

Energy Efficiency Standards Benefits -- 2006 Model Bill

Massachusetts															
Summary of Benefits by Product				2020							2030				
Products	Annual Savings per Unit	Incremental Cost per Unit	Annual Energy Savings from One Year's Sales	Energy Savings	Summer Peak Capacity Reduction	Direct and Indirect Natural Gas Savings ¹	Value of Bill Savings ²	Emissions Reductions			Energy Savings	Summer Peak Capacity Reduction	Value of Bill Savings ²	Pay Back Period	Net Present Value ³
								Carbon	NOx	SO2					
	kWh or [therms]	\$	GWh [Million CF]	GWh [Million CF]	MW	Million CF	\$Million	1000 MT	Metric Tons	Metric Tons	GWh [Million CF]	MW	\$Million	Years	\$Million (2005\$)
Bottle-type water dispensers	266	12	0.7	5.9	0.8	30.1	0.8	1.3	5.5	7.2	5.9	0.8	0.8	0.4	6.9
Commercial boilers ⁴	[268]	2,968	[13.6]	[115.6]	NA	115.6	1.5	2.0	7.9	0.0	[251.6]	NA	3.4	4.4	17.1
Commercial hot food holding cabinets	1,815	453	0.7	8.4	2.8	42.8	1.1	1.9	7.8	10.2	10.1	3.3	1.3	1.9	8.6
Compact audio products	53	1	8.1	40.6	5.6	205.5	5.4	8.9	37.6	49.1	40.6	5.6	5.4	0.1	52.9
DVD players and recorders	11	1	1.2	5.9	0.8	29.8	0.8	1.3	5.5	7.1	5.9	0.8	0.8	0.7	6.6
Liquid-immersed distribution transformers	6	2	15.4	192.2	26.5	973.4	24.6	42.1	178.3	232.6	345.9	47.7	44.3	3.2	281.6
Medium voltage dry-type distribution transformers	6/kVA	2/kVA	0.9	11.8	1.6	59.8	1.5	2.6	10.9	14.3	21.2	2.9	2.7	2.6	18.1
Metal halide lamp fixtures	307	30	16.2	202.6	66.3	1,026.4	25.9	44.4	188.0	245.3	324.2	106.1	41.5	0.8	286.7
Pool heaters ⁴	[58]	295	[28.4]	[241.1]	NA	241.1	3.1	4.1	16.5	0.0	[425.5]	NA	5.5	4.1	20.2
Portable electric spas (hot tubs)	250	100	0.5	5.4	1.3	27.3	0.7	1.2	5.0	6.5	5.4	1.3	0.7	3.0	4.0
Residential furnaces and residential boilers ^{4,5}	651	100	18.8	160.0	7.5	1,693.3	46.6	65.8	271.2	193.9	338.8	16.0	98.7	1.2	514.0
	[88]	[373]	[74.1]	[882.9]							[1884.5]			[3]	
Residential pool pumps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Single-voltage external AC to DC power supplies	4	0.5	16.4	114.9	15.9	581.8	15.2	25.2	106.6	139.1	114.9	15.9	15.2	0.9	125.2
State-regulated incandescent reflector lamps	61	1	138.4	130.1	32.1	659.0	16.7	28.5	120.7	157.5	130.1	32.1	16.7	0.1	168.3
Walk-in refrigerators and freezers	8,220	957	10.1	121.1	28.2	613.6	15.5	26.6	112.4	146.6	121.1	28.2	15.5	0.9	121.5
Total			228	999	189	6,299	159	256	1,074	1,210	1,464	261	252		1,632
[natural gas]			[116.1]	[1239.6]							[2561.6]				

Notes:

- ¹ Direct natural gas savings are savings from use of more efficient natural gas appliances. Indirect natural gas savings are reductions in natural gas at power plants due to use of more efficient electric appliances. Indirect gas savings assume that half the power saved at power plants would be generated with natural gas.
- ² Value of energy savings is based on energy savings and average state energy prices. This value does not take account of the incremental cost of more efficient products.
- ³ Net present value is the total monetary value of bill savings achieved by products sold under the standards between now and 2030 minus the total incremental product cost incurred by purchasers as a result of the standards over the same period expressed in current dollars. Both costs and savings are discounted using a 5% real discount rate.
- ⁴ Commercial boilers, pool heaters, and residential boilers and furnaces save natural gas. Gas savings are expressed in cubic feet and enclosed in brackets to distinguish from electricity savings.
- ⁵ Residential furnaces and boilers include both natural gas and oil furnaces and boilers as well as furnace fans. Annual savings per unit, incremental cost per unit and pay back period shown here are just for gas furnaces and furnace fans, which are the most common of these products. For these calculations, gas furnace values are enclosed in brackets and listed below furnace fan values.