



2030 CHALLENGE Targets: U.S. National Medians

U.S. Medians for Site Energy Use and 2030 Challenge Energy Reduction Targets by Space/Building Type¹

From the Environmental Protection Agency (EPA): Use this chart to find the site fossil-fuel energy targets

Building Use Description ²	Available in Target Finder ³	Median Source EUJ ⁴ (kBtu/Sq.Ft./Yr)	Average Percent Electric	Median Site EUJ ⁴ (kBtu/Sq.Ft./Yr)	2030 Challenge Site EUJ Targets (kBtu/Sq.Ft./Yr)				
					50% Target	60% Target	70% Target	80% Target	90% Target
Education		144	63%	58	29.0	23.2	17.4	11.6	5.8
K-12 School	X								
College / University (campus-level)		244	63%	104	52.0	41.6	31.2	20.8	10.4
Food Sales		570	86%	193	96.5	77.2	57.9	38.6	19.3
Grocery Store / Food Market	X								
Convenience Store (with or without gas station)		657	90%	228	114.0	91.2	68.4	45.6	22.8
Food Service		575	59%	267	133.5	106.8	80.1	53.4	26.7
Restaurant / Cafeteria		434	53%	207	103.5	82.8	62.1	41.4	20.7
Fast Food		1170	64%	418	209.0	167.2	125.4	83.6	41.8
Inpatient Health Care (Hospital)	X								
Lodging		163	61%	72	36.0	28.8	21.6	14.4	7.2
Dormitory / Fraternity / Sorority	X								
Hotel, Motel or Inn	X								
Mall (Strip Mall and Enclosed)		247	71%	94	47.0	37.6	28.2	18.8	9.4
Nursing/Assisted Living	X								
Office	X								
Outpatient and Health Care		163	72%	62	31.0	24.8	18.6	12.4	6.2
Clinic / Other Outpatient Health		194	76%	67	33.5	26.8	20.1	13.4	6.7
Medical Office	X								
Public Assembly		89	57%	42	21.0	16.8	12.6	8.4	4.2
Entertainment / Culture		94	63%	46	23.0	18.4	13.8	9.2	4.6
Library		246	59%	92	46.0	36.8	27.6	18.4	9.2
Recreation		100	55%	39	19.5	15.6	11.7	7.8	3.9
Social / Meeting		71	57%	43	21.5	17.2	12.9	8.6	4.3
Public Order and Safety		161	57%	82	41.0	32.8	24.6	16.4	8.2
Fire/Police Station		146	56%	82	41.0	32.8	24.6	16.4	8.2
Service (Vehicle Repair / Service, Postal service)		96	63%	45	22.5	18.0	13.5	9.0	4.5
Storage / Shipping / Nonrefrigerated Warehouse		28	56%	10	5.0	4.0	3.0	2.0	1.0
Non-refrigerated Warehouse/Distribution Center	X								
Refrigerated Warehouse	X								
Religious Worship	X								
Retail Store (Non-mall Stores, Vehicle Dealerships)		139	67%	53	26.5	21.2	15.9	10.6	5.3
Other⁵		127	56%	70	35.0	28.0	21.0	14.0	7.0

Source: ©2012 2030 Inc. / Architecture 2030

Data Source: U.S. Environmental Protection Agency; U.S. Energy Information Administration

Notes

1. This table presents values calculated from the Energy Information Administration in the Commercial Building Energy Use Survey (CBECS), conducted in 2003; using the Environmental Protection Agency's Table 1: 2003 CBECS National Median Source Energy Use and Performance Comparisons by Building Type.
2. Building Use Descriptions are taken from valid building activities as defined by the Energy Information Administration in the Commercial Building Energy Use Survey (CBECS), conducted in 2003.
3. A "X" indicates that this Space/Building Type is included in Target Finder. On the input page, use the 2030 Challenge Energy Reduction Target option and select 60%.
4. The median Source EUI and Site EUI are calculated in kBtu/Sq.Ft./Yr by computing a median EUI for each category, applying the CBECS survey sample weights. The median represents the 50th percentile of a distribution (i.e. group or sample) of numbers. It is comparable to a score of 50 on the ENERGY STAR performance scale – where half of the buildings of a given type use more energy than the median and half of the buildings use less energy.
Converting Site to Source Energy:
Source Energy values are calculated using a conversion for electricity of 1 kBtu Site Energy = 3.34 kBtu Source Energy; a conversion for natural gas of 1 kBtu Site Energy = 1.047 kBtu Source Energy; a conversion factor for district heat of 1 kBtu site energy = 1.40 source energy and a conversion factor for fuel oil of 1 kBtu site energy = 1.01.
5. Other: For all building types not defined by the list above, these buildings may choose to use the performance benchmark categorized by "other". Note that this category is not well defined therefore source energy use varies greatly with source EUI ranging over 1500 kBtu/Sq.Ft. As categorized by EIA, "other" may include airplane hangers, laboratory, crematorium, data center, etc.

EUI: Energy Use Intensity