



## Council Agenda Statement

Item: 6  
Meeting Date: February 15, 2005

**ITEM TITLE:** Resolution \_\_\_\_\_ Adopting Council Policy No. 840-03  
Regarding Energy Conservation And Renewable Energy  
Guidelines For City Buildings And Facilities.

**SUBMITTED BY:** Director Conservation and Environmental Services  
Director General Services  
Environmental Resource Manager

*(Handwritten signature)*

**REVIEWED BY:** City Manager *(Handwritten signature)*

(4/5ths Vote Yes \_ No X)

The Building Energy Efficiency Policy establishes energy conservation and renewable energy guidelines for City buildings and facilities. Adoption of this Policy will result in more efficient and environmentally sustainable City buildings and facilities that use less energy, save money and help to protect the environment.

### RECOMMENDATION:

Staff recommends Council approve the resolution adopting the Building Energy Efficiency Policy to reaffirm and clarify the City's commitment to energy conservation and renewable energy.

Upon adoption, it will be the City Council's Policy to pursue City buildings and facilities that are more energy efficient than current State energy conservation standards (California Code of Regulations; Title 24), to incorporate non-fossil fuel based renewable generation into City buildings and facilities and to purchase non-fossil fuel based renewable energy for all City buildings and facilities. (Attachment 1).

### BOARD AND COMMISSION RECOMMENDATION:

At their January 3, 2005 meeting, the Resource Conservation Commission (RCC) unanimously endorsed City Council adoption of the Building Energy Efficiency Policy.

### DISCUSSION:

The purpose of this staff report is to propose a City Council Policy that establishes energy conservation and renewable energy guidelines for City buildings and facilities.

### **Energy Conservation and Renewable Power Projects**

Since 1993, the City of Chula Vista has proactively implemented energy conservation projects and installed renewable power (Solar) on City buildings and facilities to reduce the City's reliance on fossil fuel-generated electricity and to help protect the environment.

To date, the City has implemented approximately \$1.4 million in energy efficiency projects. The City has invested approximately \$1 million in City funds and received \$400,000 in offsetting grants and incentives. As a result of the projects, the City has avoided approximately \$2.75 million in energy cost, saved approximately 33 MW-hrs of electricity and avoided 25,000 tons of CO2 emissions.

The City saves enough electricity to power approximately 500 homes for one year.

The City's major building conservation projects include the following:

- Replaced of Civic Center Library chillers in 1993
- Retrofitted lighting at the old Police building in 1994
- Retrofitted lighting in all City buildings in 1995/1996
- Replaced chillers in the old Police building in 1997
- Replaced old water heaters in the old Police building in 1998
- Installed cool roofs, skylights, energy efficient lighting and energy efficient HVAC equipment at the John Lippitt Public Works Center in 2002
- New Police building designed and constructed at least 20% more efficient than State energy conservation standard (California Code of Regulations: Title 24).

The City's facility conservation projects include the following:

- Replacement of red-incandescent traffic signal lights with efficient red-light emitting diodes (LED) in 1998
- Replacement of green traffic signal lights with more efficient green LEDs in 2001
- Upgraded 30 refrigerators with energy conserving Energy Star models

The City has also installed solar hot water heaters and solar power at the following City locations:

- Solar hot water heaters installed at City recreation center pools in mid 1980's
- Four kW Solar system installed at Household Hazardous Waste Facility in 2002
- 30 kW solar power system installed at new Police Headquarters in April 2004
- Six kW solar power system installed at the Nature Center in September 2004

Additionally, the City has implemented community wide projects to help residents and businesses conserve energy. These include the following:

- Renewable power purchase literature provided to the community in the late 1990's.
- Solar power permit fees reduced to \$45 flat fee from an average of \$800, based on a proposal from the Planning and Building Department.
- More than 800 homes participated in the City's GreenStar Building Efficiency program that provides incentives for homes that are more energy efficient than State conservation standards. The Planning and Building Department expanded this program to new developments in 2003.
- At the height of the energy crisis, the Community Development Department and the Police Department conducted community outreach campaigns to assist businesses comply with a State executive order setting outdoor lighting standards.
- At the height of the energy crisis, the City successfully reached and assisted 1,800 households and 20 small businesses with lighting retrofits. The City provided energy audits and compact fluorescent lights to residents for committing to recycling practices, and funded mini-grants (up to \$2,500) for small businesses to implement energy efficient lighting retrofits.
- In July 2004, the City began purchasing half a (.5) megawatt of electricity for the Civic Center Campus from Shell/Coral Energy at rates below those available from the local utility.

The City Council memorialized these accomplishments by formally implementing the CO2 Reduction Plan ("CO2 Plan") and the Energy Strategy & Action Plan ("Energy Plan") adopted in November 2000 and May 2001 respectively.

### **CO2 Reduction Plan**

The City of Chula Vista became a founding charter member of the International Council for Local Environmental Initiatives (ICLEI) in 1992. ICLEI's goal is to assist cities reduce their impact on global warming by promoting development and adoption of carbon dioxide reduction plans. In 1994, with guidance from a local citizen task force, the City began developing a CO2 Reduction Plan (CO2 Plan). The City's plan focuses on reducing CO2 emissions by reducing the City's reliance on fossil fuel and by improving the City's energy efficiency at City buildings. In 1997, the City completed the CO2 Plan. Council officially adopted the CO2 Plan in November 2000 (Attachment 2). The City has made progress on most of the 20 measures identified in the CO2 Plan by: 1) working with developers to master plan communities that are more pedestrian- and mass transit- friendly; 2) demonstrating and purchasing alternative fuel vehicles; and implementing energy conservation retrofits. Energy efficiency and renewable power measures from the CO2 Plan were subsequently incorporated into the City's Energy Strategy and Action Plan that Council adopted in May 2001. The applicable CO2 Measures include:

- **Measure #2 Green Power:** This measure requires City staff to continually seek Green power purchase options from alternative suppliers for City buildings and installation of non-fossil fuel based alternative power - such as Solar power - on City buildings.
- **Measure #5 Municipal Building Upgrades and Trip Reduction:** This measure requires staff to identify energy efficiency projects with a goal of exceeding California Code of Regulations; Title 24 by 15% to 20% for City buildings

### **Energy Strategy and Action Plan**

The City Council adopted the City's Energy Strategy and Action Plan ("Energy Plan") to protect the community from the energy crisis (and from energy industry market manipulation). The Energy Plan incorporated CO2 Plan measures that require City buildings and facilities to exceed State conservation standards (California Code of Regulations; Title 24) and to plan for renewable electricity at new and major renovation buildings and facilities (Attachment 3). The applicable Action Items include the following:

- **Action #1.** This Action requires City staff to position the City to purchase power for all City buildings - for up to the City's entire load - from an alternative supplier once the option is available.
- **Action #2.** This Action requires City staff to pursue onsite generation - such as solar power - for specific City buildings.
- **Action #7.** This Action requires City staff to continue energy conservation

projects for City buildings and to be more efficient than California Code of Regulations; Title 24 standards.

### **Building Energy Efficiency Policy Implementation Guidelines**

The Building Energy Efficiency Policy will be implemented in accordance with the guidelines below:

Conservation and Environmental Services staff will provide support and technical assistance to General Services, Purchasing and other departments that may be responsible for these projects.

- A. The Building Energy Efficiency Policy guidelines will apply to new and major renovation City buildings and facilities projects. Facilities include but are not limited to parks, ball fields, streetlights, traffic signal lights and sewer pump stations.
- B. Staff will strive to achieve the following guidelines:
- **Passive Heating and Cooling Guideline:** All new buildings and facilities should be designed to take maximum advantage of passive and natural sources of heat, cooling, ventilation and light.
  - **Building Energy Efficiency Guideline:** New and major renovation buildings over 4,500 square feet should be at least 20% more energy efficient than State conservation standards (California Code of Regulation; Title 24);
  - **Facilities Energy Efficiency Guideline:** All facilities should be upgraded in aggregate as higher energy efficiency technology becomes available.
  - **Renewable Energy Generation Guideline:** All new and major renovation buildings and facilities should incorporate on-site generation using non-fossil fuel based renewable technology. New buildings and facilities should be designed to meet a goal of generating up to 20% of the energy requirement. The overall goal is to provide 20% or more of the energy demand for City owned facilities with renewable energy on a citywide basis.
  - **Renewable Energy Purchase Guideline:** Up to 100% of the energy purchased for City buildings and facilities should be supplied from non-fossil fuel renewable energy sources. Renewable energy will be purchased for buildings and facilities as they become available and as long as costs are equivalent to or below local utility rates.

- Energy Star Products Guideline: All new City buildings and facilities should be equipped with Energy Star qualified products. Existing buildings and facilities will be upgraded in aggregate as higher energy efficiency technology becomes available
- C. General Services and Conservation & Environmental Services staff will coordinate evaluation of energy conservation, renewable generation and renewable energy supply proposals based on their ability to:
- Generate operational savings,
  - Result in CO2 emissions reductions,
  - Result in air quality improvements, and
  - Acquire grants and incentives to offset project costs

### **Energy Conservation Is Fiscally and Environmentally Responsible**

The City's cumulative savings of \$2.75 million from energy conservation and renewable projects have resulted in approximately 100% return on investment in 11.5 years from a total initial investment of \$1.4 million. The City's energy conservation and renewable energy projects has generated positive economic results for the City and at the same time has benefited the environment through reduced CO2 emissions.

### **FISCAL IMPACT:**

Adopting the Building Energy Policy will result in energy conservation and renewable generation projects. Implementation of energy conservation and renewable projects will require expenditures that will result in a fiscal impact to the General Fund.

Grants and incentives developed by Conservation and Environmental Services staff will be used to offset expenditures. Actual cost and projected savings from energy conservation and renewable projects will be presented to Council for consideration on a project-by-project basis before implementation.

### **ATTACHMENTS:**

- 1) Building Energy Efficiency Policy Document
- 2) CO2 Reduction Plan
- 3) City Energy Strategy and Action Plan

## COUNCIL AGENDA STATEMENT

Item No.: 20  
 Meeting Date: 11/14/00

**TITLE:** Resolution Adopting the Carbon Dioxide Reduction Plan (CO<sub>2</sub> Reduction Plan) and Directing Staff to Continue to Implement the Recommended Measures Within the Plan.

**SUBMITTED BY:** Director of Planning and Building  
 Special Operations Manager



**REVIEWED BY:** City Manager 

(4/5<sup>th</sup> Vote: Yes \_\_\_ No X)

The CO<sub>2</sub> Reduction Plan (Attachment A) is the result of a planning effort by staff and a city task force representing a broad array of interests. Staff and the task force worked with a consultant to develop strategies to reduce carbon dioxide emissions on a local level. Since the City Council's conceptual approval of the CO<sub>2</sub> Reduction Plan in February 1997 many of the measures have been successfully implemented. Those measures that remain to be implemented fall into two general categories, 1) Environmental resource management and education, and 2) land use issues. The Environmental Resource Manager has had overall responsibility for the CO<sub>2</sub> Reduction Program and is now assigned to the Special Operations Program in the City Managers office. With the Support of the Special Operations Manager the Environmental Resource Manager will continue to focus his energies on those components of the plan that apply to City facilities, assist Departments with the implementation of their respective components of the program, monitor all programs and report the Program's progress to Council and the International Council for Local and Environmental Initiatives (ICLEI). The land use related measures would be implemented primarily by the Planning & Building Department (Attachment B)

"Smart Growth" is defined by SANDAG as a compact, efficient, and environmentally sensitive pattern of development that provides people with additional travel, housing, and employment choices by focusing future growth away from rural areas and closer to existing and planned job centers and public facilities. The City of Chula Vista has been a regional leader in creating and implementing these principles long before the term Smart Growth was popularized. Examples include the neo-traditional pedestrian oriented development in Otay Ranch and the draft CO<sub>2</sub> Reduction Plan. In an effort to improve implementation of the CO<sub>2</sub> Plan, staff recommends that the City Council formally adopt the amended CO<sub>2</sub> Reduction Plan and fold the land use measures into a future "City of Chula Vista Sustainable Development Program". The Sustainable Development Program would also address water conservation and other land use related environmental considerations. The program would include important measures identified in the CO<sub>2</sub> Reduction Plan as well as other significant environmental issues embraced by ICLEI and the Smart Growth movement. Implementation would fall under three tiers:

1. Citywide Level – "Sustainable Development" planning will be accomplished through the City's General Plan Update.
2. Sectional/Community Planning Level – "Sustainable Development" planning concepts would be developed and implemented in new SPA Plans and Community Plans.
3. Project Level – This level would advocate energy efficiency and CO<sub>2</sub> reduction in individual residential and non-residential construction projects.

In 1998, a Negative Declaration (IS-98-29) was prepared and presented to the Resource Conservation Commission (Attachment C). It was also posted with the County Recorder's Office for public review and comment. No comments were received and the Negative Declaration was never adopted by the City Council. Since that time an Addendum to the Negative Declaration (included in Attachment C) was prepared addressing the changes that have occurred in the implementation of the Plan. Staff is now recommending that the City Council adopt the Negative Declaration and the Addendum to IS-98-29.

**RECOMMENDATION:** That Council:

1. Adopt the Negative Declaration and addendum to IS-98-29.
2. Adopt the CO<sub>2</sub> Reduction Plan and direct staff to continue to implement recommended measures within the Plan, including the incorporation of the land use related measures into the City's Sustainable Development program.

**BOARD/COMMISSION RECOMMENDATIONS:**

Since its inception, the Economic Development Commission, the Resource Conservation Commission, the Growth Management Oversight Commission, the Planning Commission and City Council have reviewed the CO<sub>2</sub> Reduction Plan. All Boards/Commissions voiced support for the Plan although the Economic Development Commission wanted to ensure that the Plan would "not reduce the City's competitive position in terms of recruiting, retaining and growing local business." A synopsis of the Board/Commission recommendations is shown in Attachment D.

**DISCUSSION:**

The CO<sub>2</sub> Reduction Plan (hereafter referred to as the "Plan") was developed in 1996 as a tool to reduce the effects of Carbon Dioxide on the environment. Development of the Plan included citizen participation through a task force representing the development and business community, local and state government and City staff.

The Plan consists of twenty action measures intended to promote clean fuel vehicles, alternatives to driving, transportation efficient land use planning, and energy efficient building construction. In February 1997 the City Council approved the CO<sub>2</sub> Reduction Plan in concept and directed



conceptually approved Plan. This agenda statement identifies alternative measures that have been implemented and those measures that are not recommended for implementation.

Since February 1997 the City has been successful in implementing eleven CO<sub>2</sub> reduction measures. This includes alternative measures that were approved by the City Council in lieu of others listed in the Plan. Specifically, the original Measure 2 (Private Fleet Clean Fuel Vehicle Purchases) was replaced with "Green Power," and original Measure 10 (Reduced Commercial Parking Requirements) was replaced with "Green Power Public Education Program."

The remaining nine unimplemented measures have been further reviewed by staff to determine which ones should be pursued, based upon the greatest reduction in CO<sub>2</sub>, the availability of funding, and ease of implementation. Included in this list are also measures that are not recommended for implementation due to their very low cost/benefit ratios. Staff will continue to analyze alternative means to efficiently and effectively achieve the CO<sub>2</sub> reduction goals these measures represented.

**Completed or Ongoing Measures Monitored by the Environmental Resource Coordinator:**

To date staff has commenced or completed eight measures, which are implemented by the applicable Department as noted on Attachment B.

1. Measure 1 – Purchase of Alternative Fuel Vehicles (ON-GOING) This measure is being implemented through Council approval of a Compressed Natural Gas (CNG) fueling and maintenance facilities in the future Corporation Yard as well as the purchase of alternative fuel vehicles during the past three years. The CNG facilities will make it possible to replacement the current fleet of diesel-powered buses and other vehicles in the fleet with CNG powered vehicles. The City's inventory of Alternative Fuel Vehicles currently includes four CNG vans, one car and one propane forklift. The City is also continuing to work with Metallic Power toward the development of a zinc fuel cell demonstration light-duty truck. This effort is funded under a \$300,000 grant from the California Energy Commission.
2. Measure 2 – Green Power (ON-GOING) In June 1998 the City joined the SANDAG Power Pool and switched approximately 12 of the highest load consumption meters to "green power" or electricity generated from renewable resources. This resulted in a reduction in CO<sub>2</sub> emissions in addition to a savings in energy costs. In June 1999 the agreement was renewed and Council authorized the Energy Service Provider (ESP) to switch additional meters to green power. Due to the large number of meters under the Power Pool, the ESP was not able to execute the switch out. As of July 2000, the Power Pool has ceased to operate as an aggregator of renewable energy and all of the switched meters defaulted back to SDG&E. Staff is currently in the process of working with several ESP's to identify green electricity purchase options available to the City of Chula Vista. As a result of the land use permit to site a "peaker," power plant, the City has also negotiated with PG&E to receive up to \$30,000 in funding and in-kind services to develop photovoltaic (solar) electricity at one City facility.

3. Measure 3 – Municipal Clean Fuel Demonstration Project (ON-GOING) The City continues to work with the California Energy Commission (CEC) and SunLine Transit Agency to demonstrate a hydrogen fuel cell transit bus in Chula Vista. In December 1999, the City Council approved a Memorandum of Understanding to implement a multi-year demonstration project. The CEC awarded a \$500,000 grant to the City of Chula Vista. The City Council also approved \$36,000 in transit funds to further develop the program and pursue Department of Energy funds. In February 2000 the U.S. Department of Energy (DOE) awarded the CEC \$500,000 in grant funding to demonstrate hydrogen generation technology in California. The CEC in turn will award an additional \$500,000 in matching funds to the City of Chula Vista for the demonstration project.
  
3. Measure 4 – Telecommuting and telecenters (CLOSED) In 1993 the San Diego Air Pollution Control District proposed a mandatory rule for employers to develop a Transportation Demand Management Plan. In response to the impending rule a pilot Telecommuting Program for City employees was developed. The program resulted in several City employees that currently telecommute today and continues to be encouraged. In 1993 the City initiated its involvement in the statewide Caltrans sponsored Neighborhood Telecenters Program. In 1994 the H Street Telecenter opened followed by the opening of the Downtown Telecenter in 1995. At its height, both Telecenters served approximately 50 participants from over 25 organizations. After four years of operation, the Telecenters were not able to generate enough revenue to be self-sufficient. Outside funding was exhausted and the facilities were closed. Staff will continue to pursue the development and implementation of an alternate means of generating the CO<sub>2</sub> reduction lost by the cancellation of this component of the program.
  
5. Measure 5 – Municipal Building Upgrades and Trip Reduction (ON-GOING) Retrofits were implemented at all city facilities by upgrading lights, many HVAC systems and other appliances with energy-saving devices that have resulted in reduction of energy costs and consumption. Additional HVAC and other improvements will be made, as major capital items are schedule to be replaced or refurbished. Staff continues to work with SDG&E, the San Diego Energy Office and other contractors to identify energy efficiency opportunities for new construction and renovation projects with a goal of exceeding Title XXIV requirements by 15% to 20%. Contributing to the reduction of vehicle miles traveled by City employees and customers is the addition of the Building Departments eastern office and permitting process via the Internet. Staff is also in the process of expanding opportunities for the public to use the City's website to access information and communicate with staff without traveling to the Civic Center and other City facilities. The Environmental Resource Manager will include as a part of his work plan the development and implementation of a Van/Car Pool Program for City Employees
  
6. Measure 10 – Green Power Public Education Program (COMPLETED) In June 1998 staff was directed to develop a public education program for Chula Vista residents. The program provided information about renewable power choices specifically relating to green power. Information was published in the local newspaper, sent with trash bills and is still today provided at various special events. In the future that information will be

available on the City's web site where it can be updated and linked to information regarding other CO<sub>2</sub> reduction options for their home and business. In addition, a global warming education module has been successfully implemented in the Chula Vista Elementary School District. This module educates elementary aged school children about the harmful effects of CO<sub>2</sub> in the atmosphere.

7. Measure 16 – Traffic Signal and System Upgrades (ONGOING) The City changed all 1874 red lamps in its traffic signals to LED lamps, resulting in a 33% savings in energy costs and a reduction of 1,599 tons CO<sub>2</sub>. Using light-emitting diode technology to replace incandescent lamps in traffic signals has saved the City over \$80,000 per year. This effort also involved the City purchase of street lamps from SDG&E. The payback was approximately 2.5 years on a total investment of \$250,000. Traffic Division staff continues to work with SDG&E to identify change out opportunities for green lamps.
8. Measure 17 – Student Transit Subsidy (NOT IMPLEMENTED) This measure encourages transit subsidies for post-secondary students to mitigate new development related to area impact. Funding continues to be difficult to obtain. Staff will pursue an outside funding source and potentially more cost-effective ways to achieve the CO<sub>2</sub> projected from this component.
9. Measure 19 – Municipal Life-Cycle Purchasing Standards (ONGOING) This measure involves the inclusion of life-cycle energy costs as a selection criteria in a comprehensive purchasing policy for energy-consuming equipment. The policy has lead to the purchase of a number of green star appliances and building design or equipment changes that promote energy efficiency.

**Measures Recommended for Implementation Through Programs Administered by Planning and Building Department**

A number of the measures found in the CO<sub>2</sub> Reduction Plan are directly related to land use and can be implemented under one of three levels within the proposed "Sustainable Development Program," Citywide, Sectional/Community Planning, and Project levels.

At the Citywide level, the feasibility of the land use measures will be reviewed as a part of the upcoming General Plan update. The final work program for the General Plan update is being developed and will go forward to the City Council for review and approval in the near future. As part of this work program, staff will be proposing a Citywide "Land Use Distribution Study" which will evaluate possible locations for development near transit stations or other major activity centers, where mixed uses and higher density residential development will be considered.

At the Sectional/Community Planning Level, staff will be updating the guidelines for preparation of Air Quality Improvement Plans, which are already required to be prepared for all new projects at the SPA plan level of review.

A major component of the Program at the Project Level will be the development of programs such as the Energy Efficient Building Program (also known as the Chula Vista GreenStar Building Incentive Program). This program is being designed to significantly reduce carbon dioxide emissions by utilizing construction materials and practices, which raise energy efficiency.

It is recommended that the City Council direct staff to include the following ten measures in future planning efforts including the General Plan update and implementation.

1. Measure 6 – Enhanced Pedestrian Connections to Transit (CITYWIDE LEVEL) Installation of direct, convenient walkways and crossings between bus stops and surrounding land-uses.
2. Measure 7 – Increased Housing Density Near Transit (CITYWIDE LEVEL) Consideration of increases in residential land use designations to reach an average of 14 – 18 dwelling units per acre or more within a quarter mile of major transit routes and stops, where adequate public services can be provided.
3. Measure 8 – Site Design with Transit Orientation (CITYWIDE LEVEL) Placement of buildings and circulation routes to emphasize transit, including bus turn-outs and other stop amenities.
4. Measure 9 – Increased Land Use Mix (CITYWIDE LEVEL) Consideration of greater dispersion of a wide variety of land uses, such as siting of neighborhood commercial uses in residential areas, and inclusion of housing in commercial and light industrial areas where adequate public services can be provided.
5. Measure 11 – Site design with Pedestrian/Bicycle Orientation (SECTIONAL / COMMUNITY PLANNING LEVEL, ONGOING) Staff has been implementing this measure in several areas of the City through applicable land use standards. It encourages the placement of buildings and circulation routes in key areas and includes bike paths, bike racks and pedestrian benches.
6. Measure 12 – Bicycle Integration with Transit and Employment (ONGOING) This measure encourages employers and transit providers to provide bike storage at major transit stops and employment areas and includes bike racks on buses. Employers are also encouraged to provide showers at major transit nodes.
7. Measure 13 – Bicycle Lanes, Paths and Routes (SECTIONAL/COMMUNITY PLANING LEVEL, ON-GOING) Staff has continued to implement the City's Bikeway Master Plan, adopted in 1996. To date 67 miles of the planned 150 mile bikeway system have been completed with an additional 93 miles of lanes necessary to complete the existing Master Plan. In order to incorporate current information and accommodate future needs an update to the Bikeway Master Plan will be required. In addition a Bikeway Feasibility Study for the Chula Vista Greenbelt Master Plan will be developed.

8. Measure 14 – Energy Efficient Landscaping (SECTIONAL/COMMUNITY PLANNING LEVEL) This measure promotes the "strategic planting," of shade trees for new single-family residences as part of an overall city-wide tree planting effort to reduce ambient temperatures, smog formation, energy use and CO<sub>2</sub>. The development of energy efficient landscape amendments and an update of the landscape manual are necessary to accomplish this measure.
9. Measure 15 – Solar Pool Heating (UNDER REVIEW) This measure calls for a mandatory building code requirement for solar heating or optional motorized insulated pool covers for new pools. Staff has found that in the majority of pools being constructed, heating is only utilized for the spa, due to the high cost associated with both installation and utilization. Solar heating cannot produce the temperatures necessary to heat a spa and the benefit of a mandatory requirement is questionable. Staff will develop a list options that will help new pool permit applicants meet the CO<sub>2</sub> reduction goals should they choose to heat their pool.
10. Measure 18 – Energy Efficient Building Program (PROJECT LEVEL) Reduces carbon dioxide emissions by developing building programs that are a minimum of 20% more energy efficient than Title 24 Energy Code requirements. Builders are encouraged to voluntarily incorporate energy efficient features in their projects and are rewarded for their commitment with priority permit processing and recognition awards. This program, also known as the "GreenStar" Building Incentive Program requires third party energy inspections and CO<sub>2</sub> measurements to gauge the success of the program once completed.
11. Measure 20 – Increased Employment Density Near Transit (CITYWIDE LEVEL)  
Increase in land use and zoning designations to focus employment- generating land uses within a quarter mile of major transit stops.

#### **FISCAL IMPACT:**

The ongoing costs of implementation of the "Smart Growth" program are difficult to determine since most of the measures are currently or will be a part of other City activities. The majority of the costs incurred will be in staff time.

In the spring of 1997 the City was awarded an \$80,000 grant from the Environmental Protection Agency to develop the GreenStar Building Incentive Program. The grant provided funds that are enabling a contract employee to design and administer the program. Future implementation of "GreenStar" will require outside assistance in order to provide accurate CO<sub>2</sub> measurements within participating project sites; however, the grant provides for such contractual services.

A grant of \$500,000 was also secured to fund the majority of the costs associated with the Municipal Clean Fuel (Bus) Demonstration Project. A matching grant of \$500,000 is anticipated from the California Energy Commission in the near future.

Staff will return to Council early next year with further information as to how implementation will be programmed.

**Attachments**

- A. CO2 Reduction Plan
- B. CO2 Reduction Plan Measures
- C. Negative Declaration IS-98-29 and Addendum to IS-98-29
- D. Board/Commission Recommendations

(MTM: CO2 Program-CAS-Adopt-co2-plan)

**EXHIBIT A**

**On file in the City Clerk's Office**

**CO2 REDUCTION PLAN MEASURES**

**SMART GROWTH/LAND USE MEASURES**  
Administered by Planning & Building Department

**OTHER MEASURES**  
Monitored by Environmental Resource Coordinator

- # 6 - Enhanced Pedestrian Connections to Transit  
G.P. update & Secy/Com Prog. Level
- # 7 - Increased Housing Density Near Transit  
G.P. update & Secy/Com. Prog. Level
- # 8 - Site Design. with Transit Orientation  
G.P. update & Secy/Com Prog. Level
- # 9 - Increased Land Use Mix  
G.P. update & Secy/Com. Prog. Level
- # 11 - Site Design Pedestrian/Bicycle Orientation  
Secy/Comm. Prog. Ongoing
- # 12 - Bicycle Integration with Transit & Employment  
Secy/Comm. Prog. Ongoing
- # 13 - Bicycle Lanes, Paths & Routes  
Secy/Comm. Prog. Ongoing
- # 14 - Energy Efficient Landscaping  
G.P. update, Landscapes Amend & Secy/Comm level  
Project level Bldg. Dept.
- # 18 - Energy Efficient Bldg. Recognition Program "GreenStar"
- # 20 - Increased Employment Density Near Transit  
G.P. update & Secy/Comm. Prog. Level
- # 1 - Purchase of Alternative Fuel Vehicles  
Ongoing - PUBLIC WORKS
- # 2 - Green Power  
Ongoing - ENVR. RES. COORD.
- # 3 - Municipal Clean Fuel Demonstration Project  
Ongoing - ENVR. RES. COORD.
- # 4 - Telecommuting and telecenters  
Completed/Close - ENVR. RES. COORD.
- # 5 - Municipal Building Upgrades and Trip Reduction  
Ongoing - ENVR. RES. COORD.
- # 10 - Green Power Public Education Program  
Completed - ENVR. RES. COORD.
- # 16 - Traffic Signal & System Upgrades  
Ongoing - PUBLIC WORKS
- # 19 - Municipal Life-Cycle Purchasing Standards  
Ongoing - ENVR. RES. COORD. and  
FINANCE (PURCHASING)

NOTE: The Environmental Resource Coordinator is responsible for the oversight and monitoring of the CO2 Reduction Program and implementation responsibilities are assigned to the Departments as noted above



# Energy Strategy and Action Plan



CITY OF  
**CHULA VISTA**

276 Fourth Avenue  
Chula Vista, CA 91910

## Background and Overview

In light of the State's energy crisis, the City of Chula Vista secured the services of MRW and Associates to provide an assessment of energy management options which may allow the City to gain a measure of control over the City's demand and supply of energy as well as the financial costs of the City's energy use over time. MRW provided broad general options/recommendations with staff recommending a variety of action items to implement or advance them to the extent possible or feasible. The MRW report along with the staff analysis, formed the basis for this adopted City of Chula Vista Energy Strategy and Action Plan ("Energy Strategy"). Included as Exhibit A, is the staff prepared Executive Summary of the MRW report. Included as Exhibit B, is the final Assessment of Chula Vista's Energy Management Options report prepared by MRW.

The Energy Strategy consists of eight (8) broad-based efforts that collectively seek to take proactive steps to advance the interests of the City of Chula Vista and its residents and businesses in the areas of energy conservation, supply, and procurement. The broad-based efforts include individual short-term action plans and the assigned staff responsible for implementing them.

Staff's recommendations attempt to make progress, to the extent the City can, on both the demand and supply sides of the energy market. Certainly the City has the ability to immediately affect the demand side to a much greater degree than the supply side; particularly in the short run. The recommendations reflect the City's commitment to expand our strong record in energy conservation and the promotion and use of renewable energy sources.

Relative to the supply side, it is important to note that there are a significant number of new plants, both major power plants and smaller peaker plants, in various stages of development and approval that will make a tremendous difference on supply statewide over the next several years. The California Energy Commission (CEC) is currently reporting that it has in its application process, 13 projects expected to deliver a net capacity amount of 6,187 MW of new power supply. This includes the 510 MW Otay Mesa plant. Additionally, CEC reports that there are currently 29 peaker plant applications statewide being processed under the Governor's emergency siting authority. These peakers are expected to deliver a total of 3,219 MW of peak load generation capacity including the Otay Mesa Larkspur project (90 MW) and the proposed second peaker on Main Street in Chula Vista (57 MW). However, these plants will be primarily utilizing natural gas and therefore further taxing the limited supply of natural gas to the State and San Diego region (Section 2.6 of report). Long-term supply issues need to address natural gas supply, and in the process, could pave the way for greater market potential for renewable energy sources.

It is important to note that the Energy Strategy does not contain an easy or quick solution to the energy crisis for Chula Vista. If such a solution exists, it lies in the hands of state and federal authorities, not the City. The Energy Strategy does include however, the best-known options at this time to respond to the unique opportunities and needs for Chula Vista. It is hoped that through these efforts, as well as future efforts that may emerge, the City can prevent energy from being a limiting factor in the economic future and sustainable growth of our community.

- 1. Monitor the energy market and legal restrictions and; be prepared to enter into an Electrical Services Contract with an Energy Services Provider (ESP) or power generator as allowed by law.**

Rationale

- AB1X currently prohibits direct energy purchases for as long as the state has outstanding long-term contracts. This law needs clarification, and may be overturned, but for now, has squelched this market opportunity.
  - There is some risk that if market conditions improve in the next 1-3 years, a long-term commitment to an ESP will burden the City with higher cost electricity.
- 
- Subject to removal of existing legal restrictions, seek Council authorization to negotiate contract within the following parameters:
    - Pledge up to City's entire load (1.4MW)
    - Term: Shortest time possible, but not to exceed 3 years
    - Price: Establish a maximum fixed price beneath which staff has the authority to negotiate
    - Give authority to explore different pricing mechanisms and energy derivatives

**Staffing:**      **Lead:**            City Manager's Office - Administration  
                         **Support:**        Administration - Special Operations  
                                                    Administration - Legislative

**Timeframe:**                    Ongoing

## 2. Pursue Distributed Generation and "district" generation<sup>1</sup> opportunities for specific facilities and technologies.

### Rationale

- Distributed generation can be used as a source of energy at peak periods when power is most expensive.
- Some types of distributed generation offer significant environmental benefits to the local area.
- Because distributed generation can be accomplished with a low capital investment (relative to large-scale power plants), the financial risk to the City of this option is more manageable than pursuing the development of a City-financed power plant.
- Current and proposed funding and incentive programs that are available for distributed generation projects enhance the attractiveness of this option vis-à-vis other options. In particular, the Legislature's Special Session could lead to new funding for distributed generation and potentially an easing of regulatory and market barriers to distributed generation.
- Distributed generation can power just City facilities, or, depending upon capacity and location, could be utilized with adjacent industrial sites in an "over-the-fence" transaction. The City also should identify potential landfill gas resources and explore development of those resources, as has been done in the County at the Miramar, Sycamore and Otay landfills that use landfill methane gas to manufacture energy. In a hypothetical application of distributed generation at the Chula Vista Police Department, a best-case scenario for distributed generation provides power to the Police Department at about 7-8 cents per kWh at historical natural gas prices and 11-13 cents per kWh at current elevated prices.

Note: In terms of downside risk, there is some risk the CPUC will rule in favor of the utilities' position on distribution stranded costs or other issues that could limit the financial attractiveness of distributed generation.

<sup>1</sup> "Distributed Generation" refers to small power generation units (generally up to 30 MW) located at or near load centers that could include multiple end users through "over the fence" transactions. Technologies include simple cycle gas turbines, fuel cells and photovoltaics. "District" generation refers to the efficient use of hot water, steam or cold water between entities to reduce consumption of electricity or gas.



### **3. Partner with a third-party to build and operate power generation facilities.**

#### Rationale

- The City has an excellent opportunity to pursue this option with Duke Energy as part of the modernization of the South Bay plant.
- A partnership can be structured in numerous ways to share the risks and benefits of development and operation, and to leverage what each party brings to the table. For example, in consideration for facilitating the redevelopment of the South Bay plant, the City could obtain rights to receive a dedicated share of the plant's capacity, a share of plant revenues, and/or other public benefits such as Bayfront infrastructure, City facility energy projects, etc.
- Proposed legislation may expedite the licensing and permitting process for new power plants (primarily peaking plants) and for the repowering of existing power plants. Because this legislation will likely have sunset provisions (i.e., dates upon which they expire), the next one to three years may provide an ideal window to push through the development and siting of a power plant.
- Competing legislation may reduce the attractiveness of owning or sharing in the development of a power plant. For example, legislation, if passed, may require the owner of a power plant to sell its electricity only to in-state customers, limiting the potential market for the plant's output (legislation pushing for this "California First" policy has been softened in latest versions and now is framed in terms of price parity for California vis-à-vis out of state customers). A more draconian measure proposed in new legislation would make any owner of a power generation facility a public utility subject to the jurisdiction of the CPUC (although the legal validity of such legislation is uncertain).
- California's electricity market structure is still in a state of flux and there is considerable uncertainty as to how the market will operate in the future. This regulatory uncertainty is significant.

- 
- Monitor discussions and negotiations between the Port District and their operating contractor (Duke Energy) and continue positive and proactive negotiations with them regarding terms for the redevelopment of the South Bay Plant
    - Initial areas for investigation and analysis include but may not necessarily be limited to:
      - Project description and scoping
      - Site planning; issue definition
      - Shared risks and benefits

**Staffing:**     **Lead:**       City Manager's Office - Administration  
                  **Support:**   Community Development - Administration  
                                  Administration - Special Operations

**Timeframe:**       Ongoing

#### **4. Develop an emissions offsets program based on mobile sources**

##### Rationale

- Some City Conservation programs could be utilized to obtain emission offset credits from conversion of diesel/gasoline-powered vehicles to Natural Gas power. These could be sold or utilized to facilitate local alternative sources of power generation or fund the conversion of City fleet vehicles to cleaner air vehicles.

- 
- Work with air quality officials to realize the benefits of any City investment in alternative fuel vehicles
  - Work with future generators and the APCD to ensure any mitigation funds generated are invested locally
  - Develop portfolio of potential offset projects to make available to new generation sources requiring offsets

Staffing:    Lead:           Administration – Special Operations

              Support:   None

Timeframe:           Six (6) months







## **7. Continue / expand energy conservation projects for City facilities and promote energy efficient and renewable energy programs for businesses and residents**

### Rationale

- The City has a good record of implementing conservation programs in City facilities. Current high prices of electricity and improved conservation technologies make the paybacks on energy efficiency facilities even more attractive. Therefore, capital investments in this area face minimal risk and should yield near-term paybacks and they have the added benefit of complementing the City's CO<sub>2</sub> reduction plan.
- Energy efficient facilities will reduce consumption and therefore reduce relative ongoing energy costs regardless of the outcome of market reforms and other state or federal actions.
- Legislative initiatives will make millions of dollars of funding available to lower the financial costs of energy conservation. Again, funding assistance reduces the City's risk of pursuing energy efficiency options. Over \$500 million in funding was pledged under AB 1890 to reinvigorate the renewable energy industry in California. So far, over \$162 million has been paid for the development of 500 MW of new renewable resources, while customers have received about \$47 million in bill credits through October 2000 for buying power from renewable energy providers.
- Making information on the power crisis readily available and supporting energy conservation or other energy management efforts may be a critical factor in convincing businesses where energy costs are a large component of an operating budget to remain located in Chula Vista. It will also help businesses remain competitive over the short run. High energy consumption businesses include high-tech and bio-tech manufacturers, refrigerated food wholesale and retailers, precision machine shops and aerospace parts manufacturers.
- Increased state funding for promotion of conservation options is likely to become available. The City is in a good position to assist residents in availing themselves of these funds.
- Conservation represents the lowest risk to the investor, and the highest benefit to the region and the environment. Every kilowatt saved or produced by an alternative source is a reduction on demand pressures that should result in lower costs for others. Conservation and alternative energy are also most productive during peak hours when they are needed most.
- Conservation and alternative energy have the added benefit of being good for the environment and complement the City's commitment to climate protection.
- An array of proactive energy programs could be critical in assisting business attraction and retention activities.

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### City Facilities

- Provide additional energy design, management and funding support to the City Facilities Project Team.

- Coordinate grant and other funding sources to implement energy savings.
- Establish a process that encourages the City's design and build partners to present energy options that exceed title 24 standards, and where appropriate, install comparable energy conservation measures in existing City facilities.
- Coordinate efforts with energy service providers, the San Diego Regional Energy Office, the California Energy Commission and other agencies to take advantage of public facility programs and obtain energy conservation certifications for new and remodeled facilities.
- Establish a modified work schedule for City employees, such as a 9/80 schedule. **(Not recommended at this time.)**

NOTE: As indicated in the memo, staff is not requesting that Council take action to implement a 9/80 work schedule as part of the effort to reduce energy consumption during peak summer demand. Staff has concluded that the schedule needed to generate the energy benefits needed to meet the ten percent (10%) conservation goal would be too disruptive to public services. Additionally, there is not enough time to allow families sufficient time to adjust to the changes that would need to occur to the planning and promotion that has gone into summer programs for seniors, children and other potentially dependent members of the community that rely on those public services. Staff believes strongly that there is merit in the 9/80 plan from conservation and other important perspectives but more planning is needed to fully take advantage of those benefits and minimize the potential impacts to service. Staff will work with all City departments and Council to develop alternative energy conservation measures to replace the energy savings that are needed to meet the State recommended goals that would have accrued under 9/80 plan.

### **Residents and Businesses**

- Distribute free energy saving retrofits for existing residences.
- Develop matching fund programs to assist local businesses with energy retrofits.
- Analyze available options to provide incentives to businesses that utilize renewable sources of energy (i.e. solar panels, wind power, distributed, etc.)
  - City matching funds
  - Grants or low interest loans (Sec. 108, CDBG, CEC Solar Energy Grant Program)
  - Rebates (in partnership with SDG&E)
  - Free publicity
- Identify and support state and federal grant opportunities that encourage businesses to further develop or bring-to-market new energy-related technologies (i.e. wave technology, fuel cell, etc.)
- Provide public education, information and assistance to residents and businesses so they may take advantage of rebate, loan and grant programs that assist energy conservation. This could include developing an Energy Conservation Resource Guide.
- Include energy resource information on the City's website with links to relevant energy assistance websites (i.e. U.S. Dept. of Energy, SDG&E Small Business Services, San Diego Regional Energy Office, etc.)
- Conduct business outreach workshops inviting guest speakers from various consulting groups and service organizations/agencies to provide information on energy

conservation, renewable/sustainable sources of energy, and government programs that provide funding/rebates to support these efforts.

- Partner with other service/community organizations to broadcast energy saving resources and tips to businesses via newsletters, information pamphlets and websites and coordinate efforts with the Planning Department.
- Continue to utilize MRW to assist companies with contract negotiations as well as with general energy-related inquiries.

**Staffing:**      **Lead:**            Administration – Special Operations  
                         **Support:**        Community Development – Economic Development  
**Timeframe:**                    Ongoing

## **8. DEVELOP AND IMPLEMENT A LEGISLATIVE STRATEGY THAT FACILITATES THE CITY'S OVERALL ENERGY PLAN**

### Rationale

- Energy supply and cost issues will be dramatically affected by federal and state actions. Issues such as electricity supply costs, transmission reliability, natural gas supply/reliability, municipal utility operations, distributed energy, aggregation, environmental protection, power plant siting, direct energy procurement, and aggregation are all subjects of current Legislation. Favorable state laws could enhance and facilitate numerous City Energy Plan Options.

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Add a new category to the City's existing Legislative Program that embodies the City's goals in such key areas as environmental protection, electrical supply costs, transmission reliability, natural gas supply and availability and power plant siting. This category would include the following:

#### Support measures that:

1. Assist the City and its energy consumers improve supply/demand conditions and enhance conservation measures.
2. Preserve local options to control and fund the supply and distribution of energy (including the formation of a municipal utility district) or that fund conservation programs.
3. Enhance the City's ability to enter into distributed generation agreements without having to pay stranded transmission or distribution charges.
4. Impose "fair and reasonable" wholesale price caps.
5. Repeal the provision in AB1X that suspends customer choice, and pass a favorable bill for customer choice (SB 27X or a similar one).
6. Make municipal aggregation programs available on an "opt-out" basis.
7. Allow public agencies (not just municipal utilities) such as the City to participate in state power supply programs.
8. Encourage use of real time metering.
9. Increase incentives for photovoltaic and other alternative energy sources.

#### Oppose measures that:

1. Impinge on or restrict the City's ability to exercise land use review/control with respect to the generation or transmission of power.
2. Erode the City's ability to acquire/generate power from alternative sources, operate as a municipal utility, or enter into aggregation and/or distributed generation arrangements.

**Staffing:**    **Lead:**    Administration - Legislative  
   Administration - Special Operations  
                         **Support:**    Community Development - Economic Development  
**Timeframe:**                    Ongoing

RESOLUTION 2005-\_\_\_\_\_

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF  
CHULA VISTA ADOPTING COUNCIL POLICY NO. 800-03  
REGARDING ENERGY CONSERVATION AND  
RENEWABLE ENERGY GUIDELINES FOR CITY  
BUILDINGS AND FACILITIES

WHEREAS, since 1993, the City of Chula Vista has proactively identified and implemented energy conservation projects and installed renewable power (Solar) on City buildings and facilities to reduce the City's reliance on fossil fuel-generated electricity and to help protect the environment; and

WHEREAS, to date, the City has implemented approximately \$1.4 million in energy efficiency projects; and

WHEREAS, the City has avoided approximately \$2.75 million in energy cost, saved approximately 33 MW-hrs of electricity and avoided 25,000 tons of CO2 emissions; and

WHEREAS, the City's energy conservation and renewable energy projects have generated positive economic results for the City and at the same time have benefited the environment through reduced CO2 emissions; and

WHEREAS, adopting the Building Energy Policy sets a minimum energy-efficiency goal for City buildings and facilities and directs staff to present Council with renewable power generation and supply options for City buildings and facilities; and

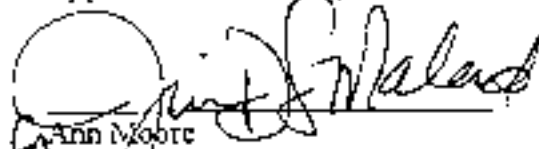
WHEREAS, this policy will reduce City's cost to operate buildings and facilities, reduce the City's energy consumption, and protect the environment.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Chula Vista does hereby adopt Council Policy No. \_\_\_\_\_, regarding Energy Conservation and Renewable Energy Guidelines for City buildings and facilities.

Presented by

\_\_\_\_\_  
Michael Meacham  
Director of Conservation and  
Environmental Services

Approved as to form by

  
\_\_\_\_\_  
Ann Moore  
City Attorney

J:\attorney\2005\Policy\Energy Policy



COUNCIL POLICY CITY OF CHULA VISTA			
SUBJECT: Building Energy Efficiency Policy	POLICY NUMBER	EFFECTIVE DATE	PAGE
	XXX-XX 840-03	XX-XX-XX	1 of 3
ADOPTED BY: Policy No. 2004-XXX		DATED: XX-XX-XX	
Final Draft			

## **BACKGROUND**

Since 1993, the City of Chula Vista has proactively implemented energy conservation projects and installed renewable power (Solar) to reduce the City's reliance on fossil fuel-generated electricity and to help protect the environment.

To date, the City has implemented approximately \$1.4 million in energy efficiency projects. The City has invested approximately \$1 million in City funds and received \$400,000 in offsetting grants and incentives. The projects have helped the City avoid approximately \$2.75 million in energy cost, saved approximately 33 MWh-hrs of electricity and avoided 25,000 tons of CO2 emissions.

The City saves enough electricity to power approximately 500 homes for one year.

The City memorialized these accomplishments by adopting the CO2 Reduction Plan ("CO2 Plan") in November 2000 and the Energy Strategy & Action Plan ("Energy Plan") in May 2001.

This Policy will continue the City's efforts to use less energy, reduce cost to operate buildings and facilities, and help to protect the environment.

## **PURPOSE**

The purpose of the Building Energy Efficiency Policy is to reaffirm the City Council's commitment to energy conservation and use of renewable power for city buildings and facilities.

## **POLICY**

It is the City Council's Policy to pursue City buildings and facilities that are more energy efficient than current State energy conservation standards (California Code of Regulations, Title 24), to incorporate non-fossil fuel based renewable generation into City buildings and facilities and to purchase non-fossil fuel based renewable energy for all City buildings and facilities.

**COUNCIL POLICY  
CITY OF CHULA VISTA**

SUBJECT: Building Energy Efficiency Policy	<b>POLICY NUMBER</b>	<b>EFFECTIVE DATE</b>	<b>PAGE</b>
	XXX-XX	XX-XX-XX	2 of 3
ADOPTED BY: Policy No. 2004-XXX		DATED: XX-XX-XX	
Final Draft			

**PROCEDURE**

Conservation and Environmental Services staff will provide support and technical assistance to General Services, Purchasing and other departments that may be responsible for these projects.

- A. The Building Energy Efficiency Policy guidelines will apply to new and major renovation City buildings and facilities projects. Facilities include but are not limited to parks, ball fields, streetlights, traffic signal lights and sewer pump stations.
- B. Staff will strive to achieve the following guidelines:
- Passive Heating and Cooling Guideline: All new buildings and facilities should be designed to take maximum advantage of passive and natural sources of heat, cooling, ventilation and light.
  - Building Energy Efficiency Guideline: New and major renovation buildings over 4,500 square feet should be at least 20% more energy efficient than State conservation standards (California Code of Regulation; Title 24);
  - Facilities Energy Efficiency Guideline: All facilities should be upgraded in aggregate as higher energy efficiency technology becomes available.
  - Renewable Energy Generation Guideline: All new and major renovation buildings and facilities should incorporate on-site generation using non-fossil fuel based renewable technology. New buildings and facilities should be designed to meet a goal of generating up to 20% of the energy requirement. The overall goal is to provide 20% or more of the energy demand for City owned facilities with renewable energy on a citywide basis.
  - Renewable Energy Purchase Guideline: Up to 100% of the energy purchased for City buildings and facilities should be supplied from non-fossil fuel renewable energy sources. Renewable energy will be purchased for buildings and facilities as they become available and as long as costs are equivalent to or below local utility rates.

**COUNCIL POLICY  
CITY OF CHULA VISTA**

SUBJECT: Building Energy Efficiency Policy	POLICY NUMBER	EFFECTIVE DATE	PAGE
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- Energy Star Products Guideline: All new City buildings and facilities should be equipped with Energy Star qualified products. Existing buildings and facilities will be upgraded in aggregate as higher energy efficiency technology becomes available.

C. General Services and Conservation & Environmental Services staff will coordinate evaluation of energy conservation, renewable generation and renewable energy supply proposals based on their ability to:

- Generate operational savings.
- Result in CO2 emissions reductions,
- Result in air quality improvements, and
- Acquire grants and incentives to offset project costs.

**REFERENCE DOCUMENTS:**

1. CO2 Reduction Plan
2. Energy Strategy and Action Plan