

DOE Commercial Building Benchmarks
New Construction
Energy Use Intensities (EUIs) [kBtu/ft²/yr]
May 5, 2009

	Miami	Houston	Phoenix	Atlanta	Los Angeles	Las Vegas	San Francisco	Baltimore	Albuquerque	Seattle	Chicago	Denver	Minneapolis	Helena	Duluth	Fairbanks	2003 CBECS Avg.
Climate Zone	1A	2A	2B	3A	3B	3B	3C	4A	4B	4C	5A	5B	6A	6B	7	8	
Large Office	39	42	40	39	32	40	34	43	39	37	43	38	47	44	49	62	99
Medium Office	38	44	42	44	35	41	40	51	43	46	53	47	59	54	62	82	94
Small Office	46	48	49	46	36	44	38	53	47	47	61	52	70	62	77	110	80
Warehouse	15	15	15	16	14	16	14	18	17	16	21	20	26	23	27	43	48
Stand-alone Retail	48	46	46	41	34	41	35	45	42	40	48	45	54	51	61	88	70
Strip Mall	46	44	44	44	35	43	38	48	45	42	51	47	60	55	66	99	110
Primary School	65	71	69	69	57	65	71	78	68	65	85	74	99	88	107	147	68
Secondary School	69	74	74	73	50	68	67	87	72	72	99	81	117	101	128	181	80
Supermarket	161	171	161	175	155	162	171	191	174	186	206	188	224	209	240	296	214
Fast Food Restaurant	727	732	709	737	642	703	671	796	729	738	849	774	917	846	973	1,179	451
Sit-down Restaurant	507	517	496	526	454	500	493	567	523	540	595	553	635	603	672	792	231
Hospital	155	159	145	155	135	139	144	162	131	144	162	140	170	151	171	199	249
Outpatient facility	106	101	104	96	98	100	88	94	96	88	94	94	96	92	93	99	95
Small Hotel	70	71	70	72	62	69	65	78	72	72	83	77	90	84	96	118	75
Large Hotel	133	135	125	133	115	128	117	145	135	131	155	142	170	158	182	226	110
Mid-rise Apartment	45	45	43	43	35	41	36	47	41	41	52	45	61	53	67	94	n/a

DOE Commercial Building Benchmarks
Post-1980 Construction
Energy Use Intensities (EUIs) [kBtu/ft²/yr]
March 2010

	Miami	Houston	Phoenix	Atlanta	Los Angeles	Las Vegas	San Francisco	Baltimore	Albuquerque	Seattle	Chicago	Denver	Minneapolis	Helena	Duluth	Fairbanks
Climate Zone	1A	2A	2B	3A	3B	3B	3C	4A	4B	4C	5A	5B	6A	6B	7	8
Large Office	45	49	46	50	42	46	42	53	45	49	56	48	60	53	63	87
Medium Office	54	55	55	56	47	53	47	62	52	57	68	57	75	65	81	114
Small Office	62	63	61	67	50	61	52	74	67	63	85	75	96	86	105	150
Warehouse	14	17	18	21	12	19	16	29	24	23	38	32	52	43	63	118
Stand-alone Retail	96	96	92	100	72	89	81	112	97	98	128	110	148	131	163	232
Strip Mall	104	99	97	105	80	95	88	120	104	108	139	119	160	143	178	253
Primary School	76	72	69	71	61	66	62	75	67	67	81	70	88	79	93	136
Secondary School	67	66	63	66	49	62	56	76	64	69	86	71	99	85	108	160
Supermarket	182	197	182	205	171	186	191	221	200	209	238	216	258	238	276	345
Quick Service Restaurant	558	570	560	590	507	567	543	652	599	608	714	646	784	719	848	1,072
Full Service Restaurant	459	466	450	481	406	455	438	526	484	497	573	518	626	578	680	853
Hospital	167	168	164	164	160	161	154	165	150	156	165	151	168	155	170	198
Outpatient facility	360	332	336	325	315	328	272	318	309	283	313	305	319	309	315	360
Small Hotel	71	67	67	66	60	64	60	67	64	62	70	66	74	69	77	92
Large Hotel	127	132	124	136	120	125	125	147	135	139	157	146	169	160	181	218
Mid-rise Apartment	53	53	53	58	40	54	49	70	59	65	80	67	91	80	102	141

DOE Commercial Building Benchmarks
Pre-1980 Construction
Energy Use Intensities (EUIs) [kBtu/ft²/yr]
March 2010

	Miami	Houston	Phoenix	Atlanta	Los Angeles	Las Vegas	San Francisco	Baltimore	Albuquerque	Seattle	Chicago	Denver	Minneapolis	Helena	Duluth	Fairbanks
Climate Zone	1A	2A	2B	3A	3B	3B	3C	4A	4B	4C	5A	5B	6A	6B	7	8
Large Office	48	51	47	54	43	48	44	60	48	54	58	48	62	54	65	86
Medium Office	63	61	63	61	46	59	45	64	57	54	65	58	73	65	79	110
Small Office	68	71	72	75	56	73	60	85	77	73	93	83	106	95	119	175
Warehouse	13	18	19	23	12	21	17	32	27	26	42	36	58	47	71	135
Stand-alone Retail	94	100	98	105	74	97	83	120	104	104	135	117	156	138	175	252
Strip Mall	101	106	104	112	80	104	90	129	111	114	146	126	169	149	190	274
Primary School	74	76	74	78	60	73	65	88	75	77	87	76	96	84	102	151
Secondary School	73	74	73	76	53	71	59	87	72	78	92	77	106	91	117	173
Supermarket	180	196	183	205	170	188	189	225	203	213	242	220	263	243	285	363
Quick Service Restaurant	593	609	595	629	536	601	568	692	632	640	745	678	815	747	880	1,113
Full Service Restaurant	450	470	456	488	404	463	444	540	491	505	582	528	632	585	691	872
Hospital	173	175	172	174	161	171	158	179	159	168	168	152	173	159	174	200
Outpatient facility	331	335	335	338	306	337	282	337	320	299	316	309	324	314	319	362
Small Hotel	64	61	61	59	56	59	54	59	58	55	60	58	63	59	64	76
Large Hotel	124	125	121	126	117	122	120	131	128	126	135	132	142	139	148	164
Mid-rise Apartment	49	55	54	62	40	57	53	77	64	72	87	73	100	88	115	162