NOTICE AND CALL OF SPECIAL JOINT MEETING
(STUDY SESSION)
OF THE CITY COUNCIL OF THE
CITY OF MORENO VALLEY
MORENO VALLEY COMMUNITY SERVICES DISTRICT
CITY AS SUCCESSOR AGENCY FOR THE
COMMUNITY REDEVELOPMENT AGENCY OF THE
CITY OF MORENO VALLEY,
MORENO VALLEY HOUSING AUTHORITY
AND THE PLANNING COMMISSION

***THE CITY COUNCIL RECEIVES A SEPARATE STIPEND**
FOR CSD MEETINGS

April 3, 2012 - 6:00 PM

NOTICE IS HEREBY GIVEN that a special joint meeting (Study Session) of the City Council of the City of Moreno Valley, Moreno Valley Community Services District, City as Successor Agency for the Community Redevelopment Agency of the City of Moreno Valley, Moreno Valley Housing Authority and the Planning Commission of the City of Moreno Valley will be held on April 3, 2012 commencing at 6:00 PM, in the City Council Chamber, City Hall, located at 14177 Frederick Street, Moreno Valley, California.

Said special meeting shall be for the purpose of:

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

INVOCATION

ROLL CALL

INTRODUCTIONS

PUBLIC COMMENTS ON MATTERS ON THE SPECIAL MEETING AGENDA

There is a three-minute time limit per person. Please complete and submit a LAVENDER speaker slip to the Bailiff. All remarks and questions shall be addressed to the presiding officer or to the City Council and not to any individual Council Member, staff member or other person.

SPECIAL ORDER OF BUSINESS

1 DRAFT ENERGY EFFICIENCY AND CLIMATE ACTION STRATEGY (CEDD/10 MIN.)

2 IMPLEMENTATION OF THE SOUTHERN CALIFORNIA EDISON LOCAL GOVERNMENT STRATEGIC PLAN GRANT ("STRATEGIC SOLICITATION") (CEDD/10 MIN.)

3 DARK SKY ORDINANCE – UPDATE TO INCLUDE RECENT FEDERAL AND STATE LAWS ON LIGHT BULB INTENSITY AND ENERGY USAGE (CEDD/10 MIN.)

4 MAJOR PROJECT REVIEW PROCESS (CEDD/10 MIN.)

5 CITY COUNCIL/PLANNING COMMISSION COMMUNICATIONS

ADJOURNMENT

Materials related to an item on this Agenda submitted to the City Council/Community Services District/City as Successor Agency for the Community Redevelopment Agency, or Housing Authority after distribution of the agenda packet are available for public inspection in the City Clerk's office at 14177 Frederick Street during normal business hours.

Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, in compliance with the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Mel Alonzo, ADA Coordinator, at 951.413.3027 at least 48 hours before the meeting. The 48-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

APPROVALS	
BUDGET OFFICER	
CITY ATTORNEY	
CITY MANAGER	

Report to City Council

TO: Mayor and City Council
Planning Commission

FROM: Barry Foster, Community & Economic Development Director

AGENDA DATE: April 3, 2012

TITLE: DRAFT ENERGY EFFICIENCY AND CLIMATE ACTION STRATEGY

RECOMMENDED ACTION

Staff recommends that the City Council and Planning Commission review the policies in the attached Draft Energy Efficiency and Climate Action Strategy Document and provide direction to staff.

BACKGROUND

At its Joint Study Session of June 15, 2010, the City Council and the Planning Commission reviewed an early draft and gave direction on the continued preparation of the Energy Efficiency and Climate Action Strategy. The main direction at that meeting was for the City to lead by example in implementing best practices for energy efficiency and greenhouse gas reduction and to maximize the use of an incentive based approach to community-wide efforts wherever possible. Since that meeting, staff has refined and reformatted the Strategy based on City Council and Planning Commission input, further review by an internal task force and a recently completed greenhouse gas analysis. The new draft Strategy is attached as Attachment No. 1.

A climate action plan is a commitment on the part of a jurisdiction to pursue a set of goals, objectives and policies aimed at reducing that community's greenhouse gas emissions. Both energy efficiency and climate change initiatives are part of the Energy Efficiency and Climate Action Strategy. Energy efficiency for the purposes of this document is what the City as an organization is doing to conserve energy and achieve energy savings. Climate change covers energy efficiency and other measures that would be implemented on a community-wide basis. The implementation of energy efficiency and climate action initiatives will reduce energy use and greenhouse gases in

the City. Energy production is one of the major contributors to greenhouse gas emissions.

At the joint Study Session, there was discussion about the Strategy Task Force, and how the Task Force led to the creation of the Energy Efficiency and Climate Action Strategy document. The Task Force consists of members from Planning, Capital Projects, Transportation, Special Districts, Maintenance and Operations, City Managers, Electric Utilities and Facilities Divisions. Since then, staff has continued to conduct research on other cities' energy efficiency and climate action plans. The Task Force has identified various past, current, and potential policies and practices, that further energy efficiency and the reduction in greenhouse gases responsible for climate change.

Attachment No. 1 presents a draft list of potential policies for discussion and comment by the City Council and Planning Commission. The list includes all potential policies identified by staff at the Task Force meetings and in review of other cities' plans and recommendations published from various environmental organizations. The list, while not exhaustive, is intended to provide policy makers with a wide range of options from which to choose for potential adoption and implementation.

DISCUSSION

The City has received funding under the Federal Stimulus Package Energy Efficiency and Conservation Block Grant to undertake several projects and initiatives to reduce the City organization's energy use and consequently its greenhouse gas emissions. The funding covers the cost of the Energy Efficiency and Climate Action Strategy. As part of this grant, the City has been able to hire a consultant to conduct a Greenhouse Gas Analysis for the City as an organization and for the City as a community.

The Energy Efficiency and Climate Action Strategy and the Greenhouse Gas Analysis discusses potential programs and policies to reduce overall City energy use, considers an increase in the use of renewable energy, and identifies a potential future City policy of life cycle costs. The strategy has prioritized implementation of programs, policies, and projects based upon energy efficiency, cost efficiency and potential resources. While the Greenhouse Gas Analysis provides more of a scientific approach and recommends a target to reduce community-wide GHG emission emissions by 15% from 2007 levels by 2020, consistent with the State reduction goals in AB 32, the legislation providing the basis of the State's climate action initiatives.

The draft Strategy has drawn on a number of resources. The City's General Plan has been researched and its policies have been incorporated into the draft document. The energy efficiency and climate change plans for the cities of San Carlos, Riverside, Redlands, and Palm Desert have been reviewed and their policies included in the draft document for consideration. Local utilities, including Southern California Edison, Eastern Municipal Water District, Southern California Gas Company, and the City Utility were identified as possible providers of energy efficiency programs, policies, and

funding. Finally, State, Federal and private energy efficient activities were reviewed for potential policies, and consideration given to the impact of regulations and incentives related to building standards, alternative energy, and vehicle emissions and mileage standards.

The City direction with the Strategy is to lead by example, in the implementation of best practices for energy efficiency. The Strategy is broken up into two main parts Section I Energy Efficiency (City Facilities) and Section II Climate Action Strategy (City as a Community). Within the Energy Efficiency section, the first category is called out as Current Energy Efficient Practices. These practices are categorized into Electricity, Water, Recycling and Diversion, Alternative Fuels, and Education. These current practices list what the City is currently doing to be more energy efficient. After the current practices, there is the Proposed Energy Efficient Policies section category where a comprehensive table of energy reduction measures is given. The energy measures are categorized into Energy use, Water use, Recycling and Diversion, Alternative Transportation, Renewable Energy, and Greenhouse Gas Emissions. The anticipated level of Cost Effectiveness and the Lead City Division who would be the lead on the proposed policy is also listed.

In Section II Climate Action Strategy there is also a comprehensive table of energy reduction measures that apply on a community-wide basis. The energy measures are categorized into the same way as Section I.

One example of the City being proactive and leading in energy efficiency is the retrofit to City facilities. An example is the City Hall facility, which has completed lighting retrofits, added solar film to the windows, and installed a new HVAC system. These City Hall projects are reducing the energy used and the City's energy bills. For the period ending on October 4, 2010 City Hall had used 109,440 kWH in electricity and had an electric bill of $20,287 for that month, and for the same month a year later after completing the retrofits in March 2011 City Hall had used 89,660 kWH and had an electric bill of $17,176. In comparing the two years there was a saving of 19,780 kHW electricity saved and a $3,110 savings in just one month.

For the Climate Action Strategy Section a couple of examples of the City being proactive, is maintaining the City's Community Partnership program with Southern California Edison, The Gas Company, and Moreno Valley Electric Utility through the Energy Coalition. The City has participated in energy efficient out reach by placing poster boards in the Parks and Recreation building that promote potential energy rebates, and energy reducing tips. In addition to the partnership with The Energy Coalition the City has created a G.R.E.E.N. (Getting Residents Energy Efficient Now) website that encourages residents to become more energy efficient in their homes, and has web links to other energy websites.

On another track, the State has a number of initiatives to address the implementation of Assembly Bill 32 and Senate Bill 375, both aimed at reducing greenhouse gas emissions in California. SB 375 calls for the preparation of a Sustainable Communities

Plan (SCS) by each Council of Governments. Moreno Valley will be part of the SCS prepared by the Southern California Council of Governments (SCAG). Planning staff is involved in the initial SCAG activities to develop the SCS. The SCS will assess current development and future plans, as represented in the adopted general plans of communities to ensure a certain level of greenhouse gas emissions on an area-wide basis. The SCS may identify land use changes that would need to be considered by Moreno Valley and other SCAG member cities to achieve the area-wide emissions reduction target. AB 32 establishes a statewide greenhouse gas emissions cap which requires emissions to be reduced to 1990 levels by the year 2020. The bill includes mandatory reporting rules, adoption of a plan and regulations to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, including provisions for using both market mechanisms and alternative compliance mechanisms. The policies included in the Strategy will assist in the preparation of the SCS and in meeting the requirements of AB 32 and SB 375.

The above-referenced activities are an overview of the efforts of the Energy Efficiency and Climate Action Strategy Document. Staff is looking for direction from the City Council and the Planning Commission on the draft Energy Efficiency and Climate Action policies prior to embarking on finalizing the Energy Efficiency and Climate Action Strategy.

Once the Strategy has been revised and finalized by the task force, the Strategy will be presented at a community forum and then scheduled for a City Council public hearing meeting for final review and action.

NOTIFICATION

Listing on the City Council Agenda.

ATTACHMENTS/EXHIBITS

1. Draft Energy Efficiency and Climate Action Strategy Document
2. Energy Efficiency and Climate Action Presentation

Prepared By:
Gabriel Diaz
Associate Planner

Department Head Approval:
Barry Foster
Community & Economic Development Director

Concurred By:
John C. Terell
Planning Official

Council Action	
Approved as requested:	Referred to:
Approved as amended:	For:
Denied:	Continued until:
Other:	Hearing set for:

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City of Moreno Valley
Energy Efficiency and Climate Action Strategy

Draft prepared by the City of Moreno Valley Planning Division and the Energy Efficiency and Conservation Task Force

ATTACHMENT 1

Table of Contents

Summary

The City of Moreno Valley recognizes the impact of global climate change from carbon dioxide emissions arising from the activities of the City organization as well as the community's residents, businesses and visitors. Furthermore, the City recognizes the benefits achieved through energy and resource efficiency measures in reducing the community's carbon dioxide emissions as well as improving air quality, energy reliability and economic well-being in the City and region. The City recognizes the need to reduce our energy use and greenhouse gas emissions and become a more sustainable community. The City of Moreno Valley Energy Efficiency and Climate Action Strategy (hereafter referred to as "Strategy") is a policy document which identifies ways that the City of Moreno Valley can reduce energy and water consumption and greenhouse gas emissions as an organization (its employees and the operation of its facilities) and outlines the actions that the City can encourage and community members can employ to reduce their own energy and water consumption and greenhouse gas emissions.

Introduction

The City of Moreno Valley's Energy Efficiency and Climate Action Strategy main objectives are to reduce the environmental impact and fiscal impact of energy usage and greenhouse gas emissions in municipal facilities and within the community. The genesis of the Strategy is the Federal Energy Efficiency and Conservation Block Grant awarded to the City to implement energy efficiency projects and strategies for the City as an organization. At the request of the City Council, the scope of the grant was expanded to include the preparation of a climate action strategy. With City Council support, City staff has applied for energy efficiency grants. In June 2010 the City was awarded a $375,000 (SCE) Southern California Edison Strategic Solicitation for the purpose of expanding the scope of the Strategy and its implementation, including the preparation of a greenhouse gas inventory for the community.

The Strategy is intended to be a comprehensive living policy document for the City organization and the community to address energy and water conservation and effects of climate change. The Strategy is organized into two main sections: Energy Efficiency (City as an organization) and Climate Action (City as a community). The Strategy also contains a Greenhouse Gas Analysis component. The Greenhouse Gas Analysis is also separated into two parts, the City as an organization and the City as a community.

The City realizes the challenges the community may face due to climate change and excess energy and water consumption. With the implementation of energy and water conservation and greenhouse gas reduction measures, training and public awareness, the expected results are the reduction of greenhouse gas emissions and energy and water consumption. In implementing the Strategy, the City's General Plan may need to be updated to reference the Strategy for guidance on energy efficiency and greenhouse gas reduction.

In recent years, the State of California adopted several bills to address energy and climate issues, Assembly Bill 32 and Senate Bill 375.

Assembly Bill 32 establishes a statewide greenhouse gas emissions cap which requires emissions to be reduced to 1990 levels by the year 2020. The bill includes mandatory

reporting rules, adoption of a plan and regulations to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, including provisions for using both market mechanisms and alternative compliance mechanisms. Greenhouse gases, as defined under AB 32, include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The Air Resources Board (ARB) is the State agency charged with monitoring and regulating emissions of greenhouse gases. Under the current "business as usual" scenario, statewide emissions are increasing at a rate of approximately 1% per year as noted below.

California Senate Bill 375 provides emission-reducing goals so regions can plan to integrate disjointed planning and provide incentives for local governments and developers to follow new conscientiously-planned growth patterns. SB 375 enhances the Air Resources Board's (ARB) ability to reach AB 32 goals. For California to reach its greenhouse gas reduction goals, communities must address how they grow. This law directs the ARB to set greenhouse gas reduction targets for regions of the state and work with California's 18 metropolitan planning organizations (MPOs) to align their transportation, housing, and regional land-use plans with greenhouse gas reductions in mind. SB 375 has three goals: (1) to use the regional transportation planning process to help achieve Assembly Bill 32 goals; (2) to use CEQA streamlining as an incentive to encourage residential projects which help achieve AB 32 goals to reduce greenhouse gas emissions (GHG); and (3) to coordinate the regional housing needs allocation process with the regional transportation planning process to reduce vehicle miles traveled. SB 375 will be responsible for reshaping the face of California's communities into more sustainable, walkable communities with alternative transportation options and increased quality of life.

Overview of Energy Efficiency

The Energy Efficiency section's primary focus is to identify potential energy efficiency measures for the City as an organization, both those that have been implemented and those that could be implemented in the future. In addition, the document provides direction and policies to ensure the most effective, practical, and affordable, energy use practices are implemented.

Overview of Climate Action

The focus of the Climate Action section is to promote measures similar to those identified in the Energy Efficiency section and additional measures that can be implemented by the community's residents and businesses to reduce greenhouse gas emissions on a community-wide basis. The Climate Action Strategy includes an analysis of existing and future greenhouse gas emissions community wide and provides a set of policies to guide efforts to reduce greenhouse gas emissions to meet or exceed State requirements without unduly compromising other community goals.

Overview of the Greenhouse Gas Analysis

The analysis was completed under the premise that the City and the community it represents are uniquely capable of addressing emissions associated with sources under the City's jurisdiction. The City's emission reduction efforts should coordinate with the

state strategies in order to accomplish emission reductions in an efficient and cost effective manner. The City developed this document with the following purposes in mind:

- Create a GHG baseline from which to benchmark GHG reductions;
- Provide a plan that is consistent with and complementary to: the GHG emissions reduction efforts being conducted by the State of California through the Global Warming Solutions Act (AB 32); the Federal Government through the actions of the Environmental Protection Agency; and the global community through the Kyoto Protocol; and
- Guide the development, enhancement, and implementation of actions that reduce GHG emissions.

This report establishes 2010 as the year on which to base the existing inventory; this is the most recent year for which reliable data concerning the City's residential, commercial, and government operations are available. Sources of emissions include transportation, electricity and natural gas use, landscaping, water and wastewater pumping and treatment, and treatment and decomposition of solid waste. The 2007 inventory represents conditions prior to the economic recession and will be used to set the target for reducing emissions by the year 2020. The 2010 inventory was calculated using the most recent data available. The 2010 inventory serves as a reference against which to measure the City's progress towards reducing GHG emissions since 2007 and into the future, and also serves as documentation for potential emission trading opportunities.

Moreno Valley's 2010 municipal operations inventory includes sources and quantities of GHG emissions from government owned or rented buildings, facilities, vehicles, and equipment. The community-wide emissions inventory identifies and categorizes the major sources and quantities of GHG emissions being produced by residents, businesses, and municipal operations taking place in the City of Moreno Valley using the best available data. By having the municipal emissions separated from the community as a whole, the local government can implement reduction strategies where it has direct control, closely monitor the changes in emissions over time, and set an example for the rest of the City.

2010 Municipal Emissions Inventory

Table 3-1 2010 Municipal Data Inputs

Category	Data Input	Data Source
Electricity (kWh)	9,937,015 3,847,738	SCE MVU
Natural Gas (therms)	90,651	SCG
Vehicle Fleet *Gasoline(gallons)* *Diesel (gallons)*	 77,325 28,544	Fleet Manager Special Districts
Equipment *Gasoline(gallons)* *Diesel (gallons)*	 2,118 2,208	Parks Division Special Districts
Employee Commute (responses)	141	Employee Survey

The community-wide inventory represents all emissions from sources located with the jurisdictional boundaries of the City of Moreno Valley. Therefore, the municipal emissions described in the previous section are a subset of the community-wide inventories presented here. In 2010, the City of Moreno Valley emitted a total of 920,657 MT CO_2e from the community as a whole. The following sections describe the data inputs, emissions by source, and emissions by land use in 2010.

2010 Community-Wide Emissions Inventory

Table 3-5 2010 Community-Wide Data Inputs

Category	Data Input	Data Source
Electricity (kWh)	633,215,207 62,138,000	SCE MVU
Natural Gas (therms)	26,266,326	SCG
Transportation *Annual Vehicle Miles Traveled* *Annual Trips*	 1,077,909,543 110,098,975	 City Traffic Engineer
Area Source (based on land use) *SFR (units)* *MFR (units)* *Commercial (ksf)* *Industrial (ksf)*	 42,642 9,387 8,325 12,695	 City Planning
Solid Waste (tons)	144,824	CIWMB
Water (AF)	26,183 87	EMWD Box Springs Mutual

With the implementation of GHG reduction measures, Moreno Valley is projected to reduce its community-wide emissions to a total of 798,137 MT CO_2e, which is 556 MT CO_2e below the 2020 reduction target. This is a decrease of 38.5 percent from the City's 2020 BAU emissions inventory and 13 percent from the 2010 emissions. The reduction measures reduce GHG emissions from all sources of community-wide GHG emissions including transportation, energy, area sources, water, and solid waste. The following sections describe the emissions by source and land use category for the year 2020.

This report sets a baseline for the City's GHG emissions, projects how these emissions will grow, and includes strategies to reduce emissions to a level consistent with California's emissions reduction target. These strategies complement the City's General Plan policies and are consistent with Moreno Valley's vision for a more sustainable community.

Greenhouse Gas Analysis Reduction Policies

The purpose and intent of these policies is to achieve compliance with AB 32 and reduce GHG by 15% by 2020. In 2020, the City of Moreno Valley is projected to emit a total of 1,298,543 MT CO2e without the incorporation of GHG reduction policies. The statewide reduction measures would reduce the bulk of Moreno Valley's emissions and make a substantial contribution toward reaching the 2020 reduction target. However, the City would still need to supplement the statewide measures with the implementation of local reduction policies, in order to achieve 15% reduction in GHG by 2020. Future local policy

measures will require decision-maker approval. These reduction measures include the following:

- R2-T1: Land Use Based Trips and VMT Reduction Policies. Encourage the development of Transit Priority Projects along High Quality Transit Corridors identified in the SCAG Sustainable Communities Plan, to allow a reduction in vehicle miles traveled.

- R2-T3: Employment-Based Trip Reductions. Require a Transportation Demand Management (TDM) program for new development to reduce automobile travel by encouraging ride-sharing, carpooling, and alternative modes of transportation.

- R2-E1: New Construction Residential Energy Efficiency Requirements. Require energy efficient design for all new residential buildings to be 10% beyond the current Title 24 standards. (Reach Code)

- R2-E2: New Construction Residential Renewable Energy. Facilitate the use of renewable energy (such as solar (photovoltaic) panels or small wind turbines) for new residential developments. Alternative approach would be the purchase of renewable energy resources offsite.

- R2-E5: New Construction Commercial Energy Efficiency Requirements. Require energy efficient design for all new commercial buildings to be 10% beyond the current Title 24 standards. (Reach Code)

- R3-E1: Energy Efficient Development, and Renewable Energy Deployment Facilitation and Streamlining. Updating of codes and zoning requirements and guidelines to further implement green building practices. This could include incentives for energy efficient projects.

- R3-L2: Heat Island Plan. Develop measures that address “heat islands.” Potential measures include using strategically placed shade trees, using paving materials with a Solar Reflective Index of at least 29, an open grid pavement system, or covered parking.

- R2-W1: Water Use Reduction Initiative. Consider adopting a per capita water use reduction goal which mandates the reduction of water use of 20 percent per capita with requirements applicable to new development and with cooperative support of the water agencies.

- R3-W1: Water Efficiency Training and Education. Work with EMWD and local water companies to implement a public information and education program that promotes water conservation.

- R2-S1: City Diversion Program. For Solid Waste, consider a target of increasing the waste diverted from the landfill to a total of 75% by 2020.

Examples of current statewide and regional planning efforts to reduce GHG emissions are identified in the GHG analysis. Current City efforts include working with RTA to continue to provide timely and effective transit services, and promoting existing incentive

programs for residents that promote residential and commercial energy efficient retro-fits, such as WRCOG's low interest loan programs. These current City efforts wouldn't involve any changes in current City policy or ordinances.

City's Current Goals and Objectives

The City's General Plan includes goals and objectives to achieve energy conservation through land use planning, building design, site planning, compliance with State Title 24 energy savings requirements, and rehabilitation of existing structures. The General Plan also includes measures to reduce traffic congestion and provide more opportunities for walking and bicycling. Other areas of conservation include the use of water efficient irrigation and landscape and coordinated efforts with local water districts to use reclaimed water; recycling; and exterior lighting standards. See Section III Appendix for specific General Plan goals and objectives.

SECTION I – ENERGY EFFICIENCY

Current Energy Efficiency Practices

The City currently employs a variety of measures that reduce consumption of electricity and water and reduce the amount of solid and green waste sent to a landfill. The City has also purchased alternative fuel vehicles that reduce the consumption of gasoline. The following is an outline of current energy saving practices.

Reduced Electricity Consumption

The City of Moreno Valley is currently employing the following practices at City owned and operated facilities to reduce electricity consumption:

	Energy Reduction Measures	Cost Effectiveness	Practice	Policy	Lead Division
A1.	New buildings constructed in City parks are using solar tubes for day time lighting.	High	✓		Parks & Community Services
A2.	Photo cells are being used for lighting park grounds and buildings along with automatic shutoff timers.	High	✓		Parks & Community Services
A3.	Most park lighting is shut down at 10 p.m. except parks that need to be lit all night to address safety issues. Many sites are equipped with two or more circuits on a timer, so alternating lights may be turned off early.	High	✓		Parks & Community Services

A4.	Sport field lights at parks have been replaced with more efficient fixtures with an average energy savings of at least 30%.	High	✓		Parks & Community Services
A5.	Applied window tint/film to the City Hall building windows using grant funds. Project was completed in January 2011. Applying tint/film to windows has made City Hall more energy efficient, comfortable for employees, and reduced energy cost.	High	✓		Planning
A6.	Routine maintenance is performed on all City Heating, Ventilation, and Air Conditioning units to keep them running as efficiently as possible.	High	✓		Purchasing & Facilities
A7.	Replacement of Air Conditioning system at the City Hall Building has been completed (September 2011) using grant funds.	High	✓		Purchasing & Facilities
A8.	Conference and Recreation Center and Public Safety Building have computer systems that allow for continuous control of the HVAC systems. The temperature can be adjusted offsite, and scheduled to go on and off depending on the use of a particular room.	High	✓		Purchasing & Facilities
A9.	Using grant funding, the City is retrofitting florescent light fixtures from T12 to T8 fixtures which use less energy. Retrofit sites are the Senior Center, Library, City Hall, and Fire Stations 6, 48 and 65. Parking lot lighting for these buildings are scheduled to be upgraded to more energy efficient LED fixtures.	High	✓		Purchasing & Facilities
A10.	Light sensors have been installed in some rooms at City Hall which turn off the lights when the room is not in use. Sensors were installed 15 years ago and not all still function.	High	✓		Purchasing & Facilities
A11.	Traffic signals synchronized using grant funds to improve traffic flow and reduce air pollution and gas consumption.	High	✓		Transportation Engineering
A12.	Traffic signal lights were replaced with LED fixtures 4 years ago with a reduction of 60% power usage. Newer traffic signal lights have been installed with LED fixtures.	High	✓		Transportation Engineering

A13.	Using grant funding, the City is retrofitting all of the fluorescent bulbs in Internally Illuminated Street Name Signs with LED light engines that enhance visibility, street safety, and last longer. Annual cost savings of about 50% will be realized with the retrofit due to less use of electricity and less maintenance due to longer life expectancy of the LED.	Medium	✓		Transportation
A14.	City Hall fans run at all times while the building is occupied to maintain a comfortable temperature and a humidity level of 60%, and reduce carbon dioxide levels, per Title 24.	Low	✓		Purchasing & Facilities
A15.	Pilot program by MV Utility installed two induction lights for a 45 day trial period on light poles at Veteran's Way and Calle San Juan de Los Lagos to measure lighting performance and cost of induction lighting versus the existing lights.	TBD	✓		Special Districts

Reduced Water Consumption

The City of Moreno Valley is currently performing the following at City facilities to reduce water consumption:

	Water Reduction Measures	Cost Effectiveness	Practice	Policy	Lead Division
A16.	Restrooms and other buildings in City parks are installed with faucets that automatically shut off.	High	✓		Parks & Community Services
A17.	About 40 acres of City park land uses reclaimed water for irrigation.	High	✓		Parks and Community Services
A18.	Newer irrigation systems at City parks utilize smart controllers which are self-regulating and utilize a central weather station or have their own weather stations.	High	✓		Parks and Community Services
A19.	City adopted new landscape standards in January 2010 which require the use of drought tolerant landscape and water efficient irrigation in new installations and most retrofit projects.	High		✓	Planning
A20.	Purchasing & Facilities Division is testing 0.5 gallon per minute aerators for restroom faucets. Currently, 2.0 and 2.2 per minute gallon aerators are used.	High	✓		Purchasing & Facilities
A21.	Synthetic turf was used at the Moreno Valley Community Park soccer fields to conserve water and increase use time. Water usage was reduced significantly. Synthetic turf should be considered for other sports fields.	Medium	✓		Parks and Community Services

	Water Reduction Measures	Cost Effectiveness	Practice	Policy	Lead Division
A22.	Capital Projects Division had a demonstration project for a median on Frederick Street to evaluate cost and performance of synthetic turf. Project was placed on hold due to lack of funding.	Low	✓		Capital Projects
A23.	Facilities staff researched use of waterless urinals. Maintenance requirements and costs of current technology do not make this a viable option for use in public restrooms.	Low	✓		Purchasing & Facilities

Recycling and Diversion

The following practices or measures help to achieve the recycling and diversion goals of the City:

	Recycling and Diversion Measures	Cost Effectiveness	Practice	Policy	Lead Division
A24.	Maintenance & Operations has an ongoing program to recycle asphalt concrete. Existing pavement is ground up and recycled material is used as base for repaving. If not reused immediately, material is stored for future use.	High	✓		Maintenance & Operations
A25.	All City facilities now have recycling programs.	High	✓	✓	Maintenance & Operations
A26.	City recycling programs include: Procurement Policy, City Facilities Recycling Program, Animal Shelter: Lonely Hearts Adoption Program, School Recycling Program, Residential Recycling, Curbside & Buy-back, Voluntary Commercial Recycling, C&D Recycling, CIP Program, Community Outreach, Grasscycling, Mulch, Composting Workshops, Residential Recycling, Commercial Recycling.	High	✓	✓	Maintenance & Operations
A27.	City staff presents community programs on recycling. The City works with the Chamber of Commerce to promote recycling. The City is preparing an education program for City employees regarding recycling and disposal of hazardous materials.	High	✓		Maintenance & Operations
A28.	Rubberized asphalt concrete has been used on City street projects when cost is comparable to regular asphalt concrete. Recycled tires are used. Advantages include reduced road noise, reduced breaking distance, and slightly longer life to road surface. There are some limitations on where it may be installed.	Medium	✓		Capital Projects
A29.	Cold in Place Recycling (CIR) is used as appropriate for street rehabilitation projects. The process includes removing old pavement, combining the old pavement with emulsion, and placing it back down as part of the new street section.	Medium	✓		Capital Projects

A30.	In central plant recycling, reclaimed asphalt pavement (RAP) is screened, crushed, sized, and mixed with an asphalt rejuvenator. The recycled mix can be transported immediately to a job site, or it may be stockpiled for later use. The RAP can be freshly milled, or it may come from a stockpile.	Medium	✓		Capital Projects
A31.	For capital projects, the contractor is required to complete monthly Solid Waste Disposal and Recycling Reports and submit them to the City.	Medium	✓		Capital Projects or Contracting Division/Department
A32.	City uses green recycled janitorial products at City Hall and the Facilities Annex.	Low	✓	✓	Purchasing & Facilities

Alternative Fuel Vehicles

The City is currently doing the following with City fleet vehicles:

	Alternative Fuel Vehicle Measures	Cost Effectiveness	Practice	Policy	Lead Division
A33.	City used grant money to retrofit diesel engines vehicles to comply with new laws to make diesel engines cleaner burning. Phase I, December 2009, Phase II scheduled to be completed by December 2011.	High	✓		Maintenance & Operations
A34.	City has one electric vehicle and four natural gas vehicles (two street sweepers, one pick up truck, and one storm drain cleaning truck).	?	✓		Maintenance & Operations

Education

The City of Moreno Valley currently promotes education related to energy efficiency by participating in partnerships and organizations that promote energy efficiency and by attending seminars, workshops and trade shows related to green building, water conservation, and facility maintenance.

The City of Moreno Valley participates in the following organizations:

- Community Energy Partnership – This partnership identifies incentives and rebates for City and developer projects.
- Energy Coalition - Facilities Maintenance Division has completed energy audits for five buildings with the Energy Coalition.
- WRCOG Clean Cities – Public-private partnership dedicated to achieving improved air quality, energy security, economic development, and transportation goals.
- WRCOG Air Quality Task Force – The task force brings together cities and local resources to share information on efforts and funding opportunities to improve air quality in the region.

- WRCOG Solid Waste Technical Committee – The task force was comprised of staff from each of WRCOG's member agencies and meets to discuss solid waste and recycling issues and makes recommendations to the WRCOG's Technical Advisory Committee on matters directly relating to Western Riverside County.

- Riverside County Solid Waste Management Advisory Council (Countywide Local Task Force) – This group provides advisory to the County's Planning Commission and Board on all substantive waste management issues and solid waste facility land use matters, and also assists the County and its cities in meeting AB939 requirements, from the preparation and revision of the Countywide Integrated Waste Management Plan (CIWMP) to reviewing and commenting on solid waste facilities and their expansions for consistency and recycling goals to the Department of Resources, Recycling and Recovery.

Proposed Energy Efficiency Policies

The following energy efficiency measures are suggested as policies for the City of Moreno Valley. The suggested measures include current practices of the City of Moreno Valley along with recommendations from the City's Energy Efficiency Task Force and the practices and policies of other jurisdictions.

Reduced Electricity Consumption

The following measures are suggested as policies to assist the City of Moreno Valley in reducing electricity consumption at City owned and operated facilities:

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B1.	Establish a standard for saving energy beyond Title 24 requirements.	✓						High	Building
B2.	Document municipal green building efforts and post-occupancy building performance metrics on the City website for use as an educational resource for the development community.	✓						High	Capital Projects
B3.	Require the use of reclaimed water for City buildings, facilities, parks and parkways where connection to reclaimed water lines is feasible.		✓					High	Capital Projects or Contracting Division / Department
B4.	Require all new City buildings and facilities to participate in the Savings by Design program, which identifies ways to improve the energy efficiency of proposed construction.	✓						High	Capital Projects or Contracting Division / Department
B5.	Establish policy that mandates a green building rating system standard that applies to all new buildings and retrofits over 5,000 square feet.	✓						High	Capital Projects

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B6.	Require all new and renovated City facilities to coordinate with Southern California Edison or Moreno Valley Utility, Eastern Municipal Water District, and The Gas Company to maximize rebate opportunities. Use rebates to expand energy saving upgrades. Group projects to provide eligibility to apply for grants and rebates, and provide greater reimbursement.	✓						High	Capital Projects or Contracting Division / Department
B7.	Require life cycle cost where appropriate, to be compared to initial cost for projects. Include as part of City Council reports, in order for the decision makers to be more informed of true costs of projects.	✓						High	Capital Projects
B8.	Adopt green building policy for all City new construction and major remodels.	✓						High	Capital Projects
B9.	Implement LEED standards without becoming LEED certified to become more energy efficient. LEED certification has substantial expenses involved.	✓						High	Capital Projects

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
10.	Devise checklist of agencies to contact for rebates and/or incentives for new construction or renovation projects. List would include types of projects for which rebates are typically eligible.	✓						High	Capital Projects
B11.	Benchmark all City facilities in the Energy Star web site.	✓						High	Electric Utility
B12.	Require all City facilities have recycling programs.			✓				High	Maintenance & Operations
B13.	Require existing asphalt concrete be recycled and used as base for streets whenever feasible. Store recycled material that cannot be used immediately.			✓				High	Maintenance & Operations
314.	State recycling requirements are currently for a 50% diversion rate. The City intends to meet or exceed all future mandates passed by the state legislature.			✓				High	Maintenance & Operations
B15.	Seek funding for alternative fuel vehicles or fund improvements to City vehicles (e.g. City funding sources used for retrofitting City fleet).				✓			High	Maintenance & Operations
B16.	Use AQMD's diesel retrofit program to all City-operated diesel engines to comply with clean diesel combustion.				✓			High	Maintenance & Operations

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B17.	Establish minimum fleet mileage standard for various classes of fleet vehicles.				✓			High	Maintenance & Operations
B18.	Promote rideshare program for employees to decrease vehicles miles traveled.				✓			High	Maintenance & Operations
B19.	Restrict use of turf at City buildings and facilities to gathering areas and useable open space. The CRC would be a good place to start in reducing turf. Several areas could be changed to drought tolerant plants species. Patriot Park provides a good example of this concept.		✓					High	Parks & Community Services
B20.	Require use of smart controllers which are self-regulating with their own weather stations for all City projects consistent with City Landscape Standards. Retrofit existing controllers as funding becomes available.		✓					High	Parks & Community Services
B21.	Consider that new buildings constructed in City parks use solar tubes or equal design for daytime lighting.	✓						High	Parks & Community Services
B22.	Require installation of energy efficient fixtures for all sport field lights in new parks. Retrofit existing lights as funding is available.	✓						High	Parks & Community Services

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
23.	Implement "green at work" programs including "Cops on Bikes"	✓						High	Planning
B24.	Identify and apply for funding to implement adopted energy conservation & efficiency programs.	✓						High	Planning
B25.	Encourage employees to submit energy efficiency and conservation recommendations for City operations and assess them.	✓						High	Planning
B26.	Establish an energy efficiency revolving fund to deposit energy savings, rebates and incentives. The policy should consider the following funding sources: 100% of rebate and incentive money and 50% of energy bill savings money for future energy efficiency projects.	✓						High	Planning
B27.	Require water audits for new and renovation projects.		✓					High	Planning
B28.	Establish a fund from a portion of water savings, rebates and incentives to fund additional water saving projects.		✓					High	Planning
B29.	Provide on-site training seminars for employees on energy saving methods.	✓						High	Planning

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B30.	Install light sensors, which turn off the lights when a room is not in use, wherever practical.	✓						High	Purchasing & Facilities
B31.	Evaluate lighting requirements and safety concerns for City facilities and reduce or turn off exterior lights when facilities are not in use.	✓						High	Purchasing & Facilities
B32.	Consider all City leases to include permission to do energy retrofits (e.g. replace light bulbs) which is more efficient than having the landlord do them.	✓						High	Purchasing & Facilities
B33.	Encourage that all City building thermostats be set at Federal and State recommendations, currently 68 degrees in winter and 78 degrees in summer.	✓						High	Purchasing & Facilities
B34.	Promote turning off lights in offices and work areas when not in use at all City facilities.	✓						High	Purchasing & Facilities
B35.	Utilize an energy monitoring system to track electricity use and identify areas/facilities that can be operated more efficiently.	✓						High	Purchasing & Facilities
B36.	Require routine maintenance of the heating and air conditioning (HVAC) systems at City facilities.	✓						High	Purchasing & Facilities

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B37.	Complete an energy audit of all City facilities to identify EE&C opportunities (e.g., HVAC, lighting, weatherization, appliances), and implement all cost effective recommendations.	✓						High	Purchasing & Facilities
B38.	Pursue early participation in the smart meter rollout with SCE and automated meter reading at SCG.	✓						High	Purchasing & Facilities
B39.	Replace interior and exterior lighting fixtures with more energy efficient fixtures when they become available on the market through changes in technology as funding is available.	✓						High	Purchasing & Facilities
B40.	Establish purchasing decisions based on environmental information and life cycle costs.	✓						High	Purchasing & Facilities
B41.	Encourage installation of computer monitoring systems in new City facilities which allow continuous control of the HVAC systems wherever practical. Retrofit existing facilities as funding becomes available.	✓						High	Purchasing & Facilities
B42.	Install automatic shutoff faucets in all new City buildings and facilities wherever possible. Replace existing faucets as funding is available.		✓					High	Purchasing & Facilities

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B43.	Consider replacing aerators in existing faucets with 0.5 gallon per minute aerators where practical.		✓					High	Purchasing & Facilities
B44.	If funding is available, host annual "Energy Efficiency" Day for employees, similar to Safety Day. The Energy Coalition, Gas Company, SCE, MVU, etc. could put on demonstrations, distribute literature, give out products (light bulbs, etc.). This would help maintain Gold level status with Energy Coalition and educate employees on saving energy at work and at home.	✓					✓	High	Purchasing & Facilities
B45.	Review current median landscape standards to increase water efficiency, with efficient irrigation, grading that retains water run off and a drought tolerant plant palette.		✓					High	Special Districts

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
46.	Seek grants to renovate Alessandro Boulevard medians to reduce or eliminate turf. New median concept would reduce water, electricity and gasoline (maintenance equipment) use, and reduce maintenance cost and green waste. Medians would have irrigation control program controlled online, allowing for adjustments to irrigation schedules due to the changing weather patterns. Reduced water runoff from medians would also lower maintenance costs to adjacent asphalt pavement.		✓					High	Special Districts
B47.	Establish guideline that identifies criteria for using 'green concrete' or concrete made with recycled aggregate. Use reduces CO_2 emissions and solid waste sent to landfills (e.g. granulated coal ash, blast furnace slag).			✓				Medium	Capital Projects
B48.	Establish guideline that identifies criteria for using rubberized asphalt concrete for City projects.			✓				Medium	Capital Projects

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B49.	'Demonstration' buildings such as future new buildings, may want to become LEED certified to highlight energy and environmental improvements for public information.	✓	✓	✓		✓	✓	Medium	Capital Projects
B50.	Consider moving City electric load off-peak to increase peak capacity and take advantage of lower rates.	✓						Medium	Electric Utility
B51.	Increase the City's Electric Utility renewable energy mix.	✓						Medium	Electric Utility
B52.	Identify opportunities for on-site renewable energy generation on City-owned and private property.	✓						Medium	Electric Utility
B53.	Establish policy to replace (by normal attrition) more City Vehicles with hybrid, electric, alternative fuel, or smaller vehicles where such vehicles meet the use requirements. When it is economically feasible.				✓			Medium	Maintenance & Operations
B54.	Establish a zero waste policy to require everything to be recycled, with minimal disposables allowed and encourage composting.			✓				Medium	Maintenance & Operations
B55.	Require use of photo cells in park buildings and automatic shutoff timers wherever practical.	✓						Medium	Parks & Community Services

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
56.	Coordinate with adjacent cities and jurisdictions, and work together as a region to implement energy efficiency programs.	✓						Medium	Planning
B57.	Use green recycled janitorial products at City facilities when it is cost effective.			✓				Medium	Purchasing & Facilities
B58.	Provide bicycle parking at City facilities.				✓			Medium	Purchasing & Facilities
B59.	Research potential savings of synthetic turf and/or low water use plantings in medians, assessing installation, maintenance and water costs.		✓					Medium	Special Districts
360.	Consider use of timers on street lights to shut off during late evening and early morning hours when traffic volumes are low, pursuant to adoption of a policy regarding hours of operation for the streetlights.	✓						Medium	Special Districts
B61.	Provide incentives for City staff to develop expertise in green building strategies and certification.	✓	✓	✓	✓	✓	✓	Low	Building
B62.	Consider increasing available charge stations and other accommodations for alternative fuel and hybrid vehicles at City facilities.				✓			Low	Maintenance & Operations

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
B63.	Consider joining Pluginpartners (www.pluginpartners.org) a national organization that supports hybrid electric vehicles.				✓			Low	Maintenance & Operations
B64.	Assess use of low flow toilets and waterless urinals as performance improves and maintenance costs of fixtures become lower.		✓					Low	Purchasing & Facilities
B65.	Establish an environmentally preferable purchasing program for government operations.	✓						Low	Purchasing & Facilities
B66.	Require operation of ventilation fans at all City facilities during occupied hours to maintain a comfortable temperature, humidity level of 60%, and reduce carbon dioxide levels per Title 24.	✓						Low	Purchasing & Facilities
B67.	Replace paper towel dispensers with air dryers in City facilities where practical and cost effective.			✓				Low	Purchasing & Facilities
B68.	Consider adopting LED standard for streetlights, and requiring new installations to meet standard and retrofit existing lights as funding permits. SCE and MVU do not currently have a separate rate structure for LED. An effective LED fixture and spacing would	✓						Low	Transportation Engineering

	Reduction Measures Section I	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
	also need to be established.								

SECTION II – CLIMATE ACTION STRATEGY

Proposed Climate Action Policies

The following energy efficiency measures are suggested as policies for the City of Moreno Valley as a community. The suggested measures include recommendations from the City's Energy Efficiency Task Force and the practices and policies of other jurisdictions.

Reduced Energy Consumption

The following measures are suggested as policies to assist the City of Moreno Valley in reducing electricity consumption at City owned and operated facilities:

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Install light colored "cool" roofs and cool pavements. (Cool roofs are now a requirement per State Title 24/CalGreen Building Standards).	✓						High	Building
C2.	Promote and offer new customized incentives to address critical energy residential and commercial customer needs. Increase incentives on HVAC equipment to promote saving energy on air conditioning during hot months and heating during cool months. Create new incentives for pool pumps and heaters to upgrade pools. Develop new incentives for electric and natural gas.	✓						High	Building
C3.	Require Energy Star equipment and appliances in new construction & renovations.	✓					✓	High	Building
C4.	Specify no- or low-VOC (Volatile Organic Compound) materials.						✓	High	Building
C5.	Consider adopting a new energy efficiency ordinance requiring 10-15% above Title 24.	✓	✓	✓		✓	✓	High	Building
C6.	Install photovoltaic or other solar technology based on demonstrated return on investment for city owned facilities.					✓		High	Capital Projects or Contracting Division / Department
C7.	City should partner directly with the 5 largest consumers of energy to encourage and promote their energy efficiency activities.	✓						High	Electric Utility

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C8.	Promote energy saving opportunities to businesses.	✓						High	Electric Utility
C9.	Promote and implement programs to encourage load shifting to off-peak house and explore demand response solutions.	✓						High	Electric Utility
C10.	Provide education on energy efficiency to residents, customers and/or tenants.	✓						High	Electric Utility
C11.	Use co-branded marketing to leverage the City's influence and knowledge of the community. Create new Partnership brand to integrate City and Utility marketing campaigns to customers. Develop Marketing Team to coordinate City and Utility marketing. Advertise routinely on local media: radio, TV, newspaper, City newsletter, and website.	✓						High	Electric Utility
C12.	Promote and motivate behavioral change, by providing energy saving tip information in local media.	✓						High	Electric Utility
C13.	Take lead to increase face-to-face marketing efforts in the City by organizing the following community activities: • Mayor sponsoring key stakeholder meetings; • City sponsored ideas expo and participating at other regional energy events; • City presenting program to local businesses at	✓						High	Electric Utility

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
	Chamber of Commerce meetings; • City working with community organizations, local service clubs, HOA's and chambers of commerce to educate and sign-up participants; • Contractors conducting face-to-face marketing to both residential and business customers; • City Council recognizing "energy champions" to demonstrate savings to others; and Sponsoring Commercial Food Service luncheons for restaurant, hotel, and country club owners and managers.								
C14.	Explore use of other renewable energy technologies to expand City efforts to utilize renewable energy.					✓		High	Electric Utility
C15.	Implement low impact development practices that maintain existing hydrology of the site to manage storm water and protect the environment. (Use of low impact development practices is required by the new regional water quality permit to be implemented over the next year)		✓					High	Land Development
C16.	Require that developer recycle existing street material for use as base for new streets.			✓				High	Land Development

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C17.	Address and minimize vegetation that degrades access along public rights of way.				✓			High	Land Development
C18.	Develop and implement a public education outreach program that addresses the discharge of preventable contaminants into the sanitary sewer system by residents and businesses (example: no pharmaceuticals or paint down the drain) as an element of the existing public education outreach program.		✓					High	Maintenance & Operations
C19.	Work with Waste Management to utilize billing statements or MVTV-3 to encourage businesses and residents to enroll in a recycling program.			✓				High	Maintenance & Operations
C20.	Create a contest that encourages increased community recycling.			✓				High	Maintenance & Operations
C21.	Offer rewards that will motivate recycling.			✓				High	Maintenance & Operations
C22.	Support and encourage Extended Producer Responsibility (EPR), also known as "Take-Back Programs" for household hazardous waste and other difficult to recycle materials.			✓				High	Maintenance & Operations
C23.	Explore grants to pay for recycling collection devices and their maintenance to be placed with public trash bins and designed to minimize contamination and theft.			✓				High	Maintenance & Operations
C24.	Integrate reuse and recycling into residential industrial, institutional and commercial projects.			✓				High	Maintenance & Operations

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Increase recycling at public events.			✓				High	Maintenance & Operations
.	Continue to promote the locations of local recycling facilities.			✓				High	Maintenance & Operations
C27.	Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls and use water-efficient irrigation methods.		✓					High	Parks & Community Services
C28.	Promote use of City's multi-use trail system.				✓			High	Parks & Community Services
C29.	Establish Energy Efficiency and Conservation baselines.	✓						High	Planning
C30.	Maintain City's Community Partnership program with Southern California Edison, The Gas Company, and Moreno Valley Electric Utility through the Energy Coalition. This partnership allows for funding the City can use for energy conservation marketing, education, and outreach efforts. Set municipal and community wide energy demand and usage reduction goals and implement them by leveraging program resources and incentives already committed or potentially available.	✓						High	Planning
C31.	City should become a model of energy conservation stewardship. Build upon historical and current energy conservation efforts as the foundation for continued efforts and education of the community on the value of efficiency and	✓						High	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
	conservation in cost savings and environmental benefits.								
C32.	Require new large developments (projects of regional significance) participate in the Savings by Design program, funded by Utility customers and administered by private utilities under the auspices of the State Public Utilities Commission. Program identifies ways to improve energy efficiency of proposed construction.	✓						High	Planning
C33.	Encourage community use of Southern California Edison, Moreno Valley Utility, Eastern Municipal Water District, and The Gas Company financial incentives / rebate opportunities.	✓						High	Planning
C34.	Adopt a dark sky ordinance.	✓						High	Planning
C35.	Use passive solar design, e.g., orient buildings and incorporate landscaping to maximize passive solar heating during cool seasons, minimize solar heat gain during hot seasons, and enhance natural ventilation. Design buildings to take advantage of sunlight. (Existing design guideline).	✓						High	Planning
C36.	Reduce unnecessary outdoor lighting.	✓						High	Planning
C37.	Provide customer financing to assist customers with purchasing energy efficiency equipment. WRCOG will take lead in developing a financing plan through property taxes based on	✓						High	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
	the guidelines proposed in Assembly Bill 811. City is a partner in WRCOG effort to establish regional AB811 program.								
C38.	Encourage Point-of-Sale Rebates, since they are the simplest methods for customers to qualify for incentives. Pursue adding more retailer participants within community, as well as expanding the product line of rebates available at these larger retailers.	✓						High	Planning
C39.	Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas and other open space that provide carbon sequestration benefits.					✓	✓	High	Planning
C40.	Promote use of low flow toilets for homes and businesses.		✓					High	Planning
C41.	Review and update the landscape ordinance to continue lowering use of potable water for landscape irrigation. (City updated landscape standards in 2009 to further encourage water conservation.)		✓					High	Planning
C42.	Promote incentives for use of water efficient fixtures and fittings.		✓					High	Planning
C43.	Implement water efficiency, conservation and education programs to reduce the City's per capita potable water usage.		✓					High	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C44.	Cooperate with EMWD to evaluate feasibility of renewable energy sources for water and wastewater operations. (EMWD has installed upgrades to Moreno Valley treatment plant to lower energy consumption)		✓					High	Planning
C45.	Incorporate water-reducing features into building and landscape design.		✓					High	Planning
C46.	Design buildings to be water-efficient. Install water-efficient fixtures and appliances.		✓					High	Planning
C47.	Offset water demand from new projects so that there is no net increase in water use.		✓					High	Planning
C48.	Provide education about water conservation and available programs and incentives.		✓					High	Planning
C49.	Require 50% reduction in irrigation water usage. Limit turf use (turf limited to gathering areas in non-residential and to 25% of front yard for single family residential per City landscape guidelines).		✓					High	Planning
C50.	Require 20% (40% in office/retail) reduction in domestic water usage, using EP Act as a baseline for new construction. Develop prescriptive fixture rates for renovations.		✓					High	Planning
C51.	Reduce unnecessary outdoor lighting.	✓						High	Planning
C52.	Protect existing trees and encourage the planting of new drought tolerant trees. Adopt a		✓					High	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
	tree protection and replacement ordinance.								
.	Work with developers to increase housing near transit through recently adopted mixed use zones. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			High	Planning
C54.	Monitor activities in other areas in California to identify energy saving and climate impact reducing programs suitable for the City.					✓		High	Planning
C55.	Designate Transit-Oriented Development district(s). (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			High	Planning
C56.	Explore building footprint, setbacks, height, scale, hardscape requirements to create compact building design techniques.	✓					✓	High	Planning
C57.	Explore reduced parking minimums required for mixed-use developments to encourage transit and non-motorized transportation.				✓			High	Planning
C58.	Explore greater flexibility with shared parking requirements.				✓			High	Planning
C59.	Explore incentive zoning techniques that allow developers to build more intensity in exchange for open space protection.	✓			✓		✓	High	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C60.	Explore infrastructure master plans and focus expansion in designated growth areas away from open space areas.	✓			✓		✓	High	Planning
C61.	Apply urban planning principles that encourage high density, mixed-use, walkable/bikeable neighborhoods, and coordinate land-use and transportation with open space systems and promote the efficient delivery of services and goods. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)	✓			✓			High	Planning
C62.	While actively protecting critical habitat corridors, coordinate with the Multi-Species Habitat Conservation Plan (MSHCP) to develop and implement a plan to protect natural habitat and wildlife through increasing the amount of preserve areas in the City.					✓	✓	High	Planning
C63.	Require hardscape and parking lots to be shaded.						✓	High	Planning
C64.	Explore ways to utilize GIS analysis to optimize tree placement to consider utility lines, automated recycling truck arms, and hardscape.						✓	High	Planning
C65.	Promote "Energy Efficiency" at City events or events that the City participates in such as 4th of July and the March Air Show. The Energy Coalition, Gas Company, SCE, EMWD, MVU, etc. could put on demonstrations, distribute literature, give out products (light bulbs, etc.).	✓						High	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Test new technology, from conducting small trials of innovative products to expanding uses of LED lights, solar, fuel cells, and liquid pool covers for commercial and residential applications.	✓						High	Purchasing & Facilities
C67.	Pursue early participation in the smart meter rollout with SCE and automated meter reading at SCG.	✓						High	Purchasing & Facilities
C68.	Promote on-line purchasing for climate friendly benefits.	✓						High	Purchasing & Facilities
C69.	Encourage original programming on MVTV-3 that promotes energy efficiency, e.g. a program that follows a residential energy audit, to demonstrate how residents can make their homes more energy efficient.	✓						High	Purchasing & Facilities
C70.	Actively promote walking and biking as safe modes of local travel.				✓			High	Transportation Engineering
C71.	Work with RTA to expand local transit service by increasing frequency and adding routes along arterial streets during peak periods.				✓			High	Transportation Engineering
C72.	Work with RTA to expand access to public transit by adding routes, and shelters and benches within 1/4 mile of as many residential areas, employment centers, commercial centers, schools, and parks as possible. Evaluate lighting at all shelters to improve safety.				✓			High	Transportation Engineering

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C73.	Explore trip reduction programs such as carpools/vanpools and preferential parking areas with City staff and other large employers.				✓			High	Transportation Engineering
C74.	Promote school rideshare programs to assist parents/students forming carpools.				✓			High	Transportation Engineering
C75.	Encourage schools to incorporate pickup/drop-off zones. Zones should be separated according to mode of transportation, where feasible.				✓			High	Transportation Engineering
C76.	City should adopt a Non-Motorized Transportation Plan. With focuses on pedestrian and bicycle routes and Master Sidewalk Plan. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			High	Transportation Engineering
C77.	Work with WRCOG and CalTrans to provide better traffic signal synchronization on regional roads. Provide better traffic light synchronization for locally controlled traffic signals.				✓			High	Transportation Engineering
C78.	Promote “least polluting” ways to connect people and goods to their destinations.				✓			High	Transportation Engineering
C79.	Work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles.				✓			High	Transportation Engineering

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Institute teleconference, telecommute and flexible work hour programs to reduce employee trips at the City and the private sector.				✓			High	Transportation Engineering
C81.	Educate consumers, residents, tenants and the public about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; vehicle performance and efficiency (e.g., keeping tires inflated); and low or zero-emission vehicles.				✓			High	Transportation Engineering
C82.	Coordinate a plan with local agencies to expand affordable convenient public transit to assist in reducing per capita vehicle trips in the City.				✓			High	Transportation Engineering
3.	Encourage businesses to offer discounts for customers who use alternative modes of transportation.				✓			High	Transportation Engineering
C84.	Promote car sharing programs.				✓			High	Transportation Engineering
C85.	Set goals consistent with State's Long Term Strategic Plan: All new residential construction in California will be zero net energy by 2020. All new commercial construction in California will be zero net energy by 2030.	✓						Medium	Building

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C86.	Require performance-based energy modeling. Require a minimum compliance margin of 10% better than Title 24 Part 6. Require noncompliance reporting; to include estimates of process, plug loads.	✓						Medium	Building
C87.	Require a construction indoor air quality plan (CIAQ), including a preoccupancy building flush-out.	✓						Medium	Building
C88.	Require all major points of entry have a permanent walk-off system (commercial only).	✓						Medium	Building
C89.	Install energy efficient lighting (e.g. LED), heating and cooling systems, appliances, equipment, and control systems.	✓						Medium	Building
C90.	Encourage installation of solar and wind power systems and solar hot water heaters.					✓		Medium	Building
C91.	Establish City guideline that identifies criteria for using rubberized asphalt concrete for public streets.			✓				Medium	Capital Projects
C92.	Establish City guideline that identifies criteria for using 'green concrete' that has been made with recycled aggregate for public improvements. Results in reduced CO_2 emissions and reduces solid waste sent to landfills.			✓			✓	Medium	Capital Projects
C93.	Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles.				✓			Medium	Capital Projects or Contracting Division / Department

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Follow New York City program that dedicates 10% of existing energy expenditure budget to energy efficiency projects.	✓						Medium	Electric Utility
C95.	Adopt and implement a policy to increase the use of renewable energy.	✓						Medium	Electric Utility
C96.	Promote residential surveys to educate residents on energy saving behaviors, and direct leads and data to appropriate marketing channels to encourage more extensive energy upgrades.	✓						Medium	Electric Utility
C97.	Seek funding sources to implement feasible renewable energy sources.		✓					Medium	Electrical Utility
C98.	Establish incremental growth goals for solar power systems. (e.g., solar PV, solar thermal).					✓		Medium	Electric Utility
9.	Encourage and support development of alternative technologies for processing municipal solid waste in an effort to reduce GHG emissions and generate electricity.					✓	✓	Medium	Electric Utility
C100.	Encourage installation of solar panels on unused roof and ground space and over carports and parking areas.					✓		Medium	Electric Utility
C101.	Include energy storage where appropriate to optimize renewable energy generation systems and avoid peak energy use.					✓		Medium	Electric Utility
C102.	Conduct gray water, rainfall runoff, and other system research and pilot study.		✓					Medium	Land Development

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C103.	Implement integrated stormwater management.		✓					Medium	Land Development
C104.	Enforce and follow limits on idling time for commercial vehicles, including delivery and construction vehicles.				✓			Medium	Land Development
C105.	Based on feedback from promotion of recycling commitment, consider mitigating obstacles that might hinder commercial and residential recycling.			✓				Medium	Maintenance & Operations
C106.	Actively explore new items to add to the list of accepted recycled materials with the City's franchised waste hauler.			✓				Medium	Maintenance & Operations
C107.	Promote clean material recovery facilities at landfill to process municipal solid waste.			✓				Medium	Maintenance & Operations
C108.	Implement programs to encourage and increase participation of diverted waste from landfills to meet or exceed state regulation requirements.			✓				Medium	Maintenance & Operations
C109.	Develop measures to encourage waste from all construction sites be recycled in order to meet or exceed state regulation requirements.			✓				Medium	Maintenance & Operations
C110.	Promote clean material recovery facilities at landfill to process municipal solid waste.			✓				Medium	Maintenance & Operations

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Implement programs to encourage and increase participation of diverted waste from landfills to meet or exceed state regulation requirements.			✓				Medium	Maintenance & Operations
C112.	Develop measures to encourage waste from all construction sites be recycled in order to meet or exceed state regulation requirements.			✓				Medium	Maintenance & Operations
C113.	Provide easy and convenient recycling opportunities for residents, the public, and businesses.			✓				Medium	Maintenance & Operations
C114.	Provide education and publicity about reducing waste and available recycling services.			✓				Medium	Maintenance & Operations
C115.	Implement educational programs to promote green purchasing throughout the community.	✓						Medium	Media
C116.	Reduce City's per capita base load energy consumption by 15% through energy efficiency and conservation programs by 2020.	✓						Medium	Planning
C117.	Use automatic covers, efficient pumps and motors, and solar heating for pools and spas.	✓						Medium	Planning
C118.	Develop recycling methods and expand existing uses for recycled wastewater.		✓					Medium	Planning
C119.	Make effective use of gray water. (Gray water is untreated household waste water from bathtubs, showers, bathroom sinks, and clothes washers. Gray water is for landscape irrigation.		✓					Medium	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C120.	Adopt broadly accepted design-phase calculation methodologies for energy conservation, water conservation, irrigation water conservation, alternative transportation use, and stormwater management; adjust development impact fees accordingly.	✓	✓		✓			Medium	Planning
C121.	Develop shaded, protected, attractive, and accessible pedestrian paths of travel between building entrances and parking lots, sidewalks, adjacent properties, and public transportation stops.	✓			✓			Medium	Planning
C122.	Encourage programs to establish green operations and maintenance for public and private sector businesses.	✓						Medium	Planning
C123.	City ordinances should clearly articulate guidelines to address tree shading issues associated with solar power installations.					✓		Medium	Planning
C124.	Investigate Multi-Family Affordable Solar Housing, Single-Family Affordable Solar Housing and other incentive programs for solar energy-based technology for multi-family housing, single-family affordable housing and city owned buildings.					✓		Medium	Planning
C125.	Increase housing density near transit. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			Medium	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Encourage native tree planting and establish incentives to plant native or low water plantings for all private and public projects.		✓					Medium	Planning
C127.	Establish off-street parking requirements for new development that reduce reliance on single occupancy vehicles.				✓			Medium	Planning
C128.	Obtain funding sources to implement strategies.	✓	✓	✓	✓	✓	✓	Medium	Planning
C129.	Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.	✓				✓	✓	Medium	Planning
C130.	Develop sequestration value for street trees from City database/determine impact on reducing the City's mandated goal for reducing carbon footprint.						✓	Medium	Planning
1.	Select and apply suitable program for measuring carbon offset value of urban forest and seek opportunities to participate in carbon markets.						✓	Medium	Planning
C132.	Prepare an assessment of the entire City's urban forest.					✓	✓	Medium	Planning
C133.	Steer development towards infill rather than greenfield areas. Consider differential impact fee system with lower fees for areas with infrastructure.						✓	Medium	Planning
C134.	Develop incentives for Landowners to preserve open space.						✓	Medium	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C135.	Optimize street tree, sidewalk, and hardscape interface design when planning new projects to minimize future maintenance impacts.						✓	Medium	Planning
C136.	Use satellite imagery to develop a shade tree canopy coverage assessment of all parking lots to establish baseline.						✓	Medium	Planning
C137.	Develop "retrofit strategy" for existing parking lots that lack shade.						✓	Medium	Planning
C138.	Carefully consider a shade tree ordinance and utility incentives for shading south and west faces of dwelling units.	✓					✓	Medium	Planning
C139.	Revise municipal code to ensure solar access is maintained for future solar electric and solar hot water installations.	✓				✓	✓	Medium	Building
C140.	Establish programs and incentives for achieving carbon neutrality at City sponsored events.						✓	Medium	Planning
C141.	Recommend all events receiving in-kind support in lieu of event permit fees to explore carbon offsets for their events.						✓	Medium	Planning
C142.	Promote the City's urban forest to encourage planting and maintenance of trees.					✓	✓	Medium	Planning
C143.	Provide community sustainability action website for residents and businesses to provide comprehensive information.	✓						Medium	Planning

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Develop community education initiative that provides consistent educational materials and resources for use by City staff and community groups.	✓						Medium	Planning
C145.	Partner with local businesses to promote sustainability action.	✓						Medium	Planning
C146.	Mobilize educational sectors of community to develop their own climate and sustainability action awareness programs.	✓						Medium	Planning
C147.	Designate city staff person responsible for coordinating climate action by city departments.	✓						Medium	Planning
C148.	Work with school districts to provide climate and sustainability action curriculum materials.	✓						Medium	Planning
C149.	Establish the 2007 greenhouse gas emission baseline for the community on a per capita basis.	✓						Medium	Planning
C150.	Establish programs that comply with South Coast Air Quality Management District and City General Plan to improve the quality of air in community.	✓					✓	Medium	Planning
C151.	Aggressively support programs at the AQMD that reduce GHG and particulate matter generation in the Riverside, San Bernardino, Los Angeles and Orange County regions to improve air quality and reduce pollution in the community.	✓					✓	Medium	Planning
C152.	Develop a water wise community garden program.		✓					Medium	Parks & Community Services

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C153.	Promote local demonstration gardens at Western Municipal Water District and the planned garden at the southeast corner of Cactus and Heacock, around the EMWD pump station.		✓					Medium	Parks & Community Services
C154.	Consider use of timers on some streetlights. A policy regarding hours of operation for streetlights would need to be determined.	✓						Medium	Special Districts
C155.	Promote free shuttle service connecting to Metrolink that synchronizes with Metrolink's schedule.				✓			Medium	Transportation Engineering
C156.	Create travel routes that ensure destinations may be reached conveniently by public transit, bicycling and walking. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			Medium	Transportation Engineering
C157.	Work with WRCOG to develop a new master plan to encourage use of neighborhood electric vehicles, which are environmentally friendly street legal vehicles.				✓			Medium	Transportation Engineering
C158.	Coordinate with school districts to adopt the League of America Bicyclists' Cycling curriculum so students learn safest way to bike.				✓			Medium	Transportation Engineering
C159.	Implement "Smart Bus" technology - GPS with electronic displays at stops to provide actual time data to passengers.				✓			Medium	Transportation Engineering
C160.	Develop and offer incentives to residents that downsize the number of cars in their household.				✓			Medium	Transportation Engineering

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Develop renewable fuel locations and electric plug-in stations including a map for drivers to find refueling locations.				✓			Medium	Transportation Engineering
C162.	Consider the use of round-a-bouts instead of traffic signs at low volume intersections for new development.				✓			Medium	Transportation Engineering
C163.	Retrofit existing intersections with video proximity detection rather than magnetic sensors so that cyclists and others lower weight/lower metal content vehicles are easily detected as vehicles at intersections.				✓			Medium	Transportation Engineering
C164.	Develop programs to reduce mobile sources of pollution, such as encouraging the purchase of alternative fuel vehicles or lower emission hybrids and plug-ins for the residential and business community.				✓			Medium	Transportation Engineering
C165.	Model use of alternative modes of transportation throughout the community by providing programs to City employees that can be duplicated by local businesses.				✓			Medium	Transportation Engineering
C166.	Implement a regional transit program between educational facilities. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			Medium	Transportation Engineering
C167.	Implement use of solar radar feedback signs (which display vehicle speed) to encourage compliance with speed limits and reduce waste of gasoline.				✓			Medium	Transportation Engineering

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C168.	Adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.				✓			Medium	Transportation Engineering
C169.	Provide public transit incentives such as free or low-cost monthly transit passes to employees, or free ride areas to customers.				✓			Medium	Transportation Engineering
C170.	Incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			Medium	Transportation Engineering
C171.	Ensure that projects enhance, and do not disrupt or create barriers to, non-motorized transportation.				✓			Medium	Transportation Engineering
C172.	Connect parks and open space through shared pedestrian/bike paths and trails to encourage walking and bicycling.				✓			Medium	Transportation Engineering
C173.	Create and Encourage employers to implement carpools/vanpools incentives.				✓			Medium	Transportation Engineering
C174.	Explore developing a Smart Growth Development Impact Fee matrix. Fee based on trips generated by project. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)	✓			✓			Medium	Transportation Engineering
C175.	Prepare a Master Sidewalk Plan that identifies "missing links" where sidewalks are necessary and identifies streets for which no sidewalk is required.				✓			Medium	Transportation Engineering

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Evaluate and update existing General Plan street cross-sections to accommodate "complete streets" design standards.				✓			Medium	Transportation Engineering
C177.	Incorporate public transit into the project's design. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies)				✓			Medium	Transportation Engineering
C178.	Provide incentives for city staff to develop expertise in green building strategies and certification.	✓	✓	✓		✓		Low	Building
C179.	Accelerate implementation of solar energy-based technology through permitting process (e.g., reduced permit fees, streamlined permit approval process).					✓		Low	Building
C180.	Where solar systems cannot feasibly be incorporated into the project at the outset, build "solar ready" structures.					✓		Low	Building
C181.	Where applicable develop a decommissioning plan that describes the design intent for the end-of-life of new projects, including expected life span of core and shell, possible adaptive reuse scenarios, potential material reuses, recyclability of demolished materials, and disassembly of building systems.			✓				Low	Capital Projects
C182.	File decommissioning plans in digital format for future reference upon application for major renovation or demolition.			✓				Low	Capital Projects

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
C183.	Submeter major energy/water systems (HVAC, lighting, plug loads, process load) commercial only. Encourage real-time monitoring.	✓	✓					Low	Electrical Utility
C184.	Create solar scorecard process so attainment of goals can be communicated to residents.					✓		Low	Electric Utility
C185.	Ensure that there is an accessible park, recreational, or public open space within a 1/2 mile of 90% of City residents.	✓				✓	✓	Low	Parks & Community Services
C186.	Increase bike parking.	✓			✓		✓	Low	Planning
C187.	Develop secure bicycle storage, showers, and changing rooms for all commercial, industrial, and mixed-use facilities with full-time equivalent on site staff greater than or equal to 20.	✓			✓		✓	Low	Planning
C188.	Establish organic and local farming zones.		✓					Low	Planning
C189.	Investigate State and local resources to expand local farming.		✓					Low	Planning
C190.	Seek installation of secure bicycle lockers at employment centers, commercial buildings, commercial districts, schools, and park destinations.				✓			Low	Planning
C191.	Develop “brownfields” and other underused or defunct properties near existing public transportation and jobs.				✓			Low	Planning
C192.	Include environmental factors in purchasing policy and decisions.	✓						Low	Purchasing & Facilities

	Reduction Measures Section II	Energy Use Reduction	Water Use Reduction	Recycling and Diversion	Alternative Transportation	Renewable Energy	Greenhouse Gas Emission	Cost Effectiveness	Lead Division
.	Track changes in climate friendly marketplace and constantly update procurement policies.	✓						Low	Purchasing & Facilities
C194.	Increase purchasing of climate friendly products when practical, and affordable.	✓						Low	Purchasing & Facilities
C195.	Coordinate with area school districts to install bike racks on school buses similar to public buses.				✓			Low	Transportation Engineering
C196.	Develop a program with school districts that provides incentives for students to purchase bicycles.				✓			Low	Transportation Engineering
C197.	Purchase, or create incentives for purchasing, low or zero-emission vehicles.				✓			Low	Transportation Engineering
C198.	Consider changing existing and future illuminated streetlights to LED. The retrofit cost for LED lighting is not feasible at this point. SCE and MVU do not currently have a separate rate structure for LED.	✓						Low	Special Districts

SECTION III – APPENDICES

General Plan Goals and Objectives

- Chapter 7. Energy conservation is a way to control energy costs, reduce reliance on foreign energy supplies and minimize air pollution. Energy efficiency can be derived in the arrangement of land uses, in the design of developments and the architecture of individual buildings. (GP Issues and Opportunities 7.6.2.)

- Chapter 7. Issues and Opportunities 7.6.2.The amount of energy consumed in automobile travel can be reduced if commercial and recreational opportunities are located near residential uses. Commuter travel can be minimized if there is a reasonable balance between jobs and housing within the area. Placing high intensity uses along transit corridors can also reduce automobile travel.

  Reducing residential street width can affect microclimates and reduce the summer cooling needs of adjacent homes. The orientation of buildings can be arranged to affect the amount of heat gain. Shade trees can also cool microclimates and aid in energy conservation.

  Building construction options are available to reduce energy consumption. Building construction methods include, but are not limited to, insulation of walls and ceilings, insulated windows and solar water heating systems. Many building energy conservation measures have been incorporated into Title 24 of the California Administrative Code and are required of all residential structures. (GP)

- Orient commercial development toward pedestrian use. Buildings should be designed and sited so as to present a human-scale environment, including convenient and comfortable pedestrian access, seating areas, courtyards, landscaping and convenient pedestrian access to the public sidewalk. (GP)

- Chapter 8. **Energy Conservation 8.4.11** The City of Moreno Valley, through its housing rehabilitation programs provides grants or loan funds that include work for energy conservation repairs or replacements. The City of Moreno Valley, through its Neighborhood Preservation division, participates in utility energy conservation programs sponsored by private sector utility companies. When households participating in the City's housing rehabilitation programs require additional assistance in the area of energy conservation, utility discounts or replacement of inefficient appliances, staff provides information on programs available through utility companies. Depending on the availability of funds, utility companies make available weatherization services, replacement of inefficient air conditioners with evaporative coolers, replacement of refrigerators that are over 10 years old, repair or replacement of inefficient furnaces as well as free energy efficient compact fluorescent light bulbs. (GP)

- **Objective 4.3** Develop a hierarchical system of trails which contribute to environmental quality and energy conservation by providing alternatives to motorized vehicular travel and opportunities for recreational equestrian riding, bicycle riding, and hiking, and that connects with major regional trail systems. (GP)
- 5-13 Implement Transportation Demand Management (TDM) strategies that reduce congestion in the peak travel hours. Examples include carpooling, telecommuting, and flexible work hours. (GP)
- 7.5.2 Encourage energy efficient modes of transportation and fixed facilities, including transit, bicycle, equestrian, and pedestrian transportation. Emphasize fuel efficiency in the acquisition and use of City-owned vehicles. (GP)
- 7.5.3 Locate areas planned for commercial, industrial and multiple family density residential development within areas of high transit potential and access. (GP)
- Chapter 5. Transportation Demand Management 5.3.5 Transportation Demand Management (TDM) strategies reduce dependence on the single-occupant vehicle, and increase the ability of the existing transportation system to carry more people. The goal of TDM is to reduce single occupant vehicle trips during peak hours and modify the vehicular demand for travel.

  A reduction in peak hour trips and a decrease in non-attainment pollutants can be achieved through the implementation of TDM strategies. Examples of the strategies include: carpooling, telecommuting, flexible work hours, and electronic commerce that enables people to work and shop from home.

- 7.5.1 Encourage building, site design, and landscaping techniques that provide passive heating and cooling to reduce energy demand. (GP)

    - 7.8.1 Encourage recycling projects by individuals, non-profit organizations, corporations and local businesses, as well as programs sponsored through government agencies. (GP)
    - Chapter 7. Solid Waste 7.3. The City Council adopted a “Source Reduction and Recycling Element” in 1992, describing how Moreno Valley plans to meet the goals mandated by AB939. The element includes strategies to address various components of the solid waste challenge, including the character of the waste stream, source reduction, recycling, composting, special waste (e.g. construction debris, auto bodies, medical waste, tires and appliances), education and public information, disposal facility capacity, funding and integration of the various components.

      Moreno Valley works in concert with the local waste hauling company to meet its waste diversion requirements. Residential customers place recyclable materials at the curb for collection by the waste hauler, Waste Management of the Inland Empire. The waste hauler separates and markets the recyclable materials, including cardboard, paper, tin/metal, aluminum cans, plastics

and glass. In 2004, fifty-one percent of the solid waste generated in Moreno Valley was diverted from landfills. (GP)

- 7.3.1 Require water conserving landscape and irrigation systems through development review. Minimize the use of lawn within private developments, and within parkway areas. The use of mulch and native and drought tolerant landscaping shall be encouraged. (GP)
- 7.3.2 Encourage the use of reclaimed wastewater, stored rainwater, or other legally acceptable non-potable water supply for irrigation. (GP)
- 7-2 Advocate for natural drainage channels to the Riverside County Flood Control District, in order to assure the maximum recovery of local water, and to protect riparian habitats and wildlife. (GP)
- 7-4 Provide guidelines for preferred planting schemes and specific species to encourage aesthetically pleasing landscape statements that minimize water use. (GP)
- Maintenance of systems for water supply and distribution; wastewater collection, treatment, and disposal; solid waste collection and disposal; and energy distribution which are capable of meeting the present and future needs of all residential, commercial, and industrial customers within the City of Moreno Valley. (GP)
- 7-3 Maintain a close working relationship with EMWD to ensure that EMWD plans for and is aware of opportunities to use reclaimed water in the City. (GP)
- Provide landscaping in automobile parking areas to reduce solar heat and glare. (GP)
- 6.7.6 Require building construction to comply with the energy conservation requirements of Title 24 of the California Administrative Code. (GP)
- 7.5.4 Encourage efficient energy usage in all city public buildings. (GP)
- 7.5.5 Encourage the use of solar power and other renewable energy systems. (GP)
- A dark sky policy
- Chapter 9. 2.10.7 On-site lighting should not cause nuisance levels of light or glare on adjacent properties. (GP)
- Chapter 9. 2.10.8 Lighting should improve the visual identification of structures. Within commercial areas, lighting should also help create a festive atmosphere by outlining buildings and encouraging nighttime use of areas by pedestrians.(GP)

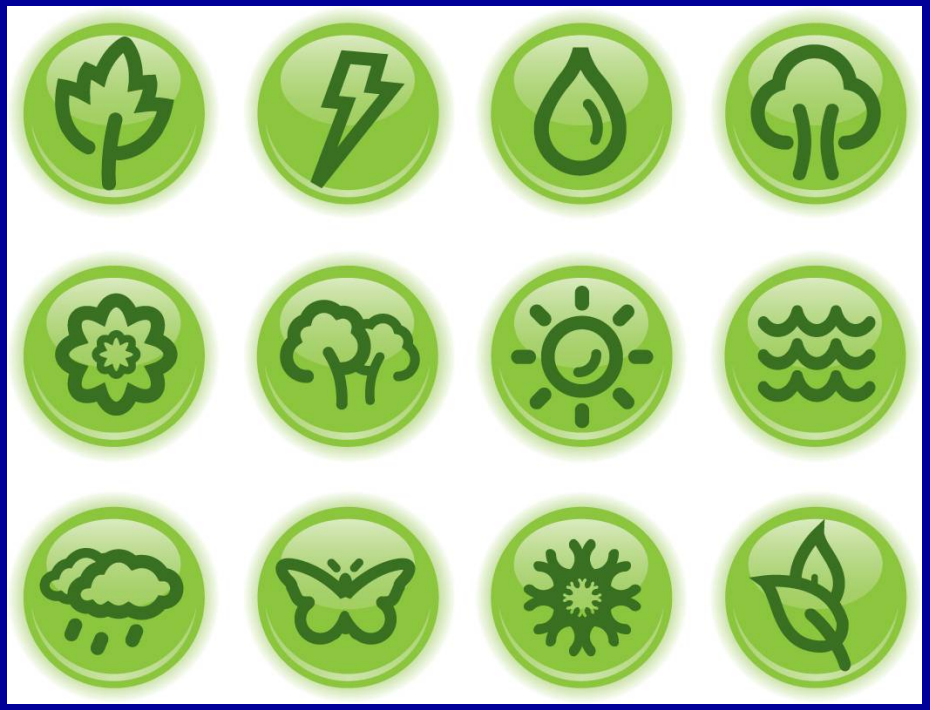
Resources

- ICLEI - Local Governments for Sustainability (ICLEI) is a membership association of local governments committed to advancing climate protection and sustainable development.
- The Energy Coalition
- Community Energy Partnership
- Southern California Edison
- The Gas Company
- Eastern Municipal Water District
- Energy Star
- WRCOG
- Waste Management
- Moreno Valley Utilities
- Moreno Valley Unified School District
- Val Verde Unified School District

Energy Efficiency and Climate Action

MORENO VALLEY
WHERE DREAMS SOAR

Energy Efficiency and Climate Action Strategy



Energy Efficiency and Climate Action Strategy – Overview

- Reviewed previously by City Council at a Study Session on June 15, 2010.
- “Lead by Example and Incentive Based”
- Funded by the Federal Energy Efficiency and Conservation Block Grant (EECBG).
- Planning Staff is seeking input from Planning Commission and City Council on the draft document.

Energy Efficiency

=

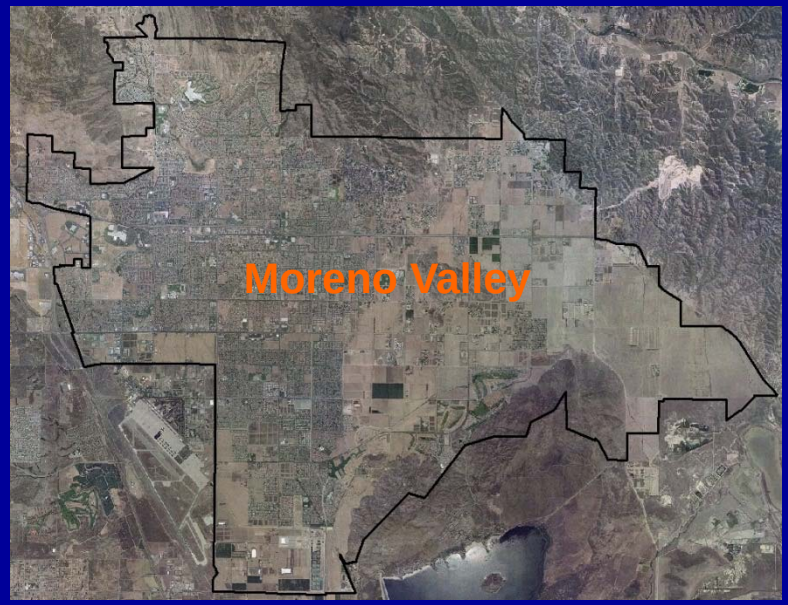
City as “Organization”

City as a “Community”

=

Energy Efficiency and Climate Action

- *Energy Efficiency Contributes to a Reduction in Greenhouse Gas.*



Background and Preparation of Plan

- Prepared with input of an Energy Efficiency and Climate Action Strategy Task Force-Comprised of members from several City departments.
- Researched policies of many other cities, a couple worth mentioning are San Carlos, Riverside, Redlands, and Palm Desert.
- The strategy prioritizes implementation of programs, policies, and projects based upon energy efficiency, cost efficiency and potential resources.

G.R.E.E.N. MoVal

http://www.moval.org/green-mv.shtml

- G.R.E.E.N. MoVal is the City of Moreno Valley's initiative to encourage residents and businesses to become more energy efficient.
- This web page is designed to connect members of the community to resources related to energy efficiency.

Preparation of GHG Analysis/Inventory

Subsequent to the June 15, 2010 City Council Study Session….

- Preparation of Greenhouse Gas Inventory and Analysis has been prepared by a consultant. Energy use is a major contributor to Greenhouse Gas emissions.
- Based on the GHG inventory, the GHG analysis identifies recommended approaches for achieving 15% reduction in GHG by the year 2020.
- These approaches/policy options have been incorporated into the draft of the Energy Efficiency and Climate Action Strategy.

Approaches/Policy Options

- Encourage the development of Transit Priority Projects along major transit corridors identified in the SCAG Sustainable Communities Plan.
- Require a Transportation Demand Management (TDM) program for new development by encouraging alternative modes of transportation.
- Require energy efficient design for all new buildings to be 10% beyond the current Title 24 standards for new residential and non-residential uses.
- Facilitate the use of renewable energy (eg. solar panels) for new developments, or the purchase of renewable energy resources offsite.
- Update codes and zoning requirements and guidelines to further implement green building practices. This could include incentives for energy efficient projects.

Approaches/Policy Options continued

- Develop measures to address “heat islands,” which may include strategically placed shade trees, paving materials that reflect heat, and/or covered parking.

- Work with EMWD to implement a public information and education program that promotes water conservation. Consider adopting a per capita water use reduction goal, which mandates the reduction of water use of 20 percent per capita.

- Consider a target of increasing the waste diverted from the landfill to a total of 75% by 2020.

Implementation/Next Steps

- Input from Planning Commission and City Council.
- Public Outreach Meeting.
- Final Review and Action by the City Council this summer.

Questions & Comments

SCE Strategic Solicitation

SCE Strategic Solicitation – What is it?

- A contract with Southern California Edison for the City to complete seven specific tasks related to energy efficiency ordinances/policy.
- City Council approved this effort on February 22, 2011.
- SCE provided a total of up to $ 375,000 in funding to complete seven tasks. The City has completed about 1/3 of the overall effort.
- The solicitation both complements and implements the Energy Efficiency and Climate Action Strategy.
- The work began on this effort began on April 1, 2011, and must be completed by October 15, 2012.

SCE Strategic Solicitation – What tasks are included?

- Staff Training for Building Inspection Staff.
- Reviewing and analyzing the Energy Efficiency Analysis/Greenhouse Gas Inventory for a Climate Action Strategy.
- Preparing an Energy Efficiency Chapter of the City's Climate Action Strategy.
- Sharing lessons learned with other communities in the SCE service territory.
- **Municipal Energy Action Plan**
- **Municipal Revolving Fund for Energy Efficiency Projects**
- **Developing and considering energy efficiency related codes ("Reach Codes")**

Municipal Energy Action Plan

What are advantages of incorporating energy efficient measures into City facilities?

- Energy savings – Many energy efficient measures will provide a return on investment in a few years.
- Rebates – Southern California Edison offers rebates for retro-fits that are within their service area.
- Incentives – Energy Leader Partnership Program model. The City is seeking the Gold level in this program for an additional .03 per Kwh incentive for City projects.

Municipal Energy Action Plan (EAP)

- The EAP will provide goals and measures focused on energy use in municipal facilities.
- This proposed plan expands on the Climate Action Strategy that also addresses energy usage.
- An EAP is needed if the City decides to pursue Platinum level under the SCE Energy Leader Partnership Program model.
- The separate EAP document would make updates easier.

Energy Efficiency Revolving Fund

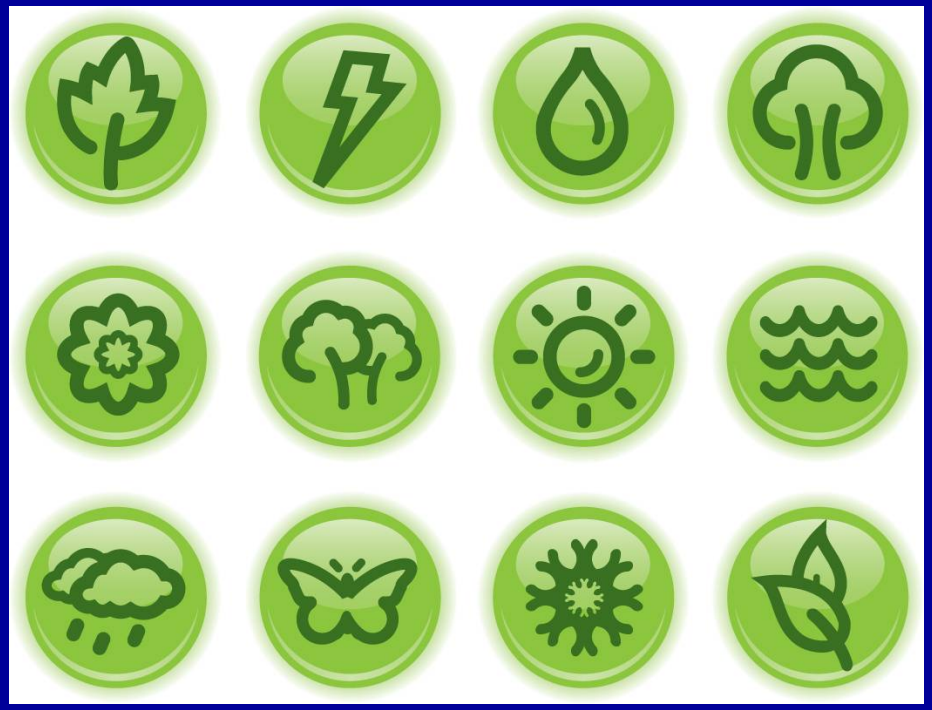
- The purpose is to establish a fund that is dedicated to future funding of energy efficient municipal projects.
- Researched “best practices” for revolving funds, including funds in San Jose, El Cerrito, and County of Riverside.
- The fund is generally established from rebates and incentives and usually includes a portion of the energy savings resulting from energy efficiency projects.
- The fund would be used only for energy efficient related projects at City facilities.
- Will help the City further improve the energy efficiency of its facilities, and use these resources to implement the proposed Energy Action Plan.

Conclusion/Next Steps

- Public Outreach will include at least one community meeting obtaining input from the public on the Climate Action Strategy, and the Energy Action Plan.
- A public hearing will be scheduled for sometime in the summer for City Council action.
- Input from the City Council and Planning Commission on the outreach for these efforts.

Questions & Comments

SCE Strategic Solicitation
Reach Codes



What are Reach Codes and how do they relate to current Energy Codes?

- Energy Reach Codes would result in construction that is more energy efficient than is required under the current energy code.
- Title 24 Energy Efficiency Standards (2008 Building Energy Efficiency Standards).
- California Green Building Code (CalGreen) – Became effective in January 2011. Established a baseline of mandatory and optional levels.

What is the purpose of adopting Reach Codes?

- Contribute to the City achieving 15% energy savings community-wide by the year 2020.
- Establish consistency with the State of California Long Term Energy Efficiency Strategic Plan and AB 32.
- Implement a policy of the Climate Action Strategy/Greenhouse Gas Analysis.

What cities are adopting reach codes?

- 40 cities in California have adopted reach codes in the last two and one-half years.
- Southern California cities adopting reach codes include Simi Valley, Chula Vista, and Manhattan Beach.
- Although there are cities in Riverside County working on Reach Codes, no cities in the County have adopted reach codes yet.

What criteria did staff consider in evaluating reach codes?

- Consideration of local municipalities with similar climate zones, and/or demographics.
- A thorough evaluation of mandatory and optional measures.
- Comparison of various approaches to implementing CalGreen and green ordinances in several other cities (Simi Valley, West Sacramento, and Chula Vista).
- Review of Cost Effectiveness Studies that have been recognized by the California Energy Commission.

Internal Review Process

- Meetings have occurred between Planning Division, Building Division and Moreno Valley Utilities.
- Final public hearings with the Planning Commission and City Council.

How can the “reach” be achieved?

- Performance measures - Requires that a project achieve a specific percentage above by Title 24/CalGreen.
- Mandatory local measures - Requires energy efficiency measures above Title 24 Standard to be incorporated into a project.
- Reach Codes will be evaluated again at the next Building Code update (2014).

Recommended Proposed Measures – Mandatory Local Measures

Residential Measures

- Orientation of buildings to optimize the use of solar energy with the long side of the house oriented within 30 degrees south.
- Landscape design to include turf limit of 25% (Tier 2), utilizing 75% native California or drought tolerant.
- Provide a minimum of one-inch conduit from electrical service equipment for the future installation of a photovoltaic (PV) system.
- Kitchen faucets to limit water consumption to 1.5 gallons per minute.

Residential Measures Continued

- Gutter and downspout systems to route water at least five (5) feet away from the foundation or connect to landscape drains.
- Construction waste generated at the site is diverted to recycle or salvage in compliance with at least a 75% reduction.
- Each appliance provided by the builder meets Energy Star requirements.
- Space on roof surface and penetrations through roof surface are provided for future solar installation.
- A radiant roof barrier to be installed, with roofing materials to include a 3 year old solar reflectance or thermal emittance.

Non -Residential Measures

- Eight (8) percent of required parking designated for any combination of low-emitting, fuel efficient and carpool/vanpool vehicles.
- Landscape design to include turf limit of 25% (Tier 2), utilizing 75% native California or drought tolerant.
- Construction waste generated at the site is diverted to recycle or salvage in compliance with at least a 75% reduction.
- Conduit to be installed from the building roof or eave to a location within the building to provide for future solar.

Non -Residential Measures Continued

- Provide solar or alternative energy source equal to the energy use of designated office space for industrial uses over 300,000 square feet in floor area.

- Use of cool roofing materials having solar reflectance and thermal emittance with specific Solar Reflectance Index values.

Recommended Proposed Measures – Performance Measures

- New Residential Projects – Achieve a 10% energy efficiency level above current Title 24 requirements.
- New Non-Residential projects – Achieve a 15% energy efficiency level above current Title 24 standards.
- Retrofits or additions to existing residential structures - Achieve 5% energy efficiency above current Title 24 standards residential structures greater than 1,000 square feet of floor area.
- Retrofits or additions to existing non-residential structures – Achieve five percent 5% energy efficiency above current Title 24 standards for non-residential structures greater than 10,000 square feet of floor area.
- These measures are consistent with Cost Effectiveness Studies and will allow for cost recovery.

Conclusion/Next Steps

- City Council/Planning Commission direction of local mandatory items and performance standards to move forward with.
- Public Outreach will be completed by meeting with the Development Community.
- Public Hearings to be scheduled for sometime in the summer at the Planning Commission and City Council levels.
- Once approved by Council, the California Energy Commission would be reviewing and approving the proposal.

Questions & Comments

APPROVALS	
BUDGET OFFICER	caf
CITY ATTORNEY	RH
CITY MANAGER	MJ

Report to City Council

TO: Mayor and City Council
Planning Commission

FROM: Barry Foster, Community & Economic Development Director

AGENDA DATE: April 3, 2012

TITLE: IMPLEMENTATION OF THE SOUTHERN CALIFORNIA EDISON LOCAL GOVERNMENT STRATEGIC PLAN GRANT ("STRATEGIC SOLICITATION") (STUDY SESSION)

RECOMMENDED ACTION

The City Council and Planning Commission review staff's proposal to implement the SCE Strategic Solicitation and provide direction to staff. The proposal includes discussion of a proposed Energy Action Plan, an Energy Efficiency Revolving Fund, and Reach Codes.

BACKGROUND

On February 22, 2011, the City Council reviewed the Southern California Edison Local Government Strategic Plan contract and Statement of Work ("Strategic Solicitation"), and recommended accepting the funds that expand the scope of the proposed Climate Action Strategy and further the Strategy's implementation. On March 1, 2011, the City executed the contract to participate in the Southern California Edison Strategic Solicitation, and upon SCE's execution of the document, work on the effort began on April 1, 2011. The total amount of the Strategic Solicitation is $375,477.00. All activities under the solicitation must be completed by no later than October 15, 2012.

The strategic solicitation provides funding for the following six tasks:

A. Staff Training for Building Inspection Staff in current energy codes
B. Reviewing and analyzing the Energy Efficiency Analysis/Greenhouse Gas Inventory for a Climate Action Strategy
C. Preparing an Energy Efficiency Chapter of the City's Climate Action Strategy Sharing lessons learned with other communities in the SCE service territory

D. Developing a Municipal Energy Action Plan
E. Developing a Municipal Revolving Fund for Energy Efficiency Projects
F. Developing and considering energy efficiency related codes ("Reach Codes")

The focus of this staff report will be on Tasks D, E, and F above as these tasks involve preparing policy plans and/or ordinances that require review and approval by City Council. Under the contract with SCE, staff is obligated to bring forward policies and/or ordinances to the City Council for consideration; however, there is no requirement that the City approve the proposed actions.

Southern California Edison was willing to fund the City's effort of developing "reach codes" because this activity would lead to long-term sustainable changes rather than fund shorter term efforts. California Public Utilities Commission's Big Bold Energy Measures are hoping to achieve zero net energy targets for new construction for residential by 2020, and commercial by 2030. Under AB 32, the objective is to achieve a 15% reduction in energy usage by the year 2020.

Cost Effectiveness

The recommended approach focuses on implementation of the most cost effective measures. The most cost effective measures are those that will result in monetary savings that offset the upfront costs for these measures in the shortest amount of time. With this approach in mind, staff researched the policy approach of other cities to determine "best practices" regarding to reach codes, Energy Action Plans, and Energy Efficiency Revolving Funds.

In order to estimate the cost savings from energy efficient measures, an "Energy Cost-Effectiveness Study" was prepared by several utility companies for Climate Zone 10 which includes Corona, Riverside, San Bernardino and Moreno Valley and extends southerly to the inland areas of San Diego County. Types of land uses reviewed in the study included both residential and non-residential uses. Residential land uses included small single family homes (a 2,025 square feet structure), large single-family homes (4,500 square feet structure), low rise multiple family residential apartments (approximately 8 units), a high rise multiple family apartment (40 dwelling units). Non-Residential uses include low rise office buildings (1 story - 10,480 square feet) and high rise office buildings (5 stories - 52,900 square feet). Retail and office buildings have been presumed by Southern California Edison to have similar energy usage. The City of Moreno Valley is currently working with Southern California Edison to determine if it is possible for SCE to prepare a cost effectiveness study for industrial projects, including large industrial warehouse projects.

Municipal Facilities/Incentives

Moreno Valley has been a member of the Community Energy Leader Partnership through Southern California Edison since 2002. Other cities that are part of the Community Energy Leader Partnership include cities of Brea, Corona, Irvine, San Bernardino, Santa Clarita, and Santa Monica. The City also participates in SCE's

Energy Leader Partnership Program Model. The levels in this Program translate directly to monetary incentives City related to energy saving projects. Currently, the City is at a Silver level and is working toward the Gold level. These additional levels translate directly to increased monetary incentives being received by the City for municipal retro-fit projects that involve energy savings. The incentives increase by 0.03 cents per Kilowatt-hour for each Kwh saved at each higher level achieved through the Partnership Program. These incentives can be considerable, and are in addition to any rebates that are available. The City of Moreno Valley has applied for energy rebates and incentives for a total of $20,220.73 from SCE.

DISCUSSION

MUNICIPAL ENERGY ACTION PLAN

The primary purpose of municipal energy action plan is to identify how the City will use energy efficiency and energy independence strategies to achieve its GHG emission reduction target of 15% by the year 2020 consistent with the State's overall target to reduce GHG emissions statewide to 1990 levels by 2020. Such a plan will provide goals and measures focused on energy use, water use, transportation, land use, and solid waste to reduce GHG emissions wherever possible while enhancing the local economy and reducing reliance on energy imports. The Energy Action Plan, which will be specific to municipal facilities, will provide guidance for implementing the Energy Efficiency and Climate Action Strategy. City Council approval of an Energy Action Plan is required for the City to potentially achieve the status of Platinum under the Energy Leader Partnership Program Model, which provides the potential for even higher SCE incentives for future energy efficiency projects. A number of cities have developed Energy Action Plans, although many cities have combined their Energy Action Plan with their Climate Action Plan.

ENERGY EFFICIENCY REVOLVING FUND

Background

Another identified task in the SCE Strategic Solicitation is to develop an energy efficiency revolving fund policy. The purpose of an energy fund is to provide a fund that is solely dedicated to helping fund City related energy projects. In general, these funds rely on monies from energy related incentives and/or rebates, and often include some percentage of the energy savings achieved from implemented projects.

In researching revolving funds, staff has examined successful revolving funds of other agencies. Three key jurisdictions that have been successful in developing such a fund are San Jose, El Cerrito, and the County of Riverside. The jurisdictions that have been successful have had "seed money" from an energy rebate for a larger project(s) that help establish the fund.

City of San Jose

The City of San Jose's energy fund was established in 2005. As with other successful funds, there was initially "seed money," in this case, from a utility incentive for a city-wide traffic signal LED retrofit project. In 2007, the City adopted a plan to transfer first year energy savings from energy projects into the Energy Fund. In 2009, the City Council extended the energy cost savings transfers to include first and second year energy cost savings. The transfers to the Energy Fund are generally based on estimated energy cost savings that are identified in third-party energy audits. A project completed in a given fiscal year will make two payments into their Energy fund in each of the subsequent fiscal years.

County of Riverside

The County's Energy Conservation Fund was established in 2010. Much of the seed money for their program was provided by incentives from one key project. The County received an incentive from the Southern California Edison Savings by Design program of $168,000 for the Palm Desert Sheriff Station project, which opened in the Fall of 2010. The building achieves 34.5% savings over Title 24. At present, the fund relies on rebates and incentives from County projects. No portion of the energy savings can be transferred back to the fund.

City of El Cerrito

The Energy and Water Efficiency Program (EWEP) is a revolving loan fund that was established by the City of El Cerrito in 2008 to fund projects that improve the resource efficiency of City operations. The EWEP is replenished annually based on a portion of the cost savings achieved by projects it funds. With this program the City of El Cerrito has shown how a local government with limited resources can implement innovative approaches to financing energy efficiency.

Discussion

The cities of San Jose and El Cerrito include a portion of their project savings into their energy fund. The County of Riverside does not set aside any of the savings. However, the County has over 450 County owned buildings so rebates and incentives have so far been workable in providing enough monies for a viable fund. Based on the experiences of other agencies, there are a number of approaches that could be taken to developing the fund. Staff's recommended approach to the policy would be for all rebates and incentives to go back into the fund as well as some percentage of the savings attributable to the project. For the fund to be useful for furthering new energy related projects, it will need to include some percentage of the savings from the project (eg. 50% of the cost savings) for a period of time (eg. the first five years of operation). These savings would not have occurred without the energy efficient design of the project. For the "seed money" for the fund, staff is recommending using the incentives and rebates received from projects largely funded by the Energy Efficiency Community Block Grant (EECBG) fund.

REACH CODES

Background

Energy reach codes are codes that would result in buildings that are more energy efficient than would otherwise be required under the minimum energy requirements in the building code. The current energy requirements are addressed in two portions of the building related Municipal Code. The first would be the Title 24 Energy Efficiency Standards (officially titled 2008 Building Energy Efficiency Standards) for Residential and Nonresidential Buildings. These standards were established in 1978 in response to a legislative mandate to reduce California's energy consumption and have been updated periodically since then. The second code would be the California Green Building Code (CalGreen) which became effective in January 2011. It is a separate more stringent code, which creates a baseline of mandatory efficiency and sustainability measures that also includes optional Tier I and Tier II levels. The Title 24 Energy Efficiency Standards and CalGreen codes are intended to be complementary.

A reach code must achieve a higher level of energy efficiency than would otherwise result from complying with Title 24, including the mandatory requirements of CalGreen. Various efforts of achieving the "reach" beyond CalGreen could include consideration of adopting performance measures based on a percentage reduction in the energy usage beyond what is currently required by Title 24, and the consideration of adopting other mandatory local measures that are identified primarily as CalGreen Tier I or II measures. Most of these measures would involve amendments to the locally adopted Building Code. A small number of these measures would also affect current planning and zoning provisions within the Municipal Code. While the modifications to the Municipal Code would still be considered a reach code, the energy efficiency benefits could not be quantified.

The State of California Long Term Energy Efficiency Strategic Plan was adopted in 2008 by the California Public Utilities Commission (CPUC), the California Air Resources Board, and the state's utilities. Various Public Resources Code sections establish a process which allows local adoption of energy conservation measures that are more stringent than the statewide standards if they are demonstrated to be cost effective. As a part of the Plan, the statement of work calls for the development of reach codes. In addition, the reach codes would help implement the City's proposed Energy Efficiency and Climate Action Strategy, which is also under discussion at this joint meeting.

A total of 40 cities in California have adopted reach codes in the last two and one-half years. Most of the cities that have adopted reach code are in Northern California. However, there are a few cities in Southern California that have adopted reach codes, including Simi Valley, Chula Vista, and Manhattan Beach. No cities in Riverside County have adopted reach codes yet. However, Western Riverside Council of Governments has formed a "Riverside Energy Leader Partnership" which comprises most of the Inland Empire cities that are not already part of an energy partnership, to assist in developing model reach codes for member cities.

In order to better ensure the cost-effectiveness of this task, the City of Moreno Valley reviewed and assessed reach codes and related resources of municipalities and organizations throughout Southern California. Staff reviewed a large number of "reach" ordinances and narrowed down the list based on consideration of specific criteria to focus on those that are most relevant to Moreno Valley's economic and climatic circumstances. The following criteria were considered when choosing cities to focus on as case studies:

- Consideration of municipalities with similar climate zones, and/or demographics.
- A thorough evaluation of mandatory requirements of CalGreen as well as Tier 1 and Tier 2 CalGreen measures will be needed to determine the approach to reach codes that would be most appropriate for the City of Moreno Valley.
- Comparison of various approaches to implementing CalGreen and green ordinances among the identified sample of cities.
- Justification for adopting a percentage of energy savings over Title 24 when other surrounding cities have not yet adopted such codes. This would include documentation of the cost effectiveness of energy saving measures for industrial warehouse buildings, particularly high-cube facilities.

Based on reviewing the ordinances of several cities and taking into consideration the criteria listed above, staff focused on the cities of Simi Valley, Chula Vista, and West Sacramento. Each city has similar climatic conditions and is located several miles inland away from the coast. The approach of each city is listed below.

Simi Valley

Simi Valley staff suggested that performance based measures are a preferable approach to mandatory local measures. Although Simi Valley adopted a few mandatory local measures, for the most part, the Simi Valley ordinance relies on adopted percentage levels above the California Energy Code (Title 24) that must be achieved. The standards for new low-rise residential structures are to exceed the minimum performance or standard design required by Title 24 currently in effect by 10%, while standards for non-residential uses would exceed Title 24 by 15%. Alterations or additions greater than 100 square feet to existing low-rise residential buildings are to exceed the minimum performance or standard design required by the California Energy Code currently in effect by 5%.

The City of Simi Valley did adopt a small number of additional mandatory local measures such as requiring Energy Star appliances/equipment for all new construction and a measure requiring that the design of steel framing shall avoid thermal bridging.

City of West Sacramento

The City of West Sacramento adopted a limited number of mandatory local measures within their Reach Code Ordinances. Specific measures from Cal Green included some of the Tier 1 voluntary measures, or those measures that exceeded current Title 24 standards by 15 percent for new construction. This included requiring kitchen faucets and dishwashers that are more efficient than CalGreen standards, requiring residential construction to install low-water consumption irrigation systems that use soaker hoses and drip irrigation, including a 30 percent cut in water use for commercial construction compared to 20 percent under CalGreen and requiring separate outdoor water meters for nonresidential landscaping of 500 square feet or larger, as opposed to the 1,000-square-foot minimum under CalGreen.

City of Chula Vista

The City of Chula Vista has not adopted any mandatory local measures, but did adopt an "Increased Energy Efficiency Ordinance (IEEO)" prior to the adoption of CalGreen. For the portion of their City included in Climate Zone 10 (same climate zone as Moreno Valley), their ordinance mandates performance standards of 20% of energy savings above Title 24 (Tier 2 under CalGreen). Chula Vista has adopted 15% energy savings (Tier 1 under CalGreen) within a portion of the city that lies in Climate Zone 7, a more coastal influenced area than the Moreno Valley Climate Zone 10. According to the City's website, Chula Vista amended CalGreen to include all residential and non-residential remodels and additions of any size.

Discussion

Internal staff task force meetings were conducted on a monthly basis to determine which mandatory local measures would be most productive and what performance standards or percentages above Title 24 would be utilized and recommended to City Council. A total of six (6) in-house meetings were conducted that included representatives from the Planning Division, Building Division and Moreno Valley Utilities. Items discussed in the meetings included which mandatory local measures and performance measures to consider for residential and non-residential development, and if incentives would be provided by Moreno Valley Utilities for any of the mandatory local measures proposed.

In reviewing various city approaches to "Reach Codes" and suggested measures discussed during the many internal subcommittee meetings, staff is suggesting that the City of Moreno Valley take a combination approach, including various mandatory local measures and percentages for performance standards that the developer can choose from. The two sub-sections of the study session report below review the measures currently being suggested by staff as follows:

A. Mandatory Local Measures

Mandatory local measures are those that will provide greater energy efficiency than current CalGreen standards and allow for energy savings citywide with the exception of the first bullet item under non-residential which is a mandatory item under CalGreen. The following residential and non-residential Municipal Code and Building Code measures are being suggested as follows:

Residential

- **Orient buildings to optimize the use of solar energy with the long side of the house oriented within 30 degrees south**

  The Municipal Code currently addresses building orientation in part, however, additional energy efficiency can be achieved by implementing the measure above and allowing for the optimum amount of sunlight to reach a house. After internal discussion, staff has decided to structure this energy efficient item on proceeding with at minimum, 50% compliance of all new homes within a new tract. State law and adopted City design guidelines encourage solar orientation. This proposal would create a minimum requirement.

- **A minimum of one-inch conduit is provided from the electrical service equipment for the future installation of a photovoltaic (PV) system.**

  Under this proposed measure, the developer will be required to provide conduit to a designated minimum space on the roof to facilitate the installation of a future solar system for new residential development. Of the items to choose from the California Green Building Code list, this measure is a lower cost item for the developer to provide on new residential tracts or for individual custom homes that would avoid future higher costs for solar system installation.

- **Space on roof surface and penetrations through roof surface are provided for future solar installation. Three-Hundred (300) square feet of unobstructed roof area facing within 30 degrees of south shall be allocated, while rough-in penetrations through the roof surface within 24 inches of the boundary of the unobstructed roof area shall be provided for electrical conduit and water piping.**

  Under this proposed measure for new residential structures, space on the roof surface and penetrations through the roof would be required by the developer to simplify the addition of a future solar system. A 300 square foot area is required based on CalGreen Building Code standards. In addition, penetrations will be required in the roof surface to allow electrical conduit and water piping for future solar.

- **Landscape design to include turf limit of 25% (Tier 2), utilizing 75% native California or drought tolerant, providing hydrozones and restoring native vegetation to areas disrupted by construction.**

  Upon verification of the Municipal Code, percentages for drought tolerant or California natives are not included in the current landscape ordinance. The landscape ordinance does mention that a maximum of 25% of the front yard can contain turf in a single-family or multiple-family residential development and 25% of production units in a single-family residential tract must include a xeriscape option without the use of turf. Irrigation hydrozones are identified in the current landscape ordinance. This item takes water conservation and drought tolerant landscape a step further to require new residential development to provide either drought tolerant landscape or California native species for the additional 75% that would not include turf.

- **Kitchen faucets shall limit water consumption to 1.5 gallons per minute.**

  This measure is requiring kitchen faucets comply with a maximum flow of 1.5 gallons per minute, which is compatible with Tier 1 standards in the California Green Building Code. Current provisions limit faucets at 2.2 gallons per minute. Although minimum flow requirements are proposed for kitchen faucets in new homes, the homeowner could switch out the system at a later date. The revised rate is consistent with the ordinance developed by the City of West Sacramento, one of the case study cities that the Moreno Valley has utilized.

- **Gutter and downspout systems shall be installed to route water at least five (5) feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved on-site location**

  This item corresponds to the National Pollutant Discharge Elimination System (NPDES) standards. In this case, rainwater can be captured either by a dry well, sump, bioswale, rainwater capture system or another on-site location as approved. Land Development was notified of the suggested "Reach Code" and agreed with the language as written.

- **Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following:**

  1. **Tier 1 at least 65% reduction.**
  2. **Tier 2 at least a 75% reduction**

The rate of construction diversion wastes with this "Reach Code" differs from the current diversion rates of 50% for construction/demolition wastes and post construction/operation waste for residential uses. Assembly Bill 341, which was approved last year and becomes law on July 1, 2012, provides a policy goal (not a mandate) of a 75% diversion rate for commercial and multiple-family residential construction waste. In order to meet the AB 341 goal of 75%, the Tier 2 standard above can be utilized. The City of Simi Valley has included this measure in their "Reach Code" ordinance at a 75% diversion rate for construction wastes.

- **Each appliance provided by the builder meets Energy Star requirements where Energy Star designation is applicable.**

  This proposed measure will ensure that all appliances provided in new homes meet Energy Star requirements. This measure has been adopted by Simi Valley in their Reach Code Ordinance.

- **A radiant roof barrier shall be installed, with roofing materials to include a 3 year old solar reflectance or thermal emittance.**

  The proposed measure above will allow for lighter colored roofs for newly established residential structures. On single-family residential tracts, a minimum of 50% of the houses in the tract shall include radiant barrier roofs.

Non-Residential

- **Eight (8) percent of all required parking shall be designated for any combination of low-emitting, fuel efficient and carpool/vanpool vehicles.**

  The item above is a mandatory item within the latest CalGreen Building Code. Staff considered either the Tier 1 approach where 10% of the required vehicle parking would be designated for carpool/vanpool parking and the Tier 2 approach where 12% of the required vehicle parking would be designated for carpool/vanpool parking, but agreed to include only the mandatory approach of requiring 8% of required parking stalls to include preferential designated spaces for carpool/vanpool and fuel efficient vehicles, due to concerns over level of demand for such spaces.

- **Landscape design to include turf limit of 25% (Tier 2), utilizing 75% native California or drought tolerant, providing hydrozones and restoring native vegetation to areas disrupted by construction.**

  In the current landscape ordinance, irrigation hydrozones are identified. This item takes water conservation and drought tolerant landscape a step

further to require new non-residential development to provide either drought tolerant landscape or California native species for the additional 75% that would not include turf.

- **Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following:**

  1. **Tier 1 at least 65% reduction.**
  2. **Tier 2 at least a 80% reduction**

  A copy of the completed waste management report shall be provided.

  This measure has been included for both residential and non-residential uses. AB 341 provides a policy goal (not a mandate) of a 75% diversion rate for commercial construction waste. In order to meet the AB 341 goal, the maximum percentage that should be considered is 75%.

- **Install conduit from the building roof or eave to a location within the building identified as suitable for future installation of a charge controller (regulator) and inverter for future solar.**

  As with residential structures, said measure will require the developer to pre-wire for the allowance of future solar on the building.

- **Provide solar or approved alternative energy source equal to the energy use of the designated office space for industrial uses over 300,000 square feet in floor area.**

  This proposed measure will provide solar or another approved alternative energy source on industrial buildings that exceed 300,000 square feet in floor area. The item is not included in the California Green Building Code; however it has been included as a mitigation measure for all recent large industrial projects in the City.

- **Use of cool roofing materials having solar reflectance and thermal emittance with specific Solar Reflectance Index values.**

  Staff is currently considering the proposed measure above that would allow for lighter colored roofs for newly established non-residential structures. Although this item was discussed with Building staff in a recent meeting, further details would be needed before considering adoption, and arriving at a specific solar reflectance index value.

B. Performance Standards

Performance standards for projects are also being recommended to further reduce energy consumption and allow developers or applicants the chance to choose from additional measures to allow savings above current Title 24 standards. The following items are recommended for consideration:

- **New Residential projects, including single-family and multiple-family housing** – Achieve Ten 10% energy efficiency above current Title 24 standards for new single and multiple family residential projects if containing greater than 1,000 square feet of floor area

- **New Non-Residential projects, including commercial, office and industrial projects** – Achieve 15% percent energy efficiency above current Title 24 standards for new commercial, office and industrial projects if containing greater than 10,000 square feet of floor area.

- **Retrofits or additions to existing residential structures** - Achieve 5% energy efficiency above current Title 24 standards for existing single-family and multiple-family residential structures containing greater than 1,000 square feet of floor area

- **Retrofits or additions to existing non-residential structures** – Achieve five percent 5% energy efficiency above current Title 24 standards for existing non-residential structures including commercial, office and industrial uses containing greater than 10,000 square feet of floor area.

The performance standards recommended above are consistent with the three cities utilized within the case study. For example, the City of Simi Valley provides performance standards at 10% above Title 24 for new low rise residential and 5% above Title 24 for low rise residential remodels. In addition, the City of Chula Vista requires limitations on projects that would be required to comply, including a 1,000 square foot threshold on residential projects and a 10,000 square foot threshold for non-residential projects.

Recommended percentages within the Performance Standards above also correlate with energy related measures included in the Greenhouse Gas Analysis conducted by the City. Within this document, new construction for residential and commercial development would facilitate the implementation of energy efficient design 10% beyond current Title 24 standards and meet the overall goal of reaching zero net energy for residential structures by 2020. This goal is consistent with the 10% minimum that the City is recommending for new residential development.

Including performance standards at 10% or above for new commercial and residential projects is consistent with current Savings by Design incentives that are offered to existing Southern California Edison (SCE) customers if the project saves 10% beyond current Title 24 standards. In most instances, Moreno Valley Utility would match the

incentives offered by SCE, and thus developers would have the opportunity to receive incentives for meeting the provisions.

Conclusion

The Moreno Valley Electric Utility (MVU) has agreed to provide benefits or incentives for specific mandatory local measures, performance standards and the overall program. MVU will be supporting Reach Code Ordinances through the Public Benefit Program funds collected from customer utility payments. The Energy Efficiency program is State mandated and MVU will comply by tailoring programs that benefit the Reach Code Program. The incentives and/or rebates will be reviewed on an annual basis for funding and are subject to availability.

It is important to note that proposed performance standards for specific percentages beyond Title 24 requirements would not be retroactive with other such Title 24 changes or would no longer apply if future Title 24 changes exceed these percentages. The next change to Title 24 provisions is proposed for sometime in 2014. At that time, staff would need to review the new codes and provisions in place to determine if any of the mandatory local measures or performance standards could be carried forward or possible modifications may be necessary.

For reach codes, the Planning Commission will first review the proposed Municipal Code items and make a recommendation to the City Council while both Municipal Code and Building Code items will be forwarded to the City Council for final review and approval. As Reach Codes are approved, the City of Moreno Valley will apply to the California Energy Commission (CEC). Once the CEC has verified that the local Reach Code Standards are based on a cost effectiveness study or studies, the application is brought before CEC staff for final approval.

SUMMARY / NEXT STEPS

As mentioned earlier in the report, planning staff is obligated under the Strategic Solicitation to bring forward recommendations for review and consideration by decision-makers. Based on the direction from the Planning Commission and City Council, planning staff will move ahead with the appropriate policies and/or ordinances. It is expected that at least one outreach meeting for the public would be held pertaining to the reach code ordinance and the Energy Action Plan in addition to the public hearing. It is expected that these actions would be brought forward by no later than June or July. The Strategic Solicitation funding must be used by no later than early October 2012.

Prepared By:
Chris Ormsby
Senior Planner

Department Head Approval:
Barry Foster
Community & Economic Development Director

Prepared By:
Mark Gross
Senior Planner

Concurred By:
John C. Terell
Planning Official

Concurred By:
Ahmad Ansari
Public Works Director/City Engineer

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CITY MANAGER	

Report to City Council

TO: Mayor and City Council
Planning Commission

FROM: Barry Foster, Community & Economic Development Director

AGENDA DATE: April 3, 2012

TITLE: DARK SKY ORDINANCE – UPDATE TO INCLUDE RECENT FEDERAL AND STATE LAWS ON LIGHT BULB INTENSITY AND ENERGY USAGE

RECOMMENDED ACTION

Staff recommends that the City Council and Planning Commission provide direction on the proposed dark sky lighting ordinance based on recent or new federal and state guidelines on light bulb intensity and energy usage prior to re-establishing a public hearing date on the item.

BACKGROUND

On July 12, 2011, City Council conducted a public hearing on a proposed citywide dark sky lighting ordinance. At said meeting, the City Council voted to continue the item to a March 2012 study session meeting in order for staff to review updated federal and state requirements on maximum wattage of incandescent and fluorescent bulbs and new more energy efficient lighting.

In light of the energy efficiency planning grants that the City has received, the proposed dark sky lighting ordinance is another means of reducing energy on a citywide basis and actually coincides with the 2010 Green Building Standards mandatory measures. Some of the mandatory proscriptive measures in the proposed ordinance include full shielding of lights; reducing spillover lighting beyond the property boundary and containing exterior lighting within the property boundaries are consistent with the new 2010 California Green Building Standards Code. The proposed dark sky ordinance is consistent with proposed "Reach Codes" presented as a study session item this evening to include higher levels of energy efficiency than would otherwise result from complying with existing Title 24 standards, including the mandatory requirements of the

California Green Building Code. Approving the proposed dark sky lighting ordinance is also consistent with reduced energy consumption measures, which is included as a goal of the Draft City of Moreno Valley's Energy Efficiency and Climate Action Strategy.

DISCUSSION

The Energy Independence and Security Act of 2007 required light bulbs to use at least 25 percent less energy. A ban on the manufacturing of old energy consuming 100 watt bulbs took effect in California on January of 2011 and in the rest of the country in January 2012. This starts with the 100 watt incandescent bulb and phases in 72, 60 and 40-watt bulbs over the next few years. With the changes in light bulb energy consumption, consumers would be forced to use one specific type of light bulb.
The incandescent bulb will not be banned, but rather be required to be more energy efficient than the older conventional incandescent bulb. The law requires only that light bulbs use less energy to produce the same amount of light intensity. In the case of the reduced 75, 60 and 45 watt bulbs that will be phased in over the next few years, light intensity will be equivalent to the 100 watt bulb at each change, however the energy used to produce the light will be less. The first stage of the standards through 2014 will require bulbs to be between 25 and 30 percent more efficient, while the second and future stages of light bulb energy efficiency could require bulbs to be 60 percent more efficient by 2020. The new standard in California stated that a 100-watt bulb manufactured on or after January 1, 2011 must have used 28 percent less energy (i.e. a 100-watt bulb may not use more than 72 watts). The new 72 watt replacement bulb will provide the same amount of light (i.e. lumens), use less power and cost less to operate than the older less economical light bulb.

When the proposed dark sky lighting ordinance was reviewed at a public hearing meeting on July 12, 2011, Councilmember concerns included whether the proposed 100 watt incandescent or 26 watt compact fluorescent bulb standard in residential areas was consistent with new standards included under state and federal laws on lighting. To address this concern about new state and federal requirements for lighting and their ever changing wattage mandates for light bulbs, staff proposes to include language within the proposed dark sky lighting ordinance where maximum light bulb wattages are reviewed at the equivalency rate of a 100 watt incandescent light bulb and a 26 watt compact fluorescent light bulb.

The City also reviewed the lighting ordinance that the County of Riverside adopted in October of 2011 to determine if additional language or standards should be included in the City's proposed Dark Sky Ordinance. In summary, Riverside County's ordinance concentrated on residential light trespass and code enforcement related items. There were no general or light intensity provisions included in the document that would assist in modifying or approving the City's Dark Sky Ordinance as currently proposed.

Based on the fact that the Planning Commission originally reviewed the ordinance prior the action at the July 2011 Council hearing, staff has included the item for the joint City Council/Planning Commission meeting in April to achieve further direction before any

additional public hearings are scheduled. Staff has attached a copy of the July 12, 2011, City Council report minus attachments to provide background on the original public hearing meeting.

NOTIFICATION

The item has been included as a listing on the City Council agenda. Study session items do not require notification to the public.

ATTACHMENTS/EXHIBITS

1. City Council Staff Report Dated July 12, 2011

Prepared By:
Mark Gross, AICP
Senior Planner

Department Head Approval:
Barry Foster
Community & Economic Development Director

Concurred By:
John Terell, AICP
Planning Official

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Report to City Council

TO: Mayor and City Council

FROM: Barry Foster, Community & Economic Development Director

AGENDA DATE: July 12, 2011

TITLE: A PUBLIC HEARING FOR CONSIDERATION OF THE REVISION OF TITLE 9, CHAPTER 9.08, SECTION 9.08.100, "LIGHTING", SECTION 9.08.190, "STREET LIGHTING", CHAPTER 9.16, ARTICLE IV, "APPLICATIONS FOR HILLSIDE DEVELOPMENT, SECTION 9.16.235 "HILLSIDE DESIGN GUIDELINES" ARTICLE VI, APPLICATIONS FOR LIGHTING, SECTION 9.16.280 "GENERAL REQUIREMENTS, AND CHAPTER 9.15 SECTION 9.15.030, "DEFINITIONS" RELATING TO DARK SKY PROVISIONS FOR GENERAL ON-SITE, STREET AND ATHLETIC FIELD/PARK LIGHTING CITYWIDE. THE APPLICANT IS THE CITY OF MORENO VALLEY.

RECOMMENDED ACTION

Staff recommends that the City Council:

1. **RECOGNIZE** that the proposed amendment is exempt from the California Environmental Quality Act (CEQA) Guidelines pursuant to Section 15061 of the CEQA Guidelines; and

2. **CONSIDER ADOPTION** of Ordinance No. 2011-____, approving revisions to Title 9, Chapter 9.08, Section 9.08.100, "Lighting", Section 9.08.190, "Street Lighting", Chapter 9.16 Article IV "Applications for Hillside Development", Section 9.16.235 "Hillside Design Guidelines", Article VI, Applications for Lighting, Section 9.16.280 "General Requirements", and Chapter 9.15 Section 9.15.030, "Definitions" relating to dark sky provisions for general on-site, athletic field/park and street lighting citywide.

ATTACHMENT 1

ADVISORY BOARD RECOMMENDATIONS

On April 14, 2011, the Planning Commission conducted a public hearing to review draft provisions related to lighting for general site, street and athletic field/park lighting citywide. At the conclusion of the public hearing, the Commission by a vote of 7/0 recommended that the City Council deny or not consider amended provisions within the Municipal Code that include a dark sky emphasis for general site, street and athletic field/park lighting.

The Planning Commission requested denial of the modifications to the lighting ordinance based on a number of reasons including, but not limited to proposed dark sky ordinance and revisions to existing Municipal Code lighting standards being intrusive to individual new residential and commercial/industrial projects, curfew lighting having the potential to create reduced lighting conditions and the potential for reduced lighting within parking lot peripheries. The Commission mentioned that the reduction of lighting in the later night hours may lead to additional crime potential and was concerned that some provisions of the dark sky ordinance such as the night lighting curfew and light wattage requirements may be difficult to enforce.

BACKGROUND

On October 20, 2009, the City Council provided direction to review existing lighting standards and provide updated dark sky provisions for consideration. The review of existing lighting ordinance standards is a direct result of the settlement agreement reached on January 7, 2010 between the Sierra Club, Highland Fairview and the City of Moreno Valley regarding approval of the Highland Fairview Corporate Park Project and the Skechers warehouse building.

Some of the current City of Moreno Valley Municipal Code requirements include provisions to curb on-site lighting such as the current reduction of lighting at property lines limited to a maximum of 0.5 foot candle and residential lighting limited to twelve feet in height, and included below the typical eave line for a house. Some of the current lighting standards however, do not facilitate a dark sky approach or assist in promoting energy efficiency. For example, the City currently requires that parking lots and other public spaces be lit “from dusk to dawn” which exceeds the hours of operation for most non-retail establishments, especially office and religious establishments.

A research study conducted by the Planning Division found that only a few cities had adopted dark sky ordinances. For example, surrounding cities such as Riverside, Perris and Redlands have not adopted dark sky ordinances. Although the settlement agreement suggested utilizing standards primarily from the City of Palm Desert, a combination of ordinances from the cities of Palm Desert, Beaumont, Palm Springs, Encinitas and San Diego among other cities were reviewed. Standards within the Palm Desert ordinance and draft guidance standards found within the International Dark-Sky Association guidelines were the basis for the revised lighting provisions.

The primary purpose of changing current lighting practices and drafting a dark sky ordinance would be to**:**

- Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, and enjoyment while preserving the ambiance of the night;
- Curtail and reverse any degradation of the nighttime visual environment and the night sky;
- Minimize glare and obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary;
- Conserve energy and resources to the greatest extent possible;
- Help protect the natural environment from the negative effects of night lighting.

DISCUSSION

In order to comply with the direction provided by the City Council at their October 20, 2009 study session meeting and the settlement agreement reached on January 7, 2010 between the Sierra Club, Highland Fairview and the City of Moreno Valley, staff has provided revised onsite and parking lot lighting, lighting required on streets and right of ways and lighting provided for sports activities within parks and athletic fields for City Council consideration. Based on provisions within the settlement agreement, staff was to report back to City Council with draft lighting requirements and recommendations for consideration without commitment to adopt an ordinance.

Some of the major modifications proposed to the existing lighting ordinance include:

- Revised development and performance standards to include maximum wattage of light bulbs for single-family residential, multiple-family residential (100 watts) and non-residential (commercial and industrial) properties (250 watts);
- All lighting designed with full cutoffs and fully shielded for residential-multiple family and all non-residential properties.
- A further reduction of light trespass or spillover lighting on adjacent properties for all non-residential (commercial and industrial) and multi-family residential properties by not exceeding 0.25 foot candle minimum maintained lighting measured from within five (5) feet of any property line consistent with language provided from the Palm Desert Ordinance. This is further enhanced from the existing ordinance where spillover lighting currently would not be able to exceed 0.50 foot candle at the property line and beyond.
- The inclusion of lighting height limits on hillside residential lighting not to exceed 8 feet, with all other residential areas not to exceed 12 feet. Non-residential

lighting height limits shall be a maximum of 30 feet, except within 100 feet of a residential use, where lighting shall be reduced to a height of 20 feet and walkway/courtyard lighting to a maximum of 12 feet in height.

- The addition of lighting curfews for outdoor lighting systems in non-residential areas requiring all lighting to be reduced by 50 percent beginning at 10:00 p.m. or the close of business, whichever is later, until dawn or the start of business, whichever is earlier.
- The addition of athletic field lighting standards to include horizontal cutoffs to reduce vertical lighting above the fixture for new lighting designs and retrofit fixtures and a maximum lighting value used in lighting recreational athletic fields to be an average maintained 50 foot-candles.

- The modification of existing street light standards to include the installation of street lighting solely for the purpose of illuminating the public right of way and conformance to the city street lighting standards, including the provision that the developer will pay all costs related to the installation of street lighting and establish a method for the payment of maintenance and operations.

In the process of updating current lighting standards, staff established a subcommittee consisting of members from various internal departments involved with lighting, including Land Development, Transportation, Police, Special Districts, Moreno Valley Utilities and the Parks and Community Services Department. Collectively, all internal departments and representatives of the subcommittee have assisted in drafting revised lighting language and have reviewed draft dark sky lighting standards, while all members of the subcommittee have agreed to modify the ordinance as is presented and attached to this report in cross-out/underline and clean copy format.

Although the Planning Commission elected not to recommend the ordinance to City Council for approval, the Council can approve the ordinance with or without modifications or elect to provide direction back to the Planning Commission in order to modify certain portions of the ordinance. Although the Planning Commission did not agree with modifying certain aspects of the ordinance as written, the Council could elect to remove or modify items such as the lighting curfew, provisions modifying additional spill-over lighting adjacent to adjoining properties or restricting wattage of lighting for residential and/or non-residential properties.

ALTERNATIVES

1. Based on the recommendation of the Planning Commission, reject the proposed draft dark sky lighting modifications and not take action on the ordinance.

2. Approve the proposed draft dark sky lighting ordinance as written.

3. Approve the proposed draft dark sky lighting ordinance with modifications.

4. Return the proposed dark sky lighting ordinance back to the Planning Commission with further direction.

FISCAL IMPACT

There are no fiscal impacts associated with the amendment of existing Municipal Code lighting standards to create a more dark sky approach.

CITY COUNCIL GOALS

Positive Environment

The modification and enhancement of existing Municipal Code general and design standards for on-site, recreation and street lighting with an emphasis on maintaining dark night skies creates a positive environment for the development of Moreno Valley's future and allows for the preservation of night skies, reduction of glare and light in more environmental sensitive land use areas such as residential hillside and open space areas, and conserves valuable energy resources.

SUMMARY

Based on direction within the settlement agreement for the Highland Fairview Corporate Park project and Skechers building and previous suggestions from hillside and rural residential residents, on-site, recreation and street light sections of the Municipal Code were drafted to consider a more dark sky approach. This includes provisions for the reduction of light trespass and glare onto adjacent residential properties, reduction of light wattage, height limits for light poles and posts, placement limitation of lights on buildings, and a lighting curfew to reduce light during the non-business nighttime hours. The proposed ordinance includes a reduction of light onto more sensitive land uses, conserves energy and assists to provide dark night skies. The draft lighting ordinance as submitted was not recommended by the Planning Commission due to concerns, including, but not limited to lighting revisions being intrusive to individual new residential and commercial/industrial projects, reduced spillover lighting within parking lot peripheries and non-residential curfew lighting during later nighttime hours having the potential to create reduced lighting conditions and the perception of additional crime opportunities in higher populated areas, and increased enforcement and costs required to carry out revised lighting provisions.

NOTIFICATION

Public notice of the proposed Municipal Code Amendment was published in the local newspaper as a 1/8 page display ad on June 24, 2011, and was mailed to the Sierra Club.

ATTACHMENTS

1. Public hearing notice
2. City Council Ordinance, including clean copies of the Ordinance amendment
3. Strikeout/underline version of Chapter 9, Section 9.08.100 “Lighting” of the Municipal Code
4. Strikeout/underline version of Chapter 9, Section 9.08.190, “Street Lighting” of the Municipal Code
5. Strikeout/underline version of Chapter 9.16, Article IV, “Applications for Hillside Development”, Section 9.16.235 “Hillside Design Guidelines” of the Municipal Code
6. Strikeout/underline version of Chapter 9.16, “Applications for Lighting” Section 9.16.280 “General Requirements” of the Municipal Code.
7. Strikeout/underline version of Chapter 9.15, Section 9.15.030 “Definitions” of the Municipal Code.
8. Planning Commission Report dated April 14, 2011, excluding attachments
9. Planning Commission Minutes of April 14, 2011

Prepared By Mark Gross, AICP, Senior Planner

Barry Foster, CEDD Director

Concurred By John C. Terell, AICP, Planning Official

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CITY MANAGER	

Report to City Council

TO: Mayor and City Council; Planning Commission

FROM: Barry A. Foster, Community & Economic Development Director

AGENDA DATE: April 3, 2012

TITLE: MAJOR PROJECT REVIEW PROCESS

The Planning Commission requested to have a discussion with the City Council regarding the Major Project Review Process. Of particular interest were ways that the Planning Commission could facilitate their timely review of major projects.

Prepared By:
John C. Terell AICP
Planning Official

Department Head Approval:
Barry A. Foster
Community & Economic Development Director

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