



# **City of West Covina Energy Action Plan**

Approved on \_\_\_\_\_

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## **Executive Summary**

With the unprecedented energy challenges resulting from increased import dependency, concerns on supply of fossil fuels worldwide, and an undoubted public interest in energy conservation and sustainability, it is clear that action needs to be taken. In order to address these concerns, the City of West Covina is committed to reducing local energy use through the enactment of policies, strategies, and actions that are both cost-effective and environmentally sound.

The purpose of this Energy Action Plan is to guide the City of West Covina toward attainable conservation goals that may also significantly reduce the impact of greenhouse gas emissions within the community.

Those goals include:

- Educating the public about energy saving techniques and programs.
- Promoting and creating energy conservation opportunities and programs.
- Installing environmentally benign, renewable and reliable energy facilities.
- Participating in alliances with local businesses and with other agencies.
- Pursuing and performing local and higher funding opportunities.
- Coordinating other City policies, programs, and ordinances to become compatible with Sustainable Community goals.

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## **SECTION 1 – INTRODUCTION**

In 2008, the annual average energy use at local municipal facilities was reported by the federal government to be in excess of 121,500 btu/sq ft—making them the eighth highest energy consuming classification, out of the report’s twelve listed types of non-residential facilities.

Of all available choices, Federal and State energy policy agencies now recommend the retrofit and replacement of obsolete equipment and energy-use systems as the best method of reducing energy consumption at existing buildings while maximizing available funds and resources.

Those civic improvement projects gain equally significant benefit from accompanying reductions in Greenhouse Gas (GHG) emissions and from the lowering of local community tax burdens used to fund each local jurisdiction's long term operational costs.

The City of West Covina is committed to perfecting an Energy Action Plan that will address the future environmental and fiscal impacts of energy usage in municipal facilities, thereby promoting good stewardship through energy conservation and efficiency practices.

### **1.1 History of Energy Planning in West Covina**

Beginning in 1993, the city performed multiple energy-efficiency projects through its Capital Improvement Program, using a variety of funding mechanisms provided through both County and State agencies. The realized benefits of that work resulted in energy savings to the local community of more than twelve million kilowatt hours and cost savings in excess of \$1,300,000, for retrofit work accomplished through the year 2009.

In 2001, the City came into partnership with the California Energy Commission, a State agency that has been providing the City with funding and professional support as it achieves its conservation goals. Since 2006, the City of West Covina has also participated in the San Gabriel Valley Energy Wise Partnership (SGVEWP), with Southern California Edison and the San Gabriel Valley Council of Governments. This program, which is funded by the California Public Utilities Commission, is intended to assist cities in identifying and undertaking municipal energy-efficiency retrofit projects.

### **1.2 Other Agency Goals**

California has enacted new legislation (“Assembly Bill 32”) with a goal for the state to reduce its own greenhouse gas emissions to 1990 levels by the year 2020. The greenhouse gases targeted by this legislation are water vapor, carbon dioxide, methane, nitrous oxide, and ozone; substances that, at naturally occurring levels, are beneficial to the environment.

Pollutant levels of Carbon Dioxide gas being released through commercial, industrial and residential burned fuels are now recognized as the greatest component of the danger addressed by this legislation. The goal of reducing that threat will be the

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primary environmental focus of this Energy Action Plan.

Aggressive support and funding from both State and County jurisdictions will be sought and encouraged to achieve the most effective and successful growth of this plan—an effort dedicated to encourage greater community participation off-site, through the promotion of documented program successes.

## **SECTION 2 – CITY OF WEST COVINA ENERGY USE**

### **2.1 City of West Covina Baseline Municipal Energy Use**

2004 Municipal Operations Energy Usage		
<b>Municipal Facility</b>	<b>Energy Usage (kWh)</b>	<b>Annual Cost</b>
City Hall	3,294,912	333,255
Senior Center	314,520	44,484
Parks	1,387,034	229,513
Street Lights	936,100	74,159
Traffic Lights	590,563	70,020

### **2.2 Highest Users (2008 measured annual use; in kWh)**

1. Civic Center: 2,561,897<sup>1</sup>
2. Cameron Park Community Center: 373,240
3. City Maintenance Yard: 366,300
4. Senior Citizen’s Center: 292,350
5. Palmview Park Community Center: 123,300
6. Shadow Oak Park Community Center: 118,520
7. Fire Station No. 2: 100,680

### **2.3 Current Energy Programs/Policies**

In order to promote, support, and implement energy efficiency and conservation programs within the City, the following policy goals have been identified:

- a. Surpass the energy efficiency standards of the California Building Code for proposed and existing municipal buildings and facilities.
- b. Provide on-line (Internet accessible) guidance and assistance to Homeowners and Builders to make compliance with new Title 24 energy requirements as effective and efficient as possible.
- c. Coordinate City Efficiency goals and programs with the efficiency projects and incentive programs of higher jurisdictional agencies. Expand the City’s Residential Solar Power permit-waiver program to include other alternative energy applications, Consider fee adjustments or rebates to local businesses and residents in support of those efforts.

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<sup>1</sup> Note: The Los Angeles County Superior Courts share parking and jail facilities at this site. The City of West Covina’s supporting role required for the County’s continuing operations impacts efforts to implement energy-efficiency projects and to fully realize the associated savings.

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- d. Modify the City's lighting standards to encourage the application of "Dark Skies" goals (discourage excessive and spill-over lighting).
  - e. Develop an ordinance to encourage energy efficiency upgrades and improvements in existing buildings. Empower the real estate community and other stakeholders to participate in current financial incentives and energy-retrofit opportunities prior to sale.
  - f. Promote energy and water conservation design features in all major renovation and development projects.
  - g. Encourage pool covers and solar pool heating systems in place of conventional methods for heating residential swimming pools.
  - h. Encourage the efficient use of water and reduce urban runoff through the use of natural drainage, drought tolerant landscaping, and efficient irrigation systems in major renovation and new development projects. Recommend the incorporation of these practices within the approval processes of other local and regional departments and jurisdictions.
  - i. Promote the coordination of landscapers and residential Solar Power contractors to minimize heat build up at existing and new homes, through more effective shading design.
  - j. Continue the planned expansion of the City's vehicle fleet with less polluting hybrid vehicles that are more energy efficient.
  - k. Continue to replace the City's existing diesel fuel burning Rapid Transit bus fleet with less polluting natural-gas fueled vehicles.
  - l. Explore and implement other energy conservation programs and measures that may prove beneficial to West Covina's economy and environment.

### **SECTION 3 – CITY OF WEST COVINA TARGET REDUCTION GOALS**

In 2009, the City of West Covina, as part of the U.S. Department of Energy's Energy and Efficiency and Conservation Block Grant (EECBG) program, developed an Energy Efficiency and Conservation Strategy. This plan identified the following energy-related principles intended to guide policy formation:

- Enhance the general quality of life through energy strategies that will benefit the community.
- Promote ecologically friendly propositions that create a healthy environment.
- Promote good stewardship through energy conservation and efficiency practices.
- Support opportunities for local economic vitality.

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- Emphasize sustainable/renewable power sources.
  - Favor locally distributed power opportunities.

Additionally, the EECS identified the following assets, opportunities and barriers in developing an energy action plan:

- **Assets** include the active participation and interest of the local populace; local organizations; local schools; local media; local energy businesses; local builders; receptive City, State, and Federal leadership; nearby governments and agencies with experience; professional and trade schools and organizations; and the City of West Covina's financial management skills.
- **Opportunities** include West Covina's sunny climate; the "green building" movement; interest in energy conservation and photovoltaics; City bonding capacity; regional alliances; the SGVEP and other organizations providing free/low-cost technical consulting services; State and Federal grants; private financing opportunities; strong local infrastructure that draws private development firms; and newly-funded residential and commercial retrofit programs.
- **Barriers** include opponents of technological change; bureaucratic-inertia and conflicting regulatory agencies; the public's resistance to perceived cost increases; political considerations; lack of available government staff; State and Federal regulatory uncertainties; lack of public knowledge about existing programs; subsidy programs that are not aligned with local goals; and project performance time limits.

As a result of these policy principles and environmental assessment, the City of West Covina identified the following goals:

1. Local business community participation rate of 5% by not later than the year 2014.
2. Local homeowner participation rate of 15% by not later than the year 2013.
3. Energy-use reductions at City buildings of at least 30% by the year 2012 (1994 baseline).

#### **SECTION 4 – CITY OF WEST COVINA ACTION STEPS**

The City recognizes that further development and planning is required before a perfected action plan item can be implemented. To serve this purpose, an interim, ad-hoc Energy Committee may be created by the City Council who will further develop plans and recommendations for implementation. The first order of business of the new Energy Committee shall be to develop and submit to Council a new "Green Building Ordinance" for adoption. The ordinance shall include or address relevant action items recommended by relevant County, State and Federal regulatory agencies, as determined by the Energy Committee.

The City is also participating in the SGVCOG's effort, funded through the SCE California Long-Term Energy Efficiency Strategic Plan solicitation, to develop robust energy action

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plans that will include both municipal facility and community-wide assessment and planning. Due to the City of West Covina's Gold Level partnership status in the SGVEWP, the completion of its EAP will be prioritized and may be underway as soon as November/December 2011.

#### **4.1 Municipal Facility Energy Efficiency Projects**

- City Hall, Senior Center & PD HVAC Retrofits (*Projects Completed in 2007 and 2008*)
  - kWh Savings: 748,000
  - kW Savings: 57.5
- City Hall Window Solar Film (*Project Completed 2010*)
  - kWh Savings: 22,762
  - kW Savings: 14.14
- Cameron Park Community Center Solar Film (*Project Completed 2010*)
  - kWh Savings: 13,500
  - kW Savings: 8.0
- City Wide HVAC Units Retrofit (13 buildings) (*Project Completed 2010*)
  - kWh Savings: 239,000
  - kW Savings: TBD
- City Wide Traffic Signals (*Project Completed 2011*)
  - kWh Savings: 135,357
  - kW Savings: 73.0
- City Wide Paths & Parking Lots Lighting Retrofits (*Project Completed 2011*)
  - kWh Savings: 298,000
  - kW Savings: 15.0
- EECBG-11 Buildings Retrofit (*Estimated Completion Date—December 2011*)
  - kWh Savings: 304,000
  - kW Savings: TBD

#### **4.2 Municipal Potential Energy Efficiency Projects**

In addition to the numerous projects that the City has already completed, the City continues to work aggressively to identify new energy-efficiency projects. Over the past year, staff has identified and worked with SCE staff to audit the following potential projects:

- Senior Center Lighting – Audit Completed 3/2010
- City Yard – Audit Completed 3/2010
- Police Station Kitchen – Audit Completed 9/2010
- Fire Station #2 Kitchen – Audit Completed 9/2010
- Sunset Field Kitchen – Audit to be Completed 10/2010
- Fire Station #1 Kitchen – Audit Completed 9/2010
- Fire Station #3 Kitchen – Audit to be completed by 10/2010
- Cameron Park Community Center Kitchen – Audit Completed 9/2010
- Cortez Park Kitchen – Audit Completed 9/2010
- Del Norte Park Kitchen – Audit to be Completed 10/2010
- Equestrian Center Kitchen – Audit Completed 9/2010



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- Friendship Park Kitchen – Audit Completed 9/2010
  - Maverick Ball Field Kitchen – Audit to be Completed 10/2010
  - Oranewood Daycare Kitchen – Audit Completed 9/2010
  - Oranewood Park Kitchen – Audit Completed 9/2010
  - Palmview Park Community Center Kitchen – Audit Completed 9/2010
  - Senior Citizen’s Center Kitchen – Audit Completed 9/2010
  - Senior Center Annex Kitchen – Audit Completed 9/2010
  - Shadow Oak Park Kitchen – Audit Completed 9/2010
  - Walmerado Park – Audit Completed 9/2010

The energy savings data from these potential projects is not yet available. Once this data is available, the City will determine which projects to move forward to implementation.

#### **4.3 Residential Energy Efficiency Efforts**

The City of West Covina is actively participating in the Energy Upgrade California program that launched in January 2011. This program targets whole-house energy efficiency-retrofits in both the residential and commercial sectors.

#### **4.4 Funding of Projects**

To fund the aforementioned projects and future projects the City will explore the following options:

- a. Explore creation of a new City-owned revolving loan program that could provide small loans to local homeowners and small businesses to assist them with their proposed energy efficiency improvements.
- b. Join existing programs that would distribute and install efficiency equipment and materials, and that promise to provide community homeowners and businesses with efficiency-evaluation products and services at low cost.
- c. Create opportunities to purchase and distribute Energy Efficiency products in bulk, providing them to the community at wholesale cost.
- d. Investigate third party financing possibilities for renewable energy installations and existing building retrofits that may be made within the community.
- e. Consider the opportunities, such as peak pricing opportunities, grants, and subsidy programs, to reduce the overall cost of electricity.
- f. Recommend a feasibility study to evaluate revenue bond opportunities for energy-related projects.
- g. Pursue all available subsidies, rebates and grants that will allow the City to accomplish energy efficiency and renewable energy projects.

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## **4.5 Policies**

The City of West Covina is considering the following policies related to energy-efficiency and conservation:

- Provide guidance and assistance to Homeowners and Builders to make compliance with new Title 24 energy requirements as effective and efficient as possible.
- Coordinate City Efficiency goals and programs with the efficiency projects and incentive programs of other agencies. Consider fee adjustments or rebates to local businesses and residents in support of those efforts.
- Modify the City's lighting standards to discourage excessive lighting.
- Consider developing an ordinance that encourages energy efficiency upgrades and improvements in buildings upon sale. Include the real estate community and other stakeholders in the ordinance development process.
- Promote energy and water conservation design features in major renovation and new development projects.
- Develop a General Plan Energy Element that will serve as the policy document for West Covina's energy strategy. The Energy Committee will work with the general public to prepare a draft Energy Element for the City Council's review. The Energy Element shall contain at a minimum a building conservation and efficiency section, a renewable energy section, a "Greenhouse Gas Emissions" section, a heat load section, and a transportation section.
- Create and adopt a new "Greenhouse Gas Emissions" Ordinance that is consistent with the policies of West Covina's Energy Plan.
- Support and facilitate the implementation of the Energy Committee's recommended Green Building Ordinance(s).
- Support local, State, and Federal legislation that is consistent with the policies of West Covina's Energy Plan.
- Provide City staff support to work with the Energy Committee and under the direction of the City Manager.
- Evaluate the establishment of a non-profit Community Energy Services Corporation (similar to Community Redevelopment agencies) to help implement the City's energy programs.
- Research and monitor the status of State and Federal regulations, programs, and funding opportunities, and make recommendations for new programs and opportunities based on changes (e.g., direct access). Assign staff that will work with the community to assist them in obtaining information, funding and support from those programs, and in creating their program applications.

## **4.6 Tracking**

All projects are tracked under the City's Capital Improvement Projects (CIP) budget program. The City of West Covina's Public Works Director/City Engineer, working as the assigned program manager, will monitor the ongoing progress of the EAP program and the individual projects. The program manager will be directly involved in initial project implementation and ongoing data collection and reporting.

Program activity project managers will be required to submit to the program manager quarterly written reports of activities and achievements. Both short-term outcomes and

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progress leading toward ultimate EAP objectives will be uniformly gathered and tracked, per the reporting metrics set by each project's funding agency.

Interim reports describing major actions taken to date for individual projects and on total program progress shall also be prepared each month, before being forwarded to appropriate departments for public posting.

Accurate records shall be kept that account for all program funds, costs, and expenditures. The City shall prepare and submit to the funding agency all required Expenditure and Funding reports, along with sustentative documents that may be requested.

The City of West Covina's Public Works Department will perform both pre and post-inspections of all new and/or retrofit work to confirm that all new fixtures and equipment are installed and operational, per project objectives.