

State of California Energy Efficiency Targets for Existing State Buildings Pursuing Zero Net Energy (ZNE)

The following energy efficiency targets for existing state buildings represent the top quartile (75%) of energy efficiency*

****rev 2019-01-11

Metric for energy efficiency used is Source Energy Use Intensity (Source EUI)**

State Building Type	Source EUI Targets for State Climate Zones***																
	CA Ave	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Conversion Factors for Zones	1.00	0.99	1.01	0.92	0.97	0.95	0.94	0.90	0.95	0.97	0.99	1.06	1.02	1.05	1.06	1.09	1.12
Adult Education - CA Conservation Corps	54	53	55	50	52	51	51	49	51	52	53	57	55	57	57	59	60
CA Community College Campuses (CCCC's)	98.4	97	99	91	95	93	92	89	93	95	97	104	100	103	104	107	110
CCCC's Science/Tech/Eng./Math (STEMs)	130.5	129	132	120	127	124	123	117	124	127	129	138	133	137	138	142	146
College/University	142	141	143	131	138	135	133	128	135	138	141	151	145	149	151	155	159
Data Center	100	99	101	92	97	95	94	90	95	97	99	106	102	105	106	109	112
Fire Station - CALFIRE	65	64	66	60	63	62	61	59	62	63	64	69	66	68	69	71	73
K-12 School	85	84	86	78	82	81	80	77	81	82	84	90	87	89	90	93	95
Laboratory	261	259	264	240	254	248	246	235	248	254	259	277	267	274	277	285	293
Library/Museum	114	113	115	105	111	108	107	103	108	111	113	121	116	120	121	124	128
Mixed Use Property (CALFIRE)	49	48	49	45	47	46	46	44	46	47	48	52	50	51	52	53	55
Multi-family Housing	133	132	134	122	129	126	125	120	126	129	132	141	136	140	141	145	149
Non-Refrig. Warehouse	37	37	37	34	36	35	35	33	35	36	37	39	38	39	39	40	41
Office - Average All Types	81	81	82	75	79	77	77	73	77	79	81	86	83	85	86	89	91
Office - Large >50K sq. ft. - DGS & Others	127	126	128	117	123	121	119	114	121	123	126	135	130	133	135	138	142
Office - Large >50K sq. ft. - CalTrans	150	149	152	138	146	143	141	135	143	146	149	159	153	158	159	164	168
Office - Large >50K sq. ft. - CMD	66	65	67	61	64	63	62	59	63	64	65	70	67	69	70	72	74
Office - Small <50K sq. ft. - CHP	201	199	203	185	195	191	189	181	191	195	199	213	205	211	213	219	225
Office - Small <50K sq. ft. - CMD	30	30	30	28	29	29	28	27	29	29	30	32	31	32	32	33	34
Office - Small <50K sq. ft. - DMV	162	160	164	149	157	154	152	146	154	157	160	172	165	170	172	177	181
Office - Small <50K sq. ft. - EDD	132	131	133	121	128	125	124	119	125	128	131	140	135	139	140	144	148
Office - Small <50K sq. ft. - Others	70	69	71	64	68	67	66	63	67	68	69	74	71	74	74	76	78
Other - Maintenance DOT/DWR	45	45	45	41	44	43	42	41	43	44	45	48	46	47	48	49	50
Other - Caltrans Trans. Mgmt. Ctr. (TMC)	567	561	573	522	550	539	533	510	539	550	561	601	578	595	601	618	635
Other - CDFA	249	247	252	229	242	237	234	224	237	242	247	264	254	262	264	272	279
Other - CDFW Fish Hatchery	47	47	47	43	46	45	44	42	45	46	47	50	48	49	50	51	53
Other - CDFW Wildlife Area/Ecolog. Reserve	13	13	13	12	13	12	12	12	12	13	13	14	13	14	14	14	15
Other - DPR Park Structures	11	11	11	10	11	10	10	10	10	11	11	12	11	12	12	12	12
Other - HCD Migrant Centers	30	30	30	28	29	29	28	27	29	29	30	32	31	32	32	33	34
Other - Education	54	53	55	50	52	51	51	49	51	52	53	57	55	57	57	59	60
Other - Entertainment Public (Conf/Conv, Theater)	62	61	63	57	60	59	58	56	59	60	61	66	63	65	66	68	69
Other - Lodging/Residential	189	187	191	174	183	180	178	170	180	183	187	200	193	198	200	206	212
Other - Specialty Hospital (DSH)	426	422	430	392	413	405	400	383	405	413	422	452	435	447	452	464	477
Outpatient Rehab/Phys. - (DSH)	113	112	114	104	110	107	106	102	107	110	112	120	115	119	120	123	127
Prison/Incarceration - CDCR	187	185	189	172	181	178	176	168	178	181	185	198	191	196	198	204	209
Residence Hall/Dorm - CALFIRE	112	111	113	103	109	106	105	101	106	109	111	119	114	118	119	122	125
Senior Care Facility – CalVet	161	159	163	148	156	153	151	145	153	156	159	171	164	169	171	175	180

* Based upon the following sources:

1. Historic 2015 state building energy use as recorded in Energy Star Portfolio Manager
2. California Commercial End-Use Survey (CEUS)
3. ASHRAE Standard 100 Data

** Source EUI can be extracted from Energy Star Portfolio Manager report, or calculated ZNE calculator inputting annual energy data

*** California Climate Zones - see

http://www.energy.ca.gov/maps/renewable/building_climate_zones.html

or by zip code

<http://www.energy.ca.gov/maps/renewable/BuildingClimateZonesByZIPCode.pdf>

**** Red font revised in 1/11/2019 to reflect corrected averages from Oakridge National Lab (ORNL), new or merged building categories from new historical data received, and three separate large office building occupancies.