date

The date (month/day/year) that marks the end point of an annual (12-month) period for which Portfolio Manager and the Building Emissions Calculator calculate metrics.

Building Emissions Calculator Import Template

A standard report template that is available within Portfolio Manager (on the “Reporting” tab, as part of the “ENERGY STAR Reports” grouping), and which is formatted for easy ingestion into the Building Emissions Calculator. The report template can be accessed [here](#).

Custom Factors/Custom Emissions Factors

User-defined GHG emissions factors that are applied to indirect fuels (electricity, district steam, district hot water, district cold water) for calculation of "[Indirect \(Market-Based\)](#)" emissions. Generally obtained from fuel suppliers, and entered as kg CO₂e/MBtu.

Direct Emissions

GHG emissions associated with onsite fuel combustion (e.g., combustion of natural gas or fuel oil).

The Building Emissions Calculator calculates Direct Emissions using two methodologies:

- *Direct*

Equal to the summed consumption of each direct fuel (natural gas, fuel oil, diesel, propane, kerosene, coal, coke, wood, other) multiplied by the corresponding national emissions factor(s).

- *Direct (with Locality Factors)*

Equals the summed consumption of each direct fuel (natural gas, fuel oils, diesel, propane, kerosene, coal, coke, wood, other) multiplied by the corresponding emissions factor(s) specified by a local jurisdiction. If a given fuel type has not been assigned a specific locality emissions factor by the selected jurisdiction, the national factor will be used.

This value will only be displayed if you have indicated that "[Locality-Specified Factors](#)" should be used for this building and period ending date. Otherwise, a value of "N/A" will be returned.

eGRID Subregion

A geographic designation defined within EPA's [Emissions & Generation Resource Integrated Database \(eGRID\)](#). Buildings are mapped by ZIP code to eGRID subregions as a practical resolution of electricity origin to determine the emissions factors to apply to a building's grid electricity consumption.

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Green Power

Green Power is a generic term for renewable energy sources and specific clean energy technologies that emit fewer GHG emissions compared to other energy sources that supply the electric grid. You may use green power directly from an on-site renewable system or purchase green power from your utility or independent green power supplier. In order for power to be considered green, you must own the Renewable Energy Certificates (RECs), which are the legal claims/rights to the environmental benefits of the green power. These rights can be sold separately from the actual electricity (kWh). Portfolio Manager and the Building Emissions Calculator distinguish between two types of Green Power:

- *Onsite Green Power*

Electricity generated from an onsite renewable system. Onsite green power sources that can be tracked in Portfolio Manager include solar and wind power. Energy use from these systems is considered “green” only if you retain the rights to the RECs. If you do not purchase the RECs, or if you sell them (for example, through REC arbitrage), then you do not have onsite green power. If you arbitrage the RECs for some or all of the electricity that you generate and consume onsite, then Portfolio Manager treats this consumption as [Offsite Green Power](#) for the purpose of emissions calculations. In both Portfolio Manager and the Building Emissions Calculator, Onsite Green Power (power produced and consumed onsite, for which RECs have been retained) receives an emissions factor of zero.

- *Offsite Green Power*

Electricity generated from offsite renewable systems. Offsite renewable power is purchased from your utility or independent suppliers and is considered green if you acquire both electricity (kWh) and a corresponding quantity of RECs. Grid electricity purchased from your utility may be bundled with RECs purchased separately to represent Offsite Green Power. Offsite Green power sources in Portfolio Manager include Solar, Wind, Geothermal, Biogas (landfill gas), Biomass, and Small Hydropower. In the Building Emissions Calculator, the “[Indirect \(Market-Based\)](#)” emissions metric assigns an emissions factor of zero to Offsite Green Power. However, the “[Indirect \(Location-Based\)](#)” emissions metric assigns the relevant eGRID subregional emissions factor to Offsite Green Power (consistent with current calculations in Portfolio Manager).

Gross Floor Area

The total property square footage. This includes all areas inside the building(s) including supporting areas. For more information, click [here](#).

Indirect Emissions

GHG emissions associated with consumption of utility-supplied electricity, district steam, district hot water, and/or district chilled water. These emissions occur at your utility’s plant, but they are a result of your property’s energy consumption and therefore contribute to your overall GHG footprint.

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The Building Emissions Calculator calculates Indirect Emissions in three ways:

- *Indirect (Location-Based)*

Equals the summed consumption of each indirect fuel (electricity, district steam, district hot water, district chilled water) multiplied by the corresponding emissions factors.

For electricity, the emissions factor is associated with the eGRID subregion in which the property is located. For all other indirect fuels, the emissions factor is the national emissions factor for these fuel types.

Note: [Offsite Green Power](#) use does not reduce a building's "Indirect (Location-Based)" emissions.

- *Indirect (Market-Based)*

Equals the summed consumption of each indirect fuel (electricity, district steam, district hot water, district chilled water) multiplied by the corresponding emissions factors.

Custom emissions factors you enter into the Building Emissions Calculator affect "Indirect (Market-Based)" emissions. Custom factors are applied to a user-specified percentage of the consumption of each indirect fuel. When you apply custom emissions factors to less than 100% of a given indirect fuel's consumption, the remaining portion of that fuel use is multiplied by the eGRID subregional factor (for electricity) or national factor (for district energy).

If no custom emissions factors are applied, the "Indirect (Market-Based)" emissions will be calculated using the same emissions factors used to calculate "[Indirect \(Location-Based\)](#)" emissions.

Note: If any of your building's electricity has been designated as [Offsite Green Power](#) in Portfolio Manager (i.e., you have marked the "Green Power" box in Portfolio Manager for that electricity consumption record), it is assigned an emissions factor of zero when calculating the building's "Indirect (Market-Based)" emissions in the Building Emissions Calculator.

- *Indirect (with Locality Factors)*

Equals the summed consumption of each indirect fuel (electricity, district steam, district hot water, district chilled water) multiplied by the corresponding "[Locality-Specified Factors](#)." If a given fuel type has not been assigned a specific emissions factor by the selected jurisdiction, the tool will use the appropriate eGRID subregional emissions factors (for electricity) and/or national factors (for district energy).

This value will only be displayed if you have indicated that "[Locality-Specified Factors](#)" should be used for this building and period ending date. Otherwise, a value of "N/A" will be returned.

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Note that the purchase of offsite green power will not reduce a building's "Indirect (with Locality Factors)" emissions.

Locality-Specified Factors

Emissions factors (typically expressed in kg CO₂e/MBtu) that local governments have assigned to specific fuel types as part of a local building performance standard (BPS). These are used to calculate the "[Indirect \(with Locality Factors\)](#)," [Direct \(with Locality Factors\)](#)," and [Total \(with Locality Factors\)](#)" emissions for a building, which may be different than the corresponding location-based and/or market-based metrics.

Location-Based Emissions

See "[Indirect Emissions](#)."

Market-Based Emissions

See "[Indirect Emissions](#)."

Portfolio Manager Baseline Period Ending Date

As defined in Portfolio Manager, a 12-month period used as a historic point of comparison. By default, this is the first 12-month period for which your building record has complete data and metrics can be calculated within Portfolio Manager. However, a different Baseline Year can also be set for a building record in Portfolio Manager.

This date is displayed for each building selected for import into the Building Emissions Calculator on the page where the user selects the specific month and year(s) for which data will be imported. The intent is to help the user avoid selecting a month/year for which Portfolio Manager metrics cannot be calculated and imported into the Building Emissions Calculator.

Portfolio Manager Current Period Ending Date

As defined in Portfolio Manager, the most recent 12-month period for which your building record has complete data and for which Portfolio Manager can generate metrics.

This date is displayed for each building selected for import into the Building Emissions Calculator on the page where the user selects the specific month and year(s) for which data will be imported. The intent is to help the user avoid selecting a month/year for which Portfolio Manager metrics cannot be calculated and imported into the Building Emissions Calculator.

Site Energy

The annual amount of all the energy your property consumes, as reflected on your energy bills. It includes energy purchased from the grid or in bulk (which are the amounts on utility bills), as well as renewable energy generated and consumed on-site (excess renewable energy generated on-site and sold to the utility is excluded from site energy use). Site Energy can be used to understand how the energy use for an individual property has changed over time.

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Site Energy Intensity

The [Site Energy](#) use divided by the property gross floor area.

Total Emissions

The Building Emissions Calculator calculates Total Emissions in three ways:

- *Total (Location-Based)*: equal to “[Direct](#)” emissions + “[Indirect \(Location-Based\)](#)” emissions.
- *Total (Market-Based)*: equal to “[Direct](#)” emissions + “[Indirect \(Market-Based\)](#)” emissions
- *Total (with Locality Factors)*: equal to “[Direct \(with Locality Factors\)](#)” emissions + “[Indirect \(with Locality Factors\)](#)” emissions.