

CITY OF CERRITOS

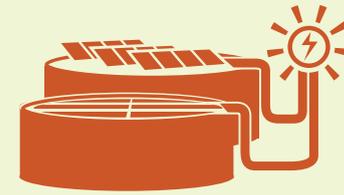


A proud tradition of environmental preservation

The City of Cerritos is committed to protecting the environment, improving residents' quality of life and promoting sustainability. The City's extensive and innovative green programs include solar energy projects, recycling programs and use of alternative fuels.



CITY OF CERRITOS
CORPORATE YARD



Photovoltaic systems generate 353,000 kilowatt hours annually

In 2010, a photovoltaic system consisting of 748 lightweight modules was installed on the roof of a water reservoir at the Cerritos Corporate Yard. The system was installed by Martifer Solar and the \$499,409 construction cost was funded by the American Recovery and Reinvestment Act of 2009, which sponsored the Energy Efficiency and Conservation Block Grant Program.

In 2011, a set of 588 high capacity solar panels was installed atop the second water reservoir at the Cerritos Corporate Yard.

The project also included the rehabilitation of the Cerritos Corporate Yard facility's original solar water-heating system. The \$725,959 project was funded through a \$380,600 grant from the Department of Energy, with the balance paid by the City. SunWize Technologies, Inc. fabricated and installed the system.

Photovoltaic RESERVOIR #1

HOW IT WORKS

1 PHOTOVOLTAIC (PV) PANELS

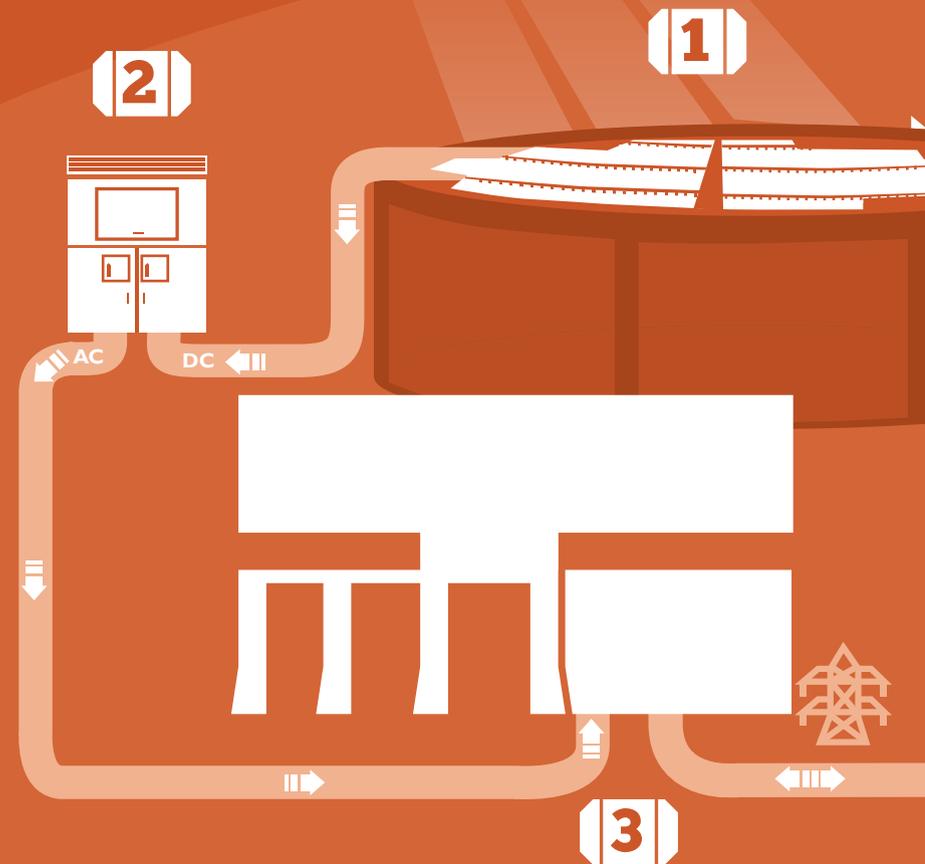
Solar panels on the first reservoir lay flat and cover most of the reservoir's roof. The panels convert the sunlight into direct current (DC) electricity.

2 DC TO AC

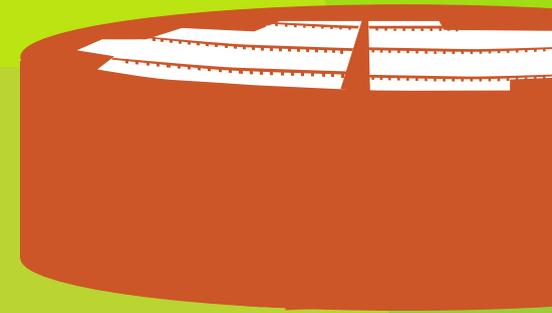
An inverter converts the electricity from DC to alternating current (AC).

3 USABLE ELECTRICITY

The power generated from these PV panels helps power the Corporate Yard offices. Any excess electricity is fed back to the grid in the form of a credit to the City and for other use.



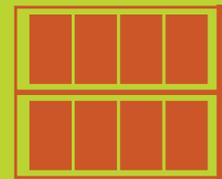
Photovoltaic RESERVOIR #1



GREEN BENEFITS

Minimal Construction

Panels apply directly on top:
no need for extra structural bracing



150,000 kWh saved per year
That's about what 20 households consume annually

**Generates power for
Corporate Yard offices**

FUNDING

**100% U.S. Dept.
of Energy Grant**

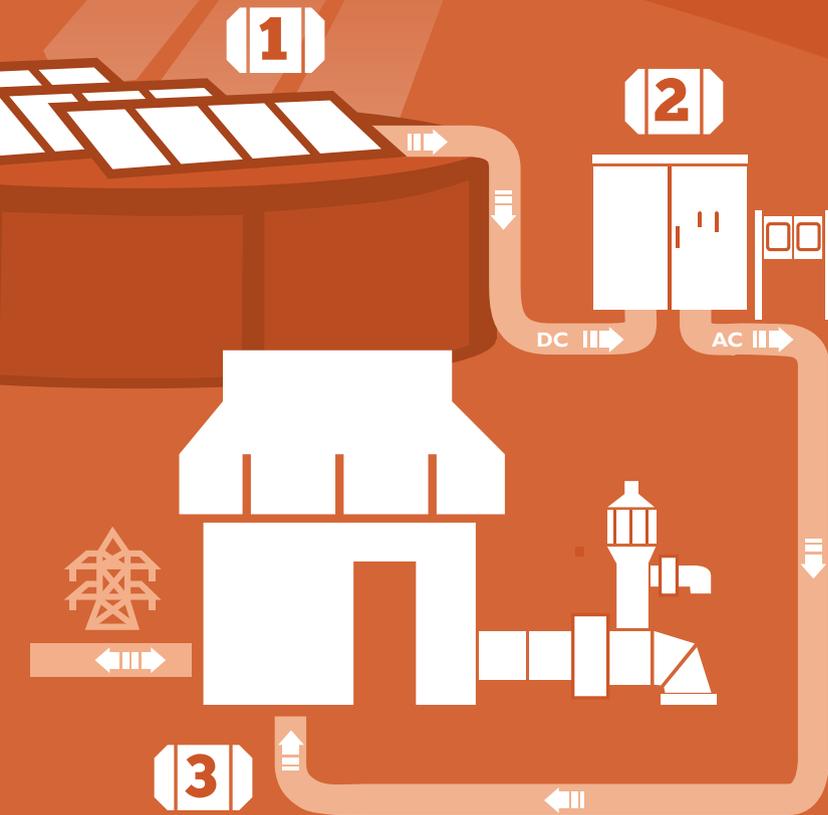
\$517,500

CONTRACTOR

MARTIFER
SOLAR

Photovoltaic RESERVOIR #2

HOW IT WORKS



1 PHOTOVOLTAIC (PV) PANELS

Solar panels on the second reservoir are angled at 10° to capture the sun's rays. The panels convert the sunlight into direct current (DC) electricity.

2 DC TO AC

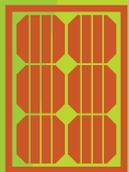
Since the well pump is powered on alternating current (AC), an inverter converts the electricity from DC to AC.

3 USABLE ELECTRICITY

The power generated from these PV panels helps power the well house. If the well pump is off while the panels generate electricity, the excess electricity is fed back to the grid in the form of a credit to the City and for other use.

Photovoltaic RESERVOIR #2

GREEN BENEFITS



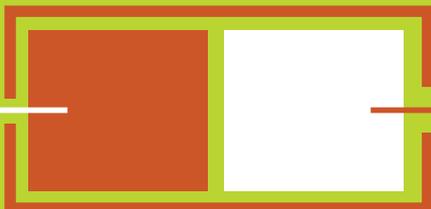
Generates power
for the well house

203,000 kWh saved per year

That's about what 27 households consume annually

FUNDING

50% City
of Cerritos



50% U.S.
Department of
Energy Grant

\$725,959

CONTRACTOR



SunWize

Solar Electric Solutions



Energy efficiencies at the Cerritos Corporate Yard

As the Cerritos Corporate Yard is one of the City's oldest facilities, the City has implemented several programs to transition the site to more efficient energy use. All landscaping at the Cerritos Corporate Yard is irrigated with recycled water; a solar energy system supplies the office's hot water needs and augments the HVAC system; and all external high-pressure sodium light fixtures have been replaced with low-energy LED lights.

Green Cerritos Corporate Yard

CNG

**COMPRESSED
NATURAL GAS**

Various City vehicles have been replaced with Compressed Natural Gas (CNG) vehicles. The City constructed a CNG fueling station at the Cerritos Corporate Yard in 2007.

Natural gas is the cleanest of all fossil fuels and has less harmful emissions

than oil and coal (namely nitrogen oxides and sulfur dioxide)



Emissions in pounds per Billion BTU of Energy Output
Energy Information Administration—Natural Gas Issues and Trends, 1998

CNG fuel costs about 40% less than its gasoline or diesel energy equivalent

\$1.93

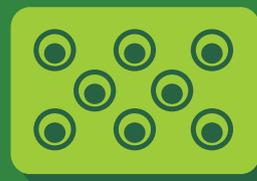
\$3.08

\$3.45

CNG



National Average Price for fuel, Clean Cities Alternative Fuel Price Report, Jan. 2011, U.S. Dept. of Energy



**LED
LIGHTING**

All external high-pressure sodium light fixtures have been replaced with low-energy LED lights, which offer many benefits:

Uses only 55% of the wattage

as high pressure sodium (HPS) lights at the same brightness



Lasts up to 50,000 hours

or about three times longer than HPS lights



LEDs also...

have less CO₂ emission,
require no maintenance,
and burn cool



Green Cerritos Corporate Yard



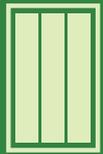
SOLAR-HEATED WATER

A solar energy system atop the Corporate Yard supplies the office's hot water needs and augments the HVAC system.



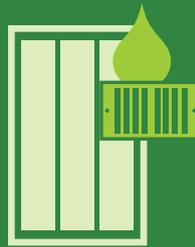
RECYCLED WATER

All landscaping at the Cerritos Corporate Yard is irrigated with recycled water.



**30% Heat
Cost Savings**
for the Corporate Yard

Helps with the
hot water and
HVAC system



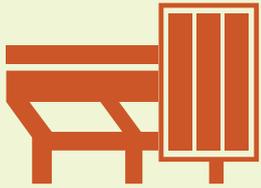
**Drinking water and
funds are saved**
by using recycled water



**Nutrients great
for plant life**

are in recycled water as it contains higher levels of potassium, phosphorus and nitrogen.





First solar-heated City Hall in the United States

In 1978, Cerritos dedicated the nation's first solar-heated City Hall complex. The solar energy system supplies heat and hot water for the building. There are approximately 1,408 square feet of solar collection panels on City Hall's roof, which assist in circulating water to collect heat and preserve the sun's thermal energy.



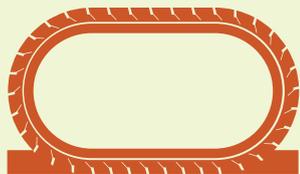


Energy efficient vehicles

The City has prioritized replacing existing City vehicles with new Compressed Natural Gas (CNG) vehicles. CNG is one of the cleanest burning alternative fuels. In 2007, the City constructed a CNG fueling station at the Cerritos Corporate Yard. The City has purchased four CNG fleet vehicles through clean air grants. In addition, all street sweeping and trash collection vehicles in Cerritos utilize CNG.

The City's Cerritos on Wheels (COW) fixed-route transportation service uses propane vehicles rather than gasoline or diesel vehicles. Propane gas is a clean-burning fuel that increases energy efficiency and provides convenience and performance benefits to the City.





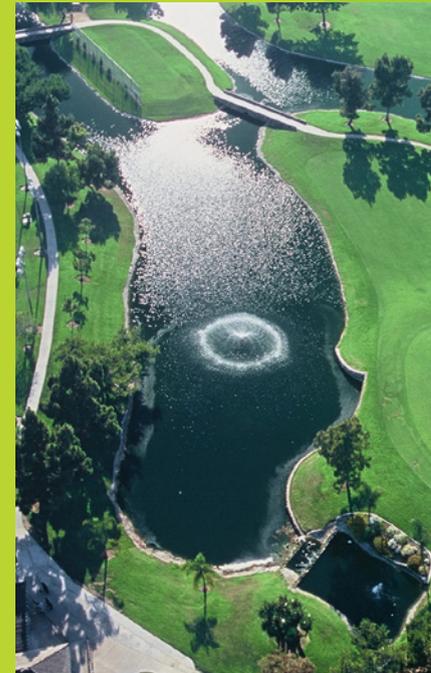
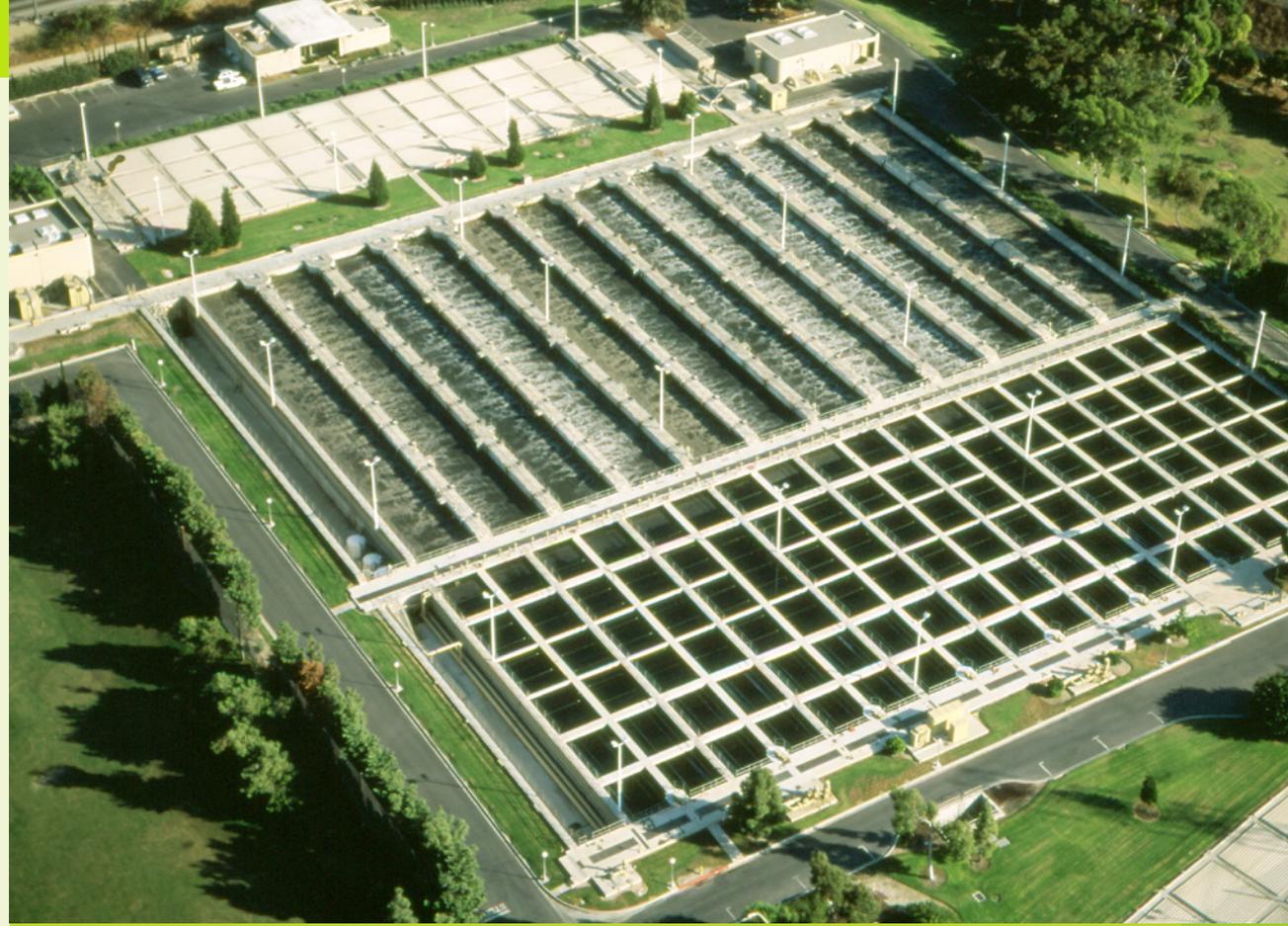
Tires to tracks

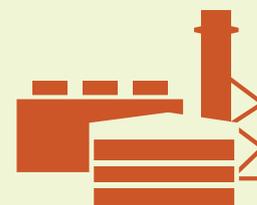
The City constructed rubberized tracks made from recycled tires at Liberty Park and Cerritos Park East. The projects recycled thousands of tires and resulted in tracks which last longer and are more pliable. The rubberized material also provides a comfortable, springy surface for walking and jogging.



Cerritos Recycled Water Distribution System

The City has an extensive recycled water distribution system that was recognized with a City Livability Outstanding Achievement Award from the U.S. Conference of Mayors in 2009. The Cerritos recycled water distribution system includes 25 miles of water lines citywide. The waste water, originating from industries, businesses and homes, is treated by a three-stage process by the Sanitation District before being used for irrigation. The City irrigates more than 200 acres of City-owned property, including most parks, parkways and medians, with recycled water. The use of recycled water saves approximately 815 million gallons of drinking water per year. In addition to City-owned property, the recycled water is also used for landscape irrigation at schools, a community college, a county park, a neighboring city's park, a cemetery, freeway landscaping and privately owned landscaped areas, such as the Cerritos Towne Center and commercial nurseries. The City's Iron-Wood Nine Golf Course was the first facility in the City to use recycled water, beginning in 1978.





Magnolia Power Plant provides clean energy

In 2001, the Cerritos Redevelopment Agency entered into an agreement with six other Southern California cities to construct an energy generation facility, the Magnolia Power Plant. The plant provides clean, reliable and lower-cost electricity resources for Cerritos traffic signals, park lighting, water wells and various City facilities. In addition, the Magnolia Power Plant provides electricity to major businesses in the City of Cerritos. The plant uses state-of-the-art technology for natural gas fired power plants, is an environmentally friendly facility for the generation of electricity, and assists in providing a long term electricity supply in Cerritos.





Green Cerritos program promotes green development

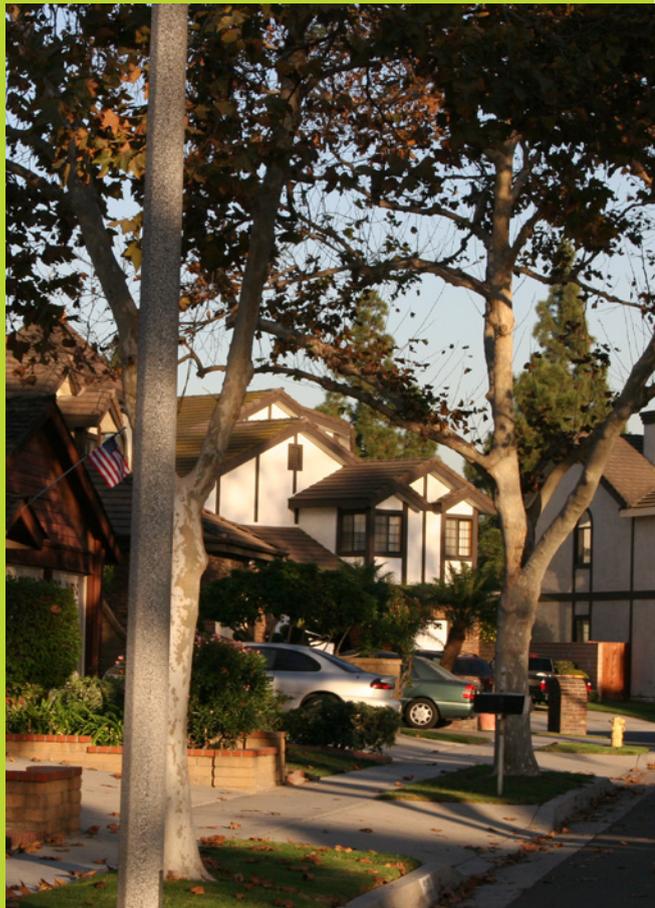
The City established a Green Cerritos program in 2009 to provide information and resources to encourage the development of a green environment made up of environmentally friendly buildings and landscaping. The Green Cerritos program also provides incentives for green residential renovation projects and for green commercial, industrial and new residential construction projects.





**Residential recycling
program diverts waste
from landfills**

In 2008, the City implemented a new residential recycling program. The program provides three barrels so waste can be sorted into recyclables, green waste and trash. With this program, more than 60 percent of trash is recycled and diverted from landfills.



Tree City USA honors

Cerritos has been named a Tree City USA every year since 1998. The honor is given by the National Arbor Day Foundation, the National Association of State Foresters and the USDA Forest Service to select cities for their outstanding community forestry programs and commitment to their urban forests. Since the City's incorporation in 1956, the Public Works Department has planted more than 30,000 trees along City sidewalks and medians, next to freeway ramps and throughout the City's many parks and recreation facilities. In Cerritos, nearly every home has a City tree planted in its parkway. Approximately 250 young trees are planted each year to replace those that are damaged by storms, age or accidents. Trees help clean the air and have also been shown to increase property values.

Green Program Highlights



Photovoltaic systems generate 353,000 kilowatt hours annually



Cerritos Recycled Water Distribution System saves approximately 815 million gallons of drinking water per year



Compressed Natural Gas (CNG) fleet of vehicles and a CNG filling station protect the environment as CNG is one of the cleanest burning alternative fuels



Cerritos City Hall's solar energy system was the first in the United States and provides most of the energy required for space heating and water heating at the facility



Magnolia Power Plant is an environmentally friendly natural-gas fired power plant that provides clean, reliable and lower-cost electricity resources



Residential recycling program: 60 percent of trash is recycled and diverted from landfills



Green Cerritos program encourages environmentally friendly construction and landscaping



Cerritos has been named a **Tree City USA** every year since 1998



CITY OF CERRITOS

Mayor Carol K. Chen

Mayor Pro Tem Jim Edwards

Councilmember Bruce W. Barrows

Councilmember Joseph Cho, Ph.D.

Councilmember Mark E. Pulido