



Existing Buildings | v2009

## Optimize energy efficiency performance

EAc1 | Possible 18 points

### Intent

To achieve increasing levels of operating energy performance relative to typical buildings of similar type to reduce environmental and economic impacts associated with excessive energy use.

### Requirements

#### Case 1. Projects eligible for Energy Star rating

For buildings eligible to receive an energy performance rating using the EPA's ENERGY STAR's Portfolio Manager tool, achieve an energy performance rating of at least 71. If the building is eligible for an energy performance rating using Portfolio Manager, Option 1 must be used.

Achieve energy efficiency performance better than the minimum requirements listed above; points are awarded according to the table below.

The minimum energy cost savings percentage for each ENERGY STAR threshold is as follows:

EPA ENERGY STAR Energy Performance Rating	Points
71	1
73	2
74	3
75	4
76	5
77	6
78	7
79	8
80	9
81	10
82	11
83	12
85	13
87	14

89	15
91	16
93	17
95	18

Have energy meters that measure all energy use throughout the performance period of buildings to be certified. Each building's energy performance must be based on actual metered energy consumption for the LEED project. A full 12 months of continuous measured energy data is required.

Calibrate meters within the manufacturer's recommended interval if the building owner, management organization or tenant owns the meter. Meters owned by third parties (e.g., utilities or governments) are exempt.

#### **Case 2. Projects not eligible for Energy Star rating**

For buildings with a primary space type not eligible to receive an energy performance rating using Portfolio Manager, comply with 1 of the following:

##### **Option 1**

Demonstrate energy efficiency performance that is better than 71% of similar buildings (71st percentile or better) by benchmarking against national source energy data provided in the Portfolio Manager tool as an alternative to energy performance ratings. Projects outside the U.S. may use a local benchmark based on source energy from their country's national or regional energy agency. Follow the detailed instructions in the LEED Reference Guide for Green Building Operations & Maintenance, 2009 Edition.

**OR**

##### **Option 2**

For buildings not suited for Case 2, Option 1, demonstrate energy efficiency performance by determining an alternative rating score using the Portfolio Manager tool to report the building's energy use data from the performance period. Follow the detailed instructions in the LEED Reference Guide for Green Building Operations & Maintenance, 2009 Edition.

##### **Option 2a. Streamlined baseline (EAp2 only - 0 points)**

This option is only available through EAp2. Enter energy use data during the performance period for at least 1 year into Portfolio Manager to determine the "weather-normalized source energy intensity". Use this value in the offline calculator to determine the percent reduction from the streamlined baseline.

##### **Option 2b. Energy baseline including historical data (up to 9 points)**

Enter at least 3 consecutive years of historical energy use data into Portfolio Manager in addition to the current year's data to determine the "weather-normalized source energy intensity" for each year. Use these values in the offline calculator to determine a baseline using the historical energy use data of the project building.

##### **Option 2c. Energy baseline including historical data plus comparable buildings (up to 18 points)**

In addition to the historical data used in Option 2b, provide energy use data for at least 3 other buildings with similar uses over at least a 2-year period to determine the "average energy performance of a similar building" in Portfolio Manager. Enter this data into the offline calculator.

**AND**

Achieve energy efficiency performance better than the minimum requirements listed above; points are awarded according to the table below.

Have energy meters that measure all energy use throughout the performance period of all buildings to be certified. Each building's energy performance must be based on actual metered energy consumption for both the LEED project and all comparable buildings used for the benchmark. A full 12 months of continuous measured energy data is required.

Calibrate meters within the manufacturer's recommended interval if the building owner, management organization or tenant owns the meter. Meters owned by third parties (e.g., utilities or governments) are exempt.

Use the Portfolio Manager tool available on the ENERGY STAR website to benchmark the project even if it is not eligible for an EPA rating: <http://www.energystar.gov/benchmark>.

Percentile level above the national median (for buildings not eligible for ENERGY STAR energy performance rating)	Points
21	1
23	2
24	3
25	4
26	5
27	6
28	7
29	8
30	9
31	10
32	11
33	12
35	13
37	14
39	15
41	16
43	17
45	18