

Cambridge Municipal Facilities Energy Use Disclosure Report Calendar Year 2016-2017

This report is presented in accordance with the Cambridge Building Energy Use Disclosure Ordinance. The ordinance requires large property owners to track and report annual energy use. Under the ordinance, the City reports energy use of buildings in its portfolio that are greater than 10,000 sf.

How Data Are Reported

The ENERGY STAR Portfolio Manager online tool calculates energy use metrics. Portfolio Manager applies a complex analytic model to compare and rank similar types of buildings across the country and over time by adjusting for differences in weather, climate, and use characteristics, such as number of operating hours and number of computers.

Benchmarking Score

K-12 schools and office buildings are the two categories that are eligible for a “benchmarking score” of 1 to 100. A score of 50 means that the building performs at the median of similar buildings nationwide; a score of 75 indicates that the building performs within the top 25% of its peers.

ENERGY STAR scores and energy use intensity (EUI) can be used to compare a building's performance over time, against other buildings nationwide or similar buildings within a portfolio.

Weather Normalization

Energy use changes due to colder winters and hotter summers; weather normalized energy accounts for this difference and allows for a closer look at changes in energy use without the effect of weather.

Property Name and Address	Gross Floor Area (GFA) (ft ²) ¹	Weather Normalized Site EUI (kBtu/ft ²) ²		Weather Normalized Source EUI (kBtu/ft ²) ²		Total GHG Emissions (Metric Tons CO ₂ e) ³		Water Use (kgal) ⁴		ENERGY STAR Score ⁵	
		CY16	CY17	CY16	CY17	CY16	CY17	CY16	CY17	CY16	CY17
Primary Property Type: K-12 School											
Baldwin School 85 Oxford Street	69,340	60	62	117	121	297	300	50,415	50,339	81	76
Cambridge Rindge & Latin School 459 Broadway	403,393	55	51	110	103	1,595	1,459		254,112	92	95
Cambridgeport School 89 Elm Street	58,323	74	68	123	112	275	249	33,269	40,257	59	68
Fletcher-Maynard Academy 225 Windsor Street	83,221	50	51	88	84	327	267		52,543	80	84
Graham & Parks School 44 Linnaean Street	78,732	46	49	76	79	240	240		36,838	89	88
Haggerty School 110 Cushing Street	53,664	79	79	150	146	299	287			64	67
Kennedy-Longfellow School 158 Spring Street	127,302	74	73	153	151	697	673	145,112	127,287	61	60
Longfellow Building 359 Broadway (temporary location of King Open School)	74,621	49	56	81	90	232	258		65,633	88	83
Martin Luther King Jr. School 102 Putnam Ave	165,176	33	26	72	69	283	308	10,532	5,392	100	100
Morse School 40 Granite Street	74,806	84	86	137	139	399	404	42,591	41,132	71	68
Peabody Complex 70 Rindge Avenue (includes Gately Youth Center and O'Neill Library)	128,392	62	62	119	116	562	541		59,096	83	84
Tobin School 197 Vassal Lane	124,543	56	55	175	171	665	629	402,507		47	47
Upton Street Building (Amigos School) 15 Upton Street	58,529	56	53	87	86	249	234	35,883	37,768	88	87
Total K-12 School GFA	1,500,042										
K-12 School Median	78,732	56	56	117	112	299	300	42,591	50,339	81	83
Primary Property Type: Office											
Alice K. Wolf Center 5 Western Avenue	58,318	49	45	108	100	221	198	90,766	157,452	NA ⁶	NA ⁶

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City Hall Annex 344 Broadway	33,909	55	47	168	144	171	143	27,702	32,190	70	77
City Hall Building 795 Massachusetts Avenue	59,140	61	50	138	123	286	240	57,549	35,792	NA ⁷	NA ⁷
Coffon Building 51 Inman Street	31,240	53	52	104	100	120	113		21,837	94	95
Lombardi Building 831 Massachusetts Avenue	21,808	79	77	192	184	143	133	17,229	18,091	67	69
Total Office GFA	204,415										
Office Median	33,909	55	50	138	123	171	143	42,626	32,190	70	77
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		CY16	CY17	CY16	CY17	CY16	CY17	CY16	CY17		
Primary Property Type: Vocational School											
Solomons Garage 454-456 Broadway (includes Plant Maintenance Dept.)	21,097	83	88	137	142	132	139	6,793	9,596		
Primary Property Type: Library											
Cambridge Public Library 449 Broadway	120,186	124	119	246	232	940	864				
Central Square Branch Library 45 Pearl Street	15,447	45	57	80	94	47	56	25,842	20,313		
Total Library GFA	135,633										
Library Median	67,817	84	88	163	163	494	460	25,842	20,313		
Primary Property Type: Recreational Center											
Citywide Senior Center 806 Massachusetts Avenue	27,999	102	97	192	188	200	189	40,371	38,899		
Frisoli Youth Center 61 Willow Street	20,059	85	84	169	158	123	114	12,415	14,146		
Moore Youth Center ⁸ 12 Gilmore Street	10,537	76	55	113	84	49	35	133,892	124,569		
Moses Youth Center 243 Harvard Street	19,405	106	106	172	176	132	130		215,271		
Russell Youth and Community Center 680 Huron Avenue	29,131	77	72	215	203	169	149		30,279		
Total Recreational Center GFA	107,131										
Recreational Center Median	20,059	85	84	172	176	132	130	40,371	38,899		
Primary Property Type: Fitness Center/Health Club/Gym											
Russell Field Athletic Facility 359 Rindge Avenue	12,089	57	56	130	126	54	52		5,207		
War Memorial Recreation Center 1640 Cambridge Street	168,224	130	125	223	213	1,026	964	251,544	240,944		
Total Fitness Center/Health Club/Gym GFA	180,313										
Fitness Center/Health Club/Gym Median	90,157	93	91	177	170	540	508	251,544	123,076		
Primary Property Type: Fire Station											
East Cambridge Fire House 175 Cambridge Street	17,093	82	75	141	127	93	83	11,993	15,685		
Fire Headquarters 491 Broadway	30,389	69	71	143	146	159	155	29,198	31,370		

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Inman Square Fire House 1384 Cambridge Street	16,728	54	49	77	72	50	48	11,969	14,861		
Lafayette Square Fire House 378 Massachusetts Avenue	19,080	63	64	94	95	73	74	16,433	15,733		
Porter Square Fire House 2029 Massachusetts Avenue	11,213	89	88	120	119	58	56	9,050	7,580		
Taylor Square Fire House 113 Garden Street	16,188	115	123	156	163	108	112		10,132		
Total Fire Station GFA	110,691										
Fire Station Median	16,911	76	73	131	123	83	79	11,993	15,273		
Primary Property Type: Police Station											
Robert W. Healy Public Safety Facility 125 Sixth Street	162,547	134	135	334	333	1,319	1,276		267,951		
Primary Property Type: Parking Garage											
First Street Parking Garage Complex 51-69 First Street (includes retail and storage spaces)	404,152	142	128	447	402	181	152		5,988		
Green Street Garage 260 Green Street	110,884	6	5	19	17	47	40	Included in Central Square Library			
Vehicle Storage Building 250R Fresh Pond Parkway	8,792	171	161	283	271	94	90	Included in Sullivan Purification Facility			
Total Parking Garage GFA	523,828										
Parking Garage Median	110,884	142	128	283	271	94	90		5,988		

Primary Property Type: Drinking Water Treatment & Distribution											
Walter J. Sullivan Water Purification Facility ⁹ Fresh Pond Parkway	250	155,632	197	221	514	591	2,650	2,900	2,837,762	3,310,093	
Primary Property Type: Public Service											
DPW Complex 147 Hampshire Street (includes Frazier Administration Building, Ryan Garage, Simard Building, and DPW Trailer)		80,764	195	191	273	267	382	370	45,171	53,775	

Total City GFA 3,182,093
City Median 58,321 74 70 138 133 211 194 34,576 36,838

Additional Notes:

1 Includes buildings and parking

-An individual building under 10,000 square feet is included if it is one of multiple buildings on a single parcel of land that in summation exceed 10,000 square feet in gross floor area.

2 Energy Use Intensity (EUI): energy use per square foot. Generally, the lower the number the more efficient the building is.

-Portfolio Manager excludes parking areas from EUI calculations, which for First St Garage Complex and some others may result in artificially high EUI numbers.

-Site EUI measures the amount of energy consumed by the building on site per square foot of space

-Source EUI measures the amount of energy consumed by the building plus losses incurred in energy production, transmission and delivery to the site per square foot of space.

3 Includes Scope 1 emissions (direct - produced on site by the building's energy use) and Scope 2 (indirect - produced off-site at energy generating facility).

-The City is using ISO New England Inc. emission factors instead of eGrid factors that Portfolio Manager is using; 2017 data was calculated using most current emissions factors updated on 1/26/2018.

-The emissions factor for electricity has dropped from 747 lbs CO₂e per MWh to 710 lbs CO₂e per MWh. The trend illustrates the fact that for some buildings emissions from electricity can decrease as a function of the electricity emissions factors, use reduction, or both.

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4 Blank cells indicate that a meter/Meter Transmission Unit was installed, replaced or scheduled for replacement and that a full year of data is not available.

5 K-12 schools and office buildings are the only building categories owned by the City that are eligible for ENERGY STAR scores.

6 Alice K Wolf is not eligible for ENERGY STAR Score because more than 25% of property is a type that is not eligible for a score (Adult Education)

7 City Hall is not eligible for ENERGY STAR Score because unoccupied space (attic) results in time-weighted weekly operating hours less than 30 (29.2)

8 Moore Youth Center water use (kgal) includes Hoyt field water supply.

9 In CY16 the Water Treatment plant was running 8 months on a reduced capacity due to a drought and construction projects. Increased EUI, total GHG emissions and water use in CY17 can be attributed to the full operational load of the plant

Source: ENERGY STAR Portfolio Manager, City of Cambridge Department of Public Works