

City of Hawthorne – Energy Action Plan 2010

Long Term Vision

The City has achieved Gold level status through the Energy Leader Partnership Program, a program developed by SCE, the Gas Company and the South Bay Council of Governments. Gold level status was earned via a 10% overall reduction in energy consumption by the City. This reflects significant energy reduction measures taken by the City, including a City-wide LED traffic signal retrofit.

The City of Hawthorne is working towards a Green House Gas emissions reduction to 1990 levels by the year 2020 per the City's upcoming Climate Action Plan. This requires a comprehensive strategy of measures but will focus on energy reduction as energy use is the City's largest source of emissions. The Energy Leader Partnership Program, as a compliment to other strategies, is guiding the City towards its energy reduction goals. The City is working toward a total 25% reduction in energy consumption in hopes of reaching Platinum status in the Energy Leader Partnership.

Objectives

Our primary objective is to implement energy efficiency measures that make fiscal sense for the City and community while simultaneously keeping pace with the goals of the City's Climate Action Plan. The City has consistently implemented small scale energy-efficiency projects as well as a number of larger projects to achieve its goals. The City has made incremental improvements to facility lighting and HVAC and has positioned itself to implement larger measures, such as a 210kW solar power system on its Memorial Center building.

Baseline Energy Use

As can be seen in the chart below, energy use is the largest source of GHG emissions for the City, far outpacing natural gas or diesel fuel use. Though largely made up of smaller facilities, the City does have a few larger facilities that have been targeted for energy efficiency improvements.

Sources of Emissions 2005	Source	Equiv CO ₂ (tonnes)	Equiv CO ₂ (%)	Energy (MMBtu)	Energy/ Fuel Use	Energy/ Fuel Use Cost (\$)
Buildings and Facilities						
Ainsworth Center	Electricity	60	1.2	669	196,140 kWh	\$29,356
Castle Recreation Building	Electricity	3	0.1	32	9,341 kWh	\$1,327
	Natural Gas	3	0.1	50	497 therms	\$670
City Hall	Electricity	216	4.3	2424	70,218 kWh	\$93,237
	Natural Gas	44	0.9	828	8,277 therms	\$8,289
City Yard Equipment Division	Electricity	12	0.3	140	41,052 kWh	\$5,921
	Natural Gas	7	0.1	128	1,282 therms	\$1,586
CNG Site	Electricity	2	0	22	6,360 kWh	\$4,098
	Natural Gas	49	1.0	927	9,274 therms	\$8,033
Hawthorne Pool	Electricity	81	1.6	910	266,720 kWh	\$37,988
	Natural Gas	18	0.4	346	3,462 therms	\$3,308
Memorial Center	Electricity	83	1.7	935	273,840 kWh	\$45,826
	Natural Gas	66	1.3	1233	12,333 therms	\$12,311
Old Police Department	Electricity	36	0.7	408	119,498 kWh	\$18,375
	Natural Gas	8	0.2	143	1,431 therms	\$1,697
Police Department	Electricity	427	8.6	4795	1,404,872 kWh	\$161,374
	Natural Gas	82	1.7	1546	15,462 therms	\$14,793
SBWIB	Electricity	147	3.0	1657	485,520 kWh	\$56,669
Sherman Lodge	Electricity	4	0.1	42	12,348 kWh	\$2,007
Street Division Facility	Electricity	8	0.2	86	25,314 kWh	\$3,607
Generators:						
City Hall Generator	Diesel	0	0	3	20 gal	n/a
Police Generator	Diesel	2	0	27	197 gal	n/a
Parks:						

Park Maintenance Yard	Electricity	3	0.1	37	10,728 kWh	\$1,582
Eucalyptus Park	Electricity	17	0.3	187	54,820 kWh	\$8,494
Glasgow Park	Electricity	4	0.1	46	13,345 kWh	\$2,195
Holy Glen Park	Electricity	12	0.2	134	39,277 kWh	\$9,903
	Natural Gas	2	0	31	308 therms	\$463
Ramona Park	Electricity	0	0	4	1,276 kWh	\$344
Snack Shack	Natural Gas	0	0.0	6	62 therms	\$191
Tennis Courts	Electricity	7	0.1	79	23,226 kWh	\$6,317
Thorpe Park Facilities	Electricity	1	0	12	3,526 kWh	\$1,002
	Natural Gas	2	0	46	462 therms	\$773
Youth Camp Facilities	Electricity	13	0.3	146	42,840 kWh	\$11,104
Building 9	Natural Gas	1	0.0	28	277 therms	\$59
Streetlights & Traffic Signals						
Traffic Signals/Controllers	Electricity	196	3.9	2193	644,313 kWh	\$67,679
Streetlights:						
Streetlight City Owned	Electricity	137	2.7	1536	450,092 kWh	\$34,442
Streetlight SCE Owned	Electricity	789	15.8	8869	2,598,700 kWh	\$396,435
Park Lighting:						
Park & Other Outdoor Lighting	Electricity	40	0.8	448	131,232 kWh	\$21,747
Airport Facilities						
Airport	Electricity	34	0.7	377	110,351 kWh	\$16,520

Highest Users

We have addressed these largest users in a variety of ways. The three facilities with the largest consumption have been subject to various levels of energy retrofits and all three have received energy audits through the Energy Leader Partnership Program. Two of the buildings are currently part of the Critical Peak Pricing program through SCE and the third, the Memorial Center, recently installed a 210kW solar power system. This solar power system will not only reduce energy consumption at the site but also increases the City's use of alternative/renewable energy and reduces carbon emissions.

Reduction Goals

As detailed in the City's Carbon Emissions Inventory and the forthcoming Climate Action Plan, the City will be reducing carbon emissions to 1990 levels by the year 2020. Additionally, the City has achieved Gold level status through the Energy Leader Partnership Program. Both the emissions reduction and the Gold status require significant energy reduction strategies.

With the installation of the solar power system on the Memorial Center, the City anticipates an energy consumption savings of nearly 10% from City facilities. The City must achieve a 15% reduction to move from Gold to Platinum status in the Energy Leader Partnership and this solar system will do much to get us to that goal. We have increased our already active outreach and education programs both within the City and the community at large and continue to work closely with SCE to do more.

Projects

The solar project is our most recent energy-related project. We will continue with our regular installation of more efficient lighting and equipment and are in the initial stages of planning some larger conservation projects.

Funding

The City is actively seeking new funding opportunities. The solar installation was made possible in part by Federal stimulus funds. The City also works closely with SCE on incentives for projects both big and small. Savings from these various conservation projects may be used to help fund additional projects.

Policies

The City is developing its Climate Action Plan in response to its carbon emissions inventory. This document will provide a road map detailing policies, projects, and strategies for both the City itself and the community. Though addressing emissions concerns of all kinds, energy consumption will be a significant aspect of the plan. This will guide the City's need for energy retrofits, renewable energy sources, and conservation measures with the goal of reducing energy consumption by an additional 15% and overall emissions to 1990 levels by 2020.