

	Data	Units	Comments	Source
<b>Typical Mid-size office</b>				
Typical size	4,982	m2	Midsize office	<a href="http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html">http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html</a>
Typical size	53,000	sq ft	Midsize office	<a href="http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html">http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html</a>
Electricity Usage	796,711	kWh/yr	Midsize office	<a href="http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html">http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html</a>
Gas Usage (Joules)	129,940	MJ/yr	Midsize office	<a href="http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html">http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html</a>
<b>Typical Utility Cost</b>				
Gas conversion	0.00947817	therms/MJ		<a href="http://www.unitconversion.org/energy/joules-to-therms-conversion.html">http://www.unitconversion.org/energy/joules-to-therms-conversion.html</a>
Gas Usage (therms)	1,232	therms/yr		
Total utility cost intensity	24	\$/m2		<a href="http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html">http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html</a>
Total utility cost	\$ 119,568	\$/yr		<a href="http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html">http://www1.eere.energy.gov/buildings/commercial_initiative/before_1980.html</a>
<b>Annual Financial Savings with BEMS</b>				
BEMS cost	0.15	\$/sq ft		
BEMS total cost	\$ 7,950			
Efficiency gain	15%			
Savings per year	\$ 17,935		flat savings projection. Does not factor demand charges with flat reduction	
Utility cost post BEMS	\$ 101,633			
<b>Annual Usage &amp; Savings with BEMS</b>				
Electricity avoided	119,506.65	kWh/yr/building		
Gas avoided (MJ)	19,491.00	MJ/yr/building		
Gas avoided (therms)	184.74	therms/yr/building		
Electricity avoided per sq ft	2.25	kWh/yr/sq ft		
Gas avoided per sq ft (MJ)	0.37	MJ/yr/sq ft		
Gas avoided per sq ft (therms)	0.003486	therms/yr/sq ft		
Electricity Usage after BEMS	677,204.35	kWh/yr		
Gas Usage after BEMS	110,449.00	MJ/yr		
<b>GHG Savings with BEMS</b>				
Grid electricity emissions factor	0.5240	lbs CO2/kWh		<a href="http://www.pge.com/about/environment/calculator/assumptions.shtml">http://www.pge.com/about/environment/calculator/assumptions.shtml</a>
CO2 Avoided for electricity (lbs)	62,621	lbs CO2/year/building		
Conversion	2,204.62	lbs/metric tons	Conversion of lbs of CO2e to MtCO2e	<a href="https://www.google.com/search?sourceid=chrome&amp;ie=UTF-">https://www.google.com/search?sourceid=chrome&amp;ie=UTF-</a>
CO2 Avoided for electricity (Mt)	28.40	Mt CO2/yr/building		
CO2 intensity of NG	13.45	lbs CO2/Therm	PG&E emissions rate (natural gas): 13.446 lbs CO2 per therm	<a href="http://www.pge.com/about/environment/calculator/assumptions.shtml">http://www.pge.com/about/environment/calculator/assumptions.shtml</a>
CO2 avoided from gas (lbs)	2,484.00	lbs CO2/yr/building		
CO2 avoided from gas (Mt)	1.13	Mt CO2/yr/building		
<b>Total CO2 avoided/typical midsize building</b>	<b>29.53</b>	<b>Mt CO2/yr</b>		
<b>Total CO2 avoided/sq ft</b>	<b>0.0005572</b>	<b>Mt CO2/yr</b>		
South Bay Class B	1,750		all types	Costar.com
South Bay pre-1990 Class B	1,200		all types	Costar.com
Percent of Class B pre-1990	0.69			
<b>Total CO2 avoided, all South Bay pre-1990 Class B buildings</b>	<b>35,437.62</b>	<b>Mt CO2/yr</b>		
Mid-size office floor space	46,702,982	sq ft	CBECS & jobs projection	
% pre 1990, Class B	31%		~46% of SF, SV, EB is Class B and 69% of Class B is pre 1990	<a href="http://www.sf-planning.org/ftp/CDG/docs/transit_center/R_TransitCenter_051308_Final.pdf">http://www.sf-planning.org/ftp/CDG/docs/transit_center/R_TransitCenter_051308_Final.pdf</a>
Midsize pre1990 class B	14,709,112	sq ft		
<b>Across all Bay Area pre-1990 class B office</b>				
Electricity avoided	<b>33,167</b>	<b>MWh/yr</b>	Midsize pre1990 class B	
Gas avoided	<b>51,271</b>	<b>therms/yr</b>	Midsize pre1990 class B	
CO2 avoided	<b>8,196</b>	<b>Mt CO2/yr</b>	Midsize pre1990 class B	