

**Town of Barrington
FY 09 Energy Data**

	USAGE			
	Electricity (kWh)	Natural Gas (therm)	Fuel Oil (gal)	Gasoline /Diesel (gal)
All Buildings	3,781,724	304,184.4	41,967	
Municipal	1,239,798	80,769.4	0	
Library	452,720	21,086.2		
Public Safety	536,160	32,443.0		
Public Works	81,121	12,081.8		
Town Hall	169,797	15,158.4		
School	2,541,926	223,415.0	41,967	
Barrington High School	1,003,200	106,911.0		
Barrington Middle School	950,200	68,089.0		
Hampden Meadows Elementary	231,326	25,661.0	4,496	
Nayatt Elementary	102,320		16,749	
Primrose Hill Elementary	138,080		20,722	
Sowams Elementary	116,800	22,754.0		
Street Lighting	599,000			
Sewer Stations	684,000			
Other Municipal	43,900			
Transportation				70,878
Municipal				57,018
DPW				57,018
Police				
Fire				
School				13,860
TOTAL	5,108,624	304,184.4	41,967	70,878

	COST				TOTAL
	Electricity	Natural Gas	Fuel Oil	Gasoline /Diesel	
All Buildings	\$523,959	\$418,405	\$133,259		\$1,075,623
Municipal	\$147,342	\$106,290	\$0		\$253,632
Library	\$54,525	\$27,683			\$82,208
Public Safety	\$61,435	\$41,594			\$103,029
Public Works	\$10,801	\$16,578			\$27,379
Town Hall	\$20,581	\$20,435			\$41,016
School	376,617.0	312,115.0	133,259.0		\$821,991
Barrington High School	\$145,009	\$152,763			\$297,772
Barrington Middle School	\$139,094	\$94,111			\$233,205
Hampden Meadows Elementary	\$35,794	\$34,142	\$6,814		\$76,750
Nayatt Elementary	\$16,834		\$57,991		\$74,825
Primrose Hill Elementary	\$21,620		\$68,454		\$90,074
Sowams Elementary	\$18,266	\$31,099			\$49,365
Street Lighting	\$186,143				\$186,143
Sewer Stations	\$95,253				\$95,253
Other Municipal	\$7,511				\$7,511
Transportation				\$242,154	\$242,154
Municipal				\$210,227	\$210,227
DPW				\$144,055	\$144,055
Police				\$46,536	\$46,536
Fire				\$19,636	\$19,636
School				\$31,927	\$31,927
TOTAL	\$812,866	\$418,405	\$133,259	\$242,154	\$1,606,684

Municipal \$752,766
School \$853,918

	FLOOR SPACE (sq ft)
All Buildings	622,939
Municipal	141,139
Library	43,783
Public Safety	38,714
Public Works	22,651
Town Hall	35,991
School	481,800
Barrington High School	189,000
Barrington Middle School	147,000
Hampden Meadows Elementary	46,500
Nayatt Elementary	34,000
Primrose Hill Elementary	36,000

	CONVERSION FACTORS
Electricity	3.412 kBTU/kWh
Natural Gas	100 kBTU/therm
Fuel Oil	138.69 kBTU/Gal

ENERGY COST (\$ per kBTU)			
Electricity	Natural Gas	Fuel Oil	Total
\$0.041	\$0.014	\$0.023	\$0.077
\$0.035	\$0.013		\$0.048
\$0.035	\$0.013		\$0.048
\$0.034	\$0.013		\$0.046
\$0.039	\$0.014		\$0.053
\$0.036	\$0.013		\$0.049
\$0.043	\$0.014	\$0.023	\$0.080
\$0.042	\$0.014		\$0.057
\$0.043	\$0.014		\$0.057
\$0.045	\$0.013	\$0.011	\$0.070
\$0.048		\$0.025	\$0.073
\$0.046		\$0.024	\$0.070

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Sowams Elementary

29,300

\$0.046

\$0.014

\$0.060

	ENERGY DENSITY (kBtu per sq ft)			
	Electricity	Natural Gas	Fuel Oil	Total
All Buildings	20.7	48.8	9.3	78.9
Municipal	30.0	57.2	0.0	87.2
Library	35.3	48.2	0.0	83.4
Public Safety	47.3	83.8	0.0	131.1
Public Works	12.2	53.3	0.0	65.6
Town Hall	16.1	42.1	0.0	58.2
School	18.0	46.4	12.1	76.5
Barrington High School	18.1	56.6	0.0	74.7
Barrington Middle School	22.1	46.3	0.0	68.4
Hampden Meadows Elementary	17.0	55.2	13.4	85.6
Nayatt Elementary	10.3	0.0	68.3	78.6
Primrose Hill Elementary	13.1	0.0	79.8	92.9
Sowams Elementary	13.6	77.7	0.0	91.3

	COST DENSITY (\$ per sq ft)			
	Electricity	Natural Gas	Fuel Oil	Total
	\$0.84	\$0.67	\$0.21	\$1.73
	\$1.04	\$0.75	\$0.00	\$1.80
	\$1.25	\$0.63	\$0.00	\$1.88
	\$1.59	\$1.07	\$0.00	\$2.66
	\$0.48	\$0.73	\$0.00	\$1.21
	\$0.57	\$0.57	\$0.00	\$1.14
	\$0.78	\$0.65	\$0.28	\$1.71
	\$0.77	\$0.81	\$0.00	\$1.58
	\$0.95	\$0.64	\$0.00	\$1.59
	\$0.77	\$0.73	\$0.15	\$1.65
	\$0.50	\$0.00	\$1.71	\$2.20
	\$0.60	\$0.00	\$1.90	\$2.50
	\$0.62	\$1.06	\$0.00	\$1.68

Energy Units Conversion Table

Source: Energy Star

The following table provides the multiplier to convert a unit of measure to kBtu:

1. Locate the energy source and the applicable unit of measure.
2. Select the conversion multiplier from the right column.
3. Multiply non-kBtu units of energy by multiplier and this converts the energy unit to kBtu equivalent.

Energy Source	Unit of Measure	Multiplier
Coal (anthracite)	Lbs. (pounds)	12.545
Coal (anthracite)	MBtu (million Btu)	1000
Coal (anthracite)	KLbs. (thousand pounds)	12545
Coal (anthracite)	MLbs. (million pounds)	12545000
Coal (anthracite)	Tons	25090
Coal (bituminous)	Lbs. (pounds)	12.465
Coal (bituminous)	MBtu (million Btu)	1000
Coal (bituminous)	KLbs. (thousand pounds)	12465
Coal (bituminous)	MLbs. (million pounds)	12465000
Coal (bituminous)	Tons	24930
Coke	Lbs. (pounds)	12.4
Coke	MBtu (million Btu)	1000
Coke	KLbs. (thousand pounds)	12400
Coke	MLbs. (million pounds)	12400000
Coke	Tons	24800
Diesel	MBtu (million Btu)	1000
Diesel	Gallons	138.6905
Diesel	Liters	36.06
District Chilled Water	MBtu (million Btu)	1000
District Chilled Water	Ton Hours	12
District Hot Water	MBtu (million Btu)	1000
District Hot Water	Therms	100
District Steam	MBtu (million Btu)	1000
District Steam	Lbs. (pounds)	1,194
District Steam	KLbs. (thousand pounds)	1194
District Steam	MLbs. (million pounds)	1194000
District Steam	Therms	100
Electricity - Grid	kWh (thousand Watt-hours)	3.412
Electricity - Grid	MWh (million Watt-hours)	3412
Electricity - Grid	MBtu (million Btu)	1000
Electricity - Onsite Renewables (solar and wind)	kWh (thousand Watt-hours)	3.412
Electricity - Onsite Renewables (solar and wind)	MWh (million Watt-hours)	3412
Electricity - Onsite Renewables (solar and wind)	MBtu (million Btu)	1000
Fuel Oil (No. 1)	MBtu (million Btu)	1000
Fuel Oil (No. 1)	Gallons	1,386.905
Fuel Oil (No. 1)	Liters	36.06
Fuel Oil (No. 2)	MBtu (million Btu)	1000
Fuel Oil (No. 2)	Gallons	138.6905
Fuel Oil (No. 2)	Liters	36.06
Fuel Oil (No. 4)	MBtu (million Btu)	1000
Fuel Oil (No. 4)	Gallons	138.6905
Fuel Oil (No. 4)	Liters	36.06
Fuel Oil (No. 5 & No. 6)	MBtu (million Btu)	1000
Fuel Oil (No. 5 & No. 6)	Gallons	149.6905
Fuel Oil (No. 5 & No. 6)	Liters	38.92
Kerosene	MBtu (million Btu)	1000
Kerosene	Gallons	135
Kerosene	Liters	35.1
Liquid Propane	MBtu (million Btu)	1000
Liquid Propane	kcf (thousand cubic feet)	2518.5
Liquid Propane	Gallons	91.6476
Liquid Propane	cf (cubic feet)	2,5185
Liquid Propane	Liters	23.828
Natural Gas	MBtu (million Btu)	1000
Natural Gas	ccf (hundred cubic feet)	102.9
Natural Gas	therms	100
Natural Gas	kcf (thousand cubic feet)	1029
Natural Gas	cf (cubic feet)	1,029
Natural Gas	MCF (million cubic feet)	1029000
Natural Gas	Cubic Meters	36.339
Propane	MBtu (million Btu)	1000
Propane	kcf (thousand cubic feet)	1000.06
Propane	Gallons	91.6476
Propane	cf (cubic feet)	2,5185
Propane	Liters	23.828
Wood	MBtu (million Btu)	1000
Wood	Tons	15380

School Buildings	\$821,991
Municipal Buildings	\$253,632
Transportation	\$242,154
Street Lighting	\$186,143
Sewer Stations	\$95,253
Other	\$7,511
	\$1,606,684

Town of Barrington Energy Survey - FY 2009 Cost

