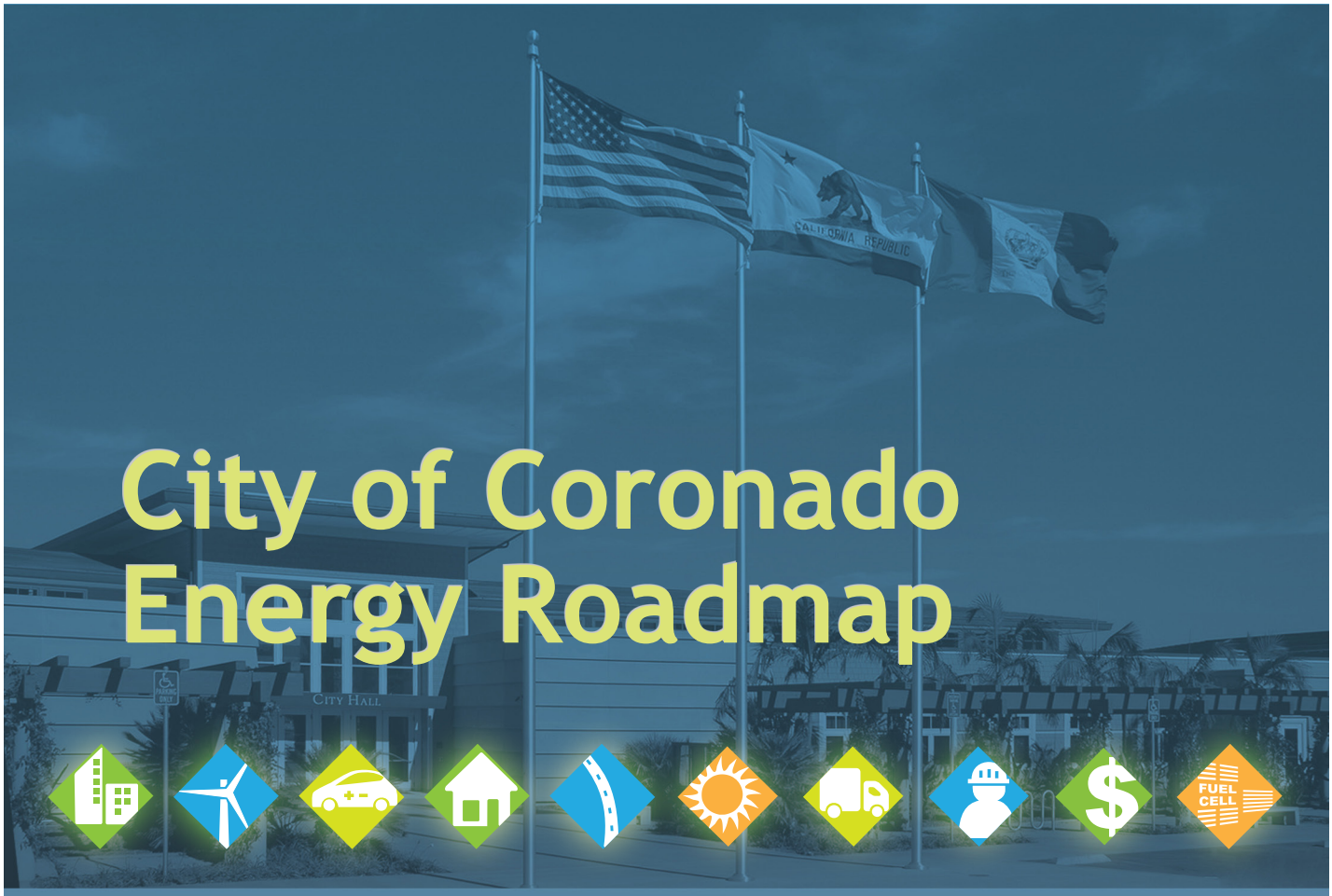

City of Coronado Energy Roadmap

Prepared through the SANDAG Energy Roadmap Program

November 2012

This Program is a collaboration between SANDAG and San Diego Gas & Electric®

SANDAG

SDGE
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Energy Roadmap for the City of Coronado

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Acknowledgements and Program Contacts

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Introduction

This energy management plan, or "Energy Roadmap," prepared by SANDAG in consultation with city staff, provides a framework for the City of Coronado (City) to identify ways to save energy in government operations and in the community, resulting in municipal cost savings and benefits to the environment. These wide-ranging, cost-effective opportunities to save electricity, natural gas, and transportation fuel include:

The Coronado Energy Roadmap charts a path to saving energy in government operations and in the community.

- No-cost expert technical assistance, such as free energy audits of government buildings,
- Help identifying and applying for energy efficiency rebates and innovative programs like zero-percent on-bill financing,
- Energy-saving resources for cutting edge topics like general plan updates, electric vehicles, alternative fuels, and transportation demand management strategies to save energy and reduce greenhouse gas (GHG) emissions, and
- The latest information on critical subjects like financing energy efficiency projects, emerging technology demonstrations, and residential retrofit programs.

California's Vision for Local Governments

By 2020, California's local governments will be leaders in using energy-efficiency to reduce energy use and global warming emissions both in their own facilities and throughout their communities.

California Long-Term Energy Efficiency Strategic Plan

The Energy Roadmap also recognizes steps the City has taken to become more sustainable. Through Energy Efficiency and Conservation Block Grants (EECBG), Coronado retrofitted municipal facilities with various energy efficiency measures, including dual occupancy sensors, interior and exterior lighting and ballasts, street lighting, and vending machine controllers.

The City also has taken advantage of the SDG&E Technical Assistance and Technology Incentives Program to complete facility evaluations to identify ways to determine load reduction potential and offset the installation and equipment costs of demand response measures.

The Energy Roadmap identifies measures that Coronado could include in a climate action plan. Coronado already completed a GHG inventory of city-operated and community-wide emissions through its participation in the San Diego Regional Climate Protection Initiative, spearheaded by ICLEI- Local Governments for Sustainability.

By building on its existing energy-saving efforts and taking advantage of some or all of the opportunities identified herein, Coronado can demonstrate leadership in energy efficiency and work toward greater sustainability in municipal operations and throughout the community – saving money for taxpayers, households, and businesses, keeping the air clean, supporting green jobs, and improving quality of life for everyone in Coronado.

Section I. Saving Energy in City Government Operations

City government can be a significant user of energy in its own buildings, facilities, and equipment. City employees also play a role through their commute choices, equipment usage, and use of government vehicles. These and other energy-using activities required to operate city government provide the city with an opportunity to lead by example. The city can improve energy efficiency, and in the process, spend fewer taxpayer dollars on utilities and gasoline, contribute to cleaner air, and reduce GHG emissions. The city also can develop staff knowledge of energy efficiency and use its operations to showcase emerging energy-efficient technologies.

The section on saving energy in government operations identifies five distinct opportunities for Coronado to lead by example with its buildings and facilities, vehicles, and energy usage practices:

1. **Save Energy in City Buildings and Facilities**
2. **Demonstrate Emerging Energy Technologies**
3. **Green the City Vehicle Fleet**
4. **Develop Employee Knowledge of Energy efficiency**
5. **Promote Commuter Benefits to City Employees**

Section II. Saving Energy in the Community

Looking beyond its own operations, city government can play an important role in influencing the energy attitudes and actions of local residents and businesses. Opportunities for influence vary widely, from public education to adopting policies and implementing programs to save energy.

Energy use can be a major expense for households and businesses, and it is a predominant source of air pollution and GHG emissions. Saving energy benefits the environment, puts money in the pockets of households and businesses, and supports growing economic opportunities including well-paying green jobs.

The Coronado Web site can be a portal for local residents and businesses to access energy-saving programs and rebates.

This section of the Energy Roadmap identifies the following opportunities to lead the community with innovative programs for energy efficiency and sustainability:

1. **Leverage Planning and Development Authority**
   a. Smart growth development policies
   b. Energy-efficient building upgrades
   c. Clean and efficient transportation options
2. **Market Energy Programs to Residents, Schools, and Local Businesses**
3. **Support Green Jobs and Workforce Training**

Potential Uses of the Energy Roadmap

Examples of activities this Energy Roadmap could assist the city with include:

- Reducing government spending on energy use such as utilities and gasoline
- Developing or assisting to implement measures to reduce GHG emissions from government operations and community activities, as part of a sustainability strategy or climate action plan
- Integrating sustainability, energy efficiency, or GHG reduction measures into a general plan, specific plan, or zoning ordinance
- Using government operations to demonstrate the feasibility of energy-efficient and sustainable practices to local residents and businesses
- Managing the city vehicle fleet
- Promoting energy efficiency programs through city communications such as newsletters, e-mail, and Web site
- Training of employees that deal with energy issues
- Offering commuter information and alternative transportation incentives as part of the city's employee benefits package
- Staying on top of the latest developments, programs, and trends in energy efficiency
- Applying and qualifying for future funding opportunities related to energy efficiency

Handouts on green jobs and training opportunities can be located at City Hall and the library.

About the Energy Roadmap Program

The Energy Roadmap Program is a partnership between the San Diego Association of Governments (SANDAG) and San Diego Gas & Electric® (SDG&E) that offers local jurisdictions assistance in making their buildings and processes energy-efficient, implementing state energy codes through access to training and workshops, and being a conduit to their constituents on programs that help reduce their energy bills, as well as the environmental impact on the community as a whole.

The program provides free energy assessments of government buildings and online tools to monitor electricity, natural gas, and transportation fuel use. It provides continued access to experts that can assist jurisdictions in taking the next steps to implement building improvements, petroleum reduction measures, and community outreach. The table below provides a timeline of the city's Energy Roadmap efforts.

Coronado's Energy Roadmap Timeline

Fall 2011	Winter 2012	Spring 2012	Summer-Fall 2012	Fall 2012 until Dec. 2014
Energy Roadmap Program launch	Report cards for city buildings	Energy audit and rate review	City's Energy Roadmap completed	City eligible for continued Roadmap assistance
City staff provide input and direction	Further building studies begin	Fleet and fuels review	Presentation to City Council	

Each participating jurisdiction receives a customized Energy Roadmap that offers a comprehensive framework for saving energy at city government facilities and in the community. Each Energy Roadmap is consistent with the SANDAG Sustainable Communities Strategy (2011); Regional Energy Strategy (2009), which serves as the San Diego region's energy policy blueprint; and the Climate Action Strategy (2010), SANDAG's first ever guide on climate change. Both strategies are available on the SANDAG Web site at www.sandag.org/energy.

The Energy Roadmap Program was developed based on existing, successful SDG&E local government partnerships with the Cities of Chula Vista and San Diego and the County of San Diego, and pilot projects undertaken through the SANDAG Sustainable Region Program with the California Center for Sustainable Energy for the cities of Carlsbad, Poway, and Solana Beach. The Energy Roadmap Program is funded primarily by California utility customers under the auspices of the California Public Utilities Commission. Transportation components are funded by SANDAG.

1

Save Energy in City Buildings and Facilities

Energy is a major operating cost for local governments. Coronado has taken many steps to reduce energy usage in its facilities using Energy Efficiency and Conservation Block Grant (EECBG) funding to install lighting upgrades, occupancy sensors, energy-efficient streetlights, and vending machine controllers. By evaluating energy usage in municipal buildings and facilities ("sites") and identifying additional energy-saving opportunities, Coronado can further reduce its energy-related operating costs and use the savings for other government services. This chapter highlights:

Coronado could save over $36,000 each year from energy efficiency upgrades identified at municipal sites.

- Free site assessments provided to the city,
- Energy-saving opportunities identified at each one, and
- Costs and paybacks to the city to undertake the energy-saving projects.

Energy Assessments

Beginning in October 2011, two types of energy assessment services were provided at no cost to the city: 1) Preliminary energy assessments, called "Energy Report Cards," of sites determined by municipal staff, and 2) More in-depth energy audits, called "Phase 2 Audits" for a subset of government buildings based on their Report Cards and direction from city staff.

Energy Report Cards were prepared for twelve municipal sites (listed below) early in 2012. Each Energy Report Card is included in **Appendix A**. These preliminary assessments established each site's baseline energy use and benchmarked it against similar building types in the country.

- City Hall
- Public Services
- Library
- Police Department
- Village Fire Department
- Cays Fire Department
- Community Center
- Golf Club Center
- Golf Cart Barn
- Cays Tennis Courts
- Tennis Center
- Lifeguard Tower

Benchmarking is a useful tool to judge a site's energy performance compared to national or state averages, and it is a new requirement to participate in SDG&E's rebate and incentive programs. Two online tools were employed to help determine how "good" or "bad" a site was performing. SDG&E's *Energy Waves* program provided historical energy usage and will enable the city to continue monitoring energy consumption/site performance online. The U.S. Environmental Protection Agency's (EPA) *Portfolio Manager* program identified how each site compared against national averages for similar facilities, and provided climate change information in carbon dioxide equivalent (CO_2e).

The preliminary energy assessments indicate that most Coronado municipal sites are performing more efficiently than comparable buildings in California and the nation. Three sites citywide were targeted for additional evaluation in the form of a comprehensive energy audit. Sites were determined in response to a specific issue discovered through the site assessment process, or as instructed by city staff. The priority site list is provided as **Appendix B**.

- City Hall
- Community Center
- Library
- All Sites: Outdoor Lighting

The Phase 2 Energy Audits were to identify energy efficiency improvements in indoor/outdoor lighting; heating, ventilation and air conditioning (HVAC); building controls; and overall building operations and performance. These engineering assessments included utility rate review, recommended retrofit projects, and rebate programs and costs. The Phase 2 utility rate analyses and energy audit findings are summarized here and included as **Appendix C**.

EFM Solutions, an engineering firm and small business in San Diego, performed all site assessments on behalf of SANDAG and provided the city with project results in the form of the Energy Report Cards, rate analyses, Phase 2 energy audit findings, and a master spreadsheet of energy conservation measures identified.

Energy Audit Findings

Coronado has the potential to realize over $36,000 in annual operations savings on its utility bills by implementing the energy conservation measures in the *Potential Savings by Energy Conservation Measure* table on the next page.

Regarding energy-saving retrofit projects, Coronado could undertake upgrades at its audited municipal sites through SDG&E's On-Bill Financing Program. This could enable

the city to avoid paying upfront capital costs associated with energy-saving retrofits through zero-percent interest loan(s) on its utility bill(s).

Once each loan is paid off (using zero-percent interest on-bill financing), the city's utility bills would reflect annual bill savings like those shown in the second table below, *Energy Conservation Measure Economics*.

Energy conservation measures can be funded through zero-percent interest loans in the On-Bill Financing Program from SDG&E.

Potential Savings by Energy Conservation Measure

Location	Measure	*Annual Savings for City*			
		Electricity (kWh)	Demand (kW)	Bill Savings	Greenhouse Gases ($MTCO_2e$)
City Hall	Indoor lighting	6,002	1.0	$900	1.9
Community Center	Indoor Lighting	39,476	8.7	$13,193	13.0
	Pool Pump VFD	70,763	6.6	$7,326	23.3
Library	Indoor Lighting	9,037	2.6	$1,356	3.0
All Sites	Outdoor Lighting	92,654	21.2	$13,898	30.6
	TOTALS	**217,932**	**40.0**	**$36,673**	**71.85**

Notes:
1. kWh = kilowatt hours, $MTCO_2e$ = metric tons of carbon dioxide equivalent.
2. Energy assessments included HVAC systems, indoor and outdoor lighting, and building controls.
3. No opportunities for natural gas savings were identified during the energy audits.

Energy Conservation Measure Economics

Location	Measure	Gross Project Cost	Total SDG&E Incentives	Net Project Cost	Simple Payback (years)
City Hall	Indoor lighting	$997	$300	$697	0.8
Community Center	Indoor Lighting	$13,193	$3,027	$10,166	0.8
	Pool Pump VFD	$7,000	$3,500	$3,500	0.5
Library	Indoor Lighting	$1,178	$452	$726	0.5
All Sites	Outdoor Lighting	$66,718	$6,106	$60,612	4.4
	TOTALS	**$89,086**	**$13,385**	**$75,701**	**2.1**

Notes: Gross and net installation and equipment costs are estimated and do not replace product specifications and contractor bids.

Implementation Strategy for Energy and Cost Savings	
1.	Pursue energy retrofit projects that qualify for on-bill financing and/or have an immediate payback.
2.	Seek approval from SDG&E to use its On-Bill Financing Program (zero-percent interest loans) to cover upfront costs for energy upgrades.
3.	Undertake internal city processes to implement energy upgrade projects.
4.	Monitor site performance to ensure energy and cost savings are achieved.

The Energy Roadmap team can assist Coronado with these implementation steps over the duration of the Roadmap Program (until December 2014).

Finance Options for Energy Projects

SDG&E provides rebates, incentives, and financing options to pay for all or part of the costs of energy conservation measures. The SDG&E On-Bill Financing Program provides zero-percent financing for the installation of energy efficiency improvements meeting certain criteria. Financial assistance also is available from other agencies like the California Energy Commission (CEC).

No-cost assistance with rebates, incentives, and financing options is available to the city as part of the Energy Roadmap Program. Please contact your Energy Roadmap coordinator with requests for assistance or questions.

San Diego Gas & Electric® Rebates and Incentives

As part of the energy audit findings, EFM Solutions identified the appropriate SDG&E rebates and incentives[1] for each municipal site. Generally, programs that apply to commercial businesses also apply to public agencies. To review all of SDG&E's rebate and incentive programs, see Chapter 7 of this Energy Roadmap or visit www.sdge.com/business/rebatesincentives/.

[1] SDG&E programs are funded by California utility customers and administered by SDG&E under the auspices of the California Public Utilities Commission. Rebates and incentives are provided on a first-come, first-served basis until program funds are no longer available.

Zero-Percent Interest On-Bill Financing from SDG&E

Through its On-Bill Financing Program,[2] SDG&E provides interest-free, unsecured financing to qualified commercial and taxpayer-funded customers for the installation of energy-efficient upgrades. Financed equipment must qualify for a rebate or incentive from SDG&E's rebate/incentive program(s). EFM Solutions and the city's SDG&E account representative, Kraig Akers, have met with city staff and discussed on-bill financing. The program for public agencies includes:

- Zero-percent financing on qualifying measures for up to ten years
- Offsets to energy-efficient upgrade costs after rebates and incentives through SDG&E
- Loan amounts that range from a minimum of $5,000 up to $250,000 per meter
- Loan installments that are added to monthly SDG&E bills
- For more information, contact Kraig Akers at KWAkers@semprautilities.com or visit www.sdge.com/obf

Low-Interest Loans from the California Energy Commission

The Energy Efficiency Financing Program provides financing for local governments, schools, and hospitals through low-interest loans for feasibility studies and installation of energy-saving measures. As of February 2012, terms included an interest rate of three-percent fixed, a maximum loan of $3 million per application, and a maximum loan term of 15 years. Again, EFM Solutions can assist Coronado with applying for this loan, if needed. For more program information, contact the CEC Special Projects Office, (916) 654-4104, e-mail: pubprog@energy.state.ca.us, or www.energy.ca.gov/efficiency/financing.

Post-assessment assistance in identifying energy project financing and implementation is a service provided to Coronado through the Energy Roadmap Program. Contact your Energy Roadmap coordinator for further assistance.

[2] The On-Bill Financing (OBF) program is funded by California utility customers and administered by SDG&E under the auspices of the California Public Utilities Commission. The OBF program may be modified or terminated without prior notice and is provided to qualified customers on a first-come, first-served basis until program funds are no longer available. Eligibility requirements apply.

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2

Demonstrate Emerging Energy Technologies

In addition to energy assessments and improving efficiency in city government facilities, Coronado can save energy by using its operations to showcase emerging energy-efficient technologies through the SDG&E Emerging Technologies Program. The city can also encourage interested local businesses and residents to demonstrate an emerging energy efficiency technology.

If the city government or community members living in Coronado want to host a demonstration, your Energy Roadmap coordinator can arrange for a meeting with SDG&E Emerging Technologies Program staff. SDG&E will provide all of the relevant information, including how to participate, eligible technologies, and any costs to the city or participating business or resident.

California's Vision on Research & Technology
Technology advancement related to energy use and demand will match—or even eclipse—the consumer electronics industry in innovation, time to market, and consumer acceptance.
California Long-Term Energy Efficiency Strategic Plan

The goal of the Emerging Technologies Program is to accelerate the adoption of advanced technologies that increase grid stability, reduce overall energy use, and reduce demand for energy at peak times. The technology demonstrations are short-term projects that provide SDG&E with necessary real-world applications of promising energy-saving technologies. These new technologies have not achieved market penetration, but their potential benefits make them worthwhile to test. Demonstrations are critical because they enable utilities like SDG&E to evaluate and determine which emerging technologies are viable and worth supporting for wider deployment.

The following table lists a variety of projects in lighting, air-conditioning, communications, and others that are being demonstrated through 2012. For more information, contact A.Y. Ahmed, SDG&E's emerging technologies program manager directly at AAhmed1@semprautilities.com, or your Energy Roadmap coordinator.

SDG&E Emerging Technologies Program: Technologies Eligible for Demonstration

City Government or Commercial Sites	
Lighting	**Addressable Electronic Ballast for HID Fixtures**: Demonstration on three building types: distribution warehouse, gymnasium, and big-box retail. Advanced electronic ballast with high bay HID (high intensity discharge) fixture that permits day lighting, dimming, and demand response measures.
Air Conditioning	**Aquachill Air Conditioner**: For small commercial buildings. Advanced split system air conditioning (AC) that uses water cooled condenser, resulting in demand and energy savings (three, four, and five ton units; EER 14.0-14.5).
Refrigeration	**VRF Conveni-Pack System**: For supermarkets and mini-markets. Advanced refrigeration and space cooling technology in one combined unit that can be used for refrigeration cases, freezers, and space conditioning (three to five ton units).
Communications and Controls	**Commercial Energy Control Systems**: For medium and large commercial buildings that utilize refrigeration (refrigerant flow technology) and smart meter technology.
	Commercial Energy Management System: For a company that utilizes a wireless network and controllers to manage and optimize a building's energy systems. To be demonstrated at medium-size commercial building with multiple packaged roof-top units and large commercial building with central plant equipment.
Residential Sites	
Air Conditioning	**Aquachill Air Conditioner**: For homes and multi-family apartment buildings. Advanced split system AC that uses water-cooled condenser, resulting in demand and energy savings (three, four, and five ton units; EER 14.0-14.5).
	VRF Mini-Split Air Conditioners: For residential single and multi-family homes. Advanced room AC that uses zoned cooling coils with air handlers and central compressor. Cooling capacity is varied and to be demonstrated in residences with one to four zones (two to five ton units).
Communications and Controls	**Single Vendor Residential HAN Pilot**: For single-family homes. Home Area Network (HAN) technology with in-home display, programmable communicating thermostat, appliance controllers, battery storage, and back-office operation; resulting in demand and energy savings. To be demonstrated at 28 homes.
	Residential Energy Management Technologies Evaluation: For single-family homes. Technologies can include home area network, in-home display, programmable communicating thermostat and appliance controllers; resulting in demand and energy savings. Based on evaluation of energy management systems from 150 companies, SDG&E will work with up to ten companies to test one to five systems each.
	Multi-Vendor HAN Pilot: HAN technologies that include IHD, PCT, load controllers from different vendors to be operated in a coordinated manner. Planned evaluation: test multi-vendor systems in 12 residential homes.
	Residential Zonal Controls: Convert central forced air heating, ventilation, and air conditioning (HVAC) systems into smart multi-zone HVAC systems. Senses conditions in each room, analyzes real-time and historical room-occupancy, and actuates vents in each room to regulate room temperature. Planned evaluation: test systems in 12 residential homes with single zone HVAC systems.

3

Green the City Vehicle Fleet

The City of Coronado maintains a fleet of approximately 100 vehicles that range from sedans and pick-up trucks to fire engines and other heavy-duty trucks. The City can achieve transportation-related energy savings through actions that promote fuel conservation, efficiency, and an increased use of clean, alternative fuels in its vehicle fleet.

The City of Coronado has adopted practices to ensure the fleet is operated as efficiently as possible.

Coronado has recognized that fleet operations contribute significantly to its total energy use, and has adopted practices to ensure the fleet is operated as efficiently as possible. As part of this effort, the fleet includes hybrid, Compressed Natural Gas (CNG), and neighborhood electric vehicles. Coronado also has retrofitted its heavier duty diesel trucks to comply with the latest emissions standards. This Roadmap chapter offers tools and information that can support Coronado's efforts to maintain efficient fleet operations through the use of advanced technology and alternative fuel vehicles.

California Goals for Transportation Fuels

The State of California has adopted several transportation fuel laws and goals, and the California Energy Commission has been the responsible agency for the targets shown in the *California Goals for Transportation Fuels* table. In order to meet these goals the state allocates grant funds through the Assembly Bill 118 (AB 118) Program to help address barriers to the production and deployment of alternative fuels, vehicles, and infrastructure. Millions of dollars are available annually through 2015, for which the City and local businesses can apply. Additional information is provided later in this section.

California Goals for Transportation Fuels

Objective	State Goals and Milestones
Petroleum Reduction	Reduce petroleum fuel use to 15 percent below 2003 levels by 2020
Alternative Fuel Use	Increase alternative fuel use to 20 percent of on-road fuel demand by 2020 and 30 percent by 2030
In-State Biofuels Use	Increase biofuel use to one billon gasoline gallons equivalent (gge) by 2010, 1.6 billion gge by 2020, and two billion gge by 2050
In-State Biofuels Production	In-state production of 20 percent of biofuels used in California by 2010, 40 percent by 2020, 75 percent by 2050

Coronado's Fleet

The City of Coronado's fleet supports the provision of essential public services such as police and fire protection, street repairs, park maintenance, and wastewater operations and city vehicles traveled more than 570,000 miles in 2011. The city used around 75,000 gallons of gasoline and diesel and spent more than $275,000 to keep the fleet fueled in 2011.

When replacing vehicles, city staff evaluates vehicle duty requirements and selects the most efficient vehicle that can do the job. Using existing fleet data, the City could track fleet-wide indicators such as total fuel consumption and vehicles miles travelled (VMT) on an annual basis. This data would help monitor progress in greening the city fleet. As more efficient and alternative fuel vehicles replace older, less efficient vehicles, the City should see reduced costs.

Online Fleet Planning Tools

The U.S. Department of Energy's Petroleum Reduction Planning Tool (www.afdc.energy.gov/afdc/prep/), at the Alternative Fuels and Advanced Vehicles Data Center, could supplement Coronado's current fleet management system by evaluating and calculating petroleum reductions through three categories of reduction measures including efficiency (e.g., fuel economy, idling reductions), conservation (e.g., VMT reductions), and alternative fuels (e.g., vehicles that run on electricity, compressed natural gas). A petroleum reduction goal (e.g., 10% savings) can be set, and the free online tool can identify potential savings based on the fleet information entered and petroleum reduction measures selected.

When considering a new fleet vehicle purchase, the Cool Fleets Web site (www.coolfleets.com) has a free online calculator that can help the City identify the most cost-effective vehicle with the best environmental performance. It provides helpful information on a variety of indicators, including costs and GHG emissions. The user can compare each vehicle to itself or other models using different variables such as the lease term and average annual mileage scenarios. The user chooses the applicable fuel cost for their location and selects vehicles individually or by category.

Coronado also can reduce fuel use by encouraging employees to use the vehicles efficiently. This includes trip planning, efficient driving habits, and routine maintenance. Specific tips are described in **Appendix D**.

Alternative Fuels for Fleet Applications

Alternative fuel and vehicle selection may depend on several factors including:

- Vehicle cost
- Availability and proximity of refueling infrastructure
- Availability of grants and tax credits
- Whether new purchase or retrofit/conversion is being considered
- Vehicle maintenance

Descriptions of each type of alternative fuel and information on the availability of alternative fuel vehicles for a variety of fleet applications are provided in **Appendix D.** Opportunities for cost-saving vehicle replacements specific to Coronado's fleet are described below.

Vehicle Replacement: Alternative Fuel Options for Coronado

SANDAG partnered with the California Center for Sustainable Energy (CCSE) to provide an assessment tailored to Coronado's fleet and vehicle replacement protocols. Coronado evaluates vehicles for replacement based on a number of factors including age, mileage, maintenance history, and condition. Consideration of high efficiency and alternative fuel options during the vehicle procurement process could help Coronado achieve green fleet goals. The City has recently replaced or retrofitted many of its heavy duty diesel vehicles to meet the California Air Resources Board (ARB) requirements.

The following *Potential Vehicle Replacements and Savings* table identifies alternative fuel replacement options that could be suitable for the pick-up trucks, SUVs, and passenger vehicles in Coronado's vehicle fleet. The table identifies potential fuel and cost savings on an annual and lifetime basis using mileage information provided by the City. CCSE identified vehicles based on high annual mileage and fuel consumption. Because most city vehicles operate in a relatively small geographic area, yearly mileage and fuel savings were found to be less than what has been identified for fleets operating in larger geographic areas. For the purpose of this assessment, emergency response vehicles and construction equipment were not included, but your Energy Roadmap coordinator can provide additional information regarding these vehicles on request.

Hybrid and alternative fuel vehicles could offer savings of $1,100 to $1,500 a year based on based on vehicle usage seen in Coronado

Potential Vehicle Replacements and Savings

Vehicle Type	Fuel Tech[1]	Annual Mileage	Gallons Fuel Reduced/ Displaced[2]	Estimated Annual Savings	Lifetime Savings (10 years)
Sedan	Hybrid	12,000	314	$1,317	$13,171
SUV	Hybrid	9,700	259	$1,116	$11,169
Truck- One Ton	CNG	8,500	850	$1,511	$15,111

Note:
1. Hybrid = hybrid electric vehicle, CNG = compressed natural gas,
2. Reducing/ displacing the use petroleum-based fuels is a goal of state policy and the federal Energy Policy Act and Energy Independence and Security Act.

Source: California Center for Sustainable Energy

The vehicle replacement analysis used current fuel prices, mileage, and fuel consumption of Coronado's vehicles, details of which are provided in **Appendix D**. In general terms, the replacement of sedans and SUVs with suitable hybrid options results in an estimated annual savings of $1,100 to $1,300 per vehicle. Replacements of pick-up and work trucks with CNG-fueled versions could result in annual savings of up to $1,500 per vehicle.

CNG vehicles can cost between $8,000 and $20,000 more than their gasoline- or diesel-fueled counterparts, and could require additional fueling infrastructure. The substantial fuel savings that would be achieved from large trucks, some of the biggest consumers of fuel, could offset the higher purchase costs within a few years when combined with available incentives. Coronado should carefully evaluate all fuel types and available incentives when vehicle replacement decisions are made. California offers rebates and incentives for alternative fuel vehicles and infrastructure: currently available rebates are outlined later in this chapter.

Fuel Availability in Coronado

Additional fueling infrastructure is needed for widespread adoption of alternative fuel vehicles. The City currently has access to its own gasoline, diesel and CNG fueling. Other available refueling sites near Coronado are identified in the *Summary of Alternative Fuel Infrastructure Availability* table below. **Appendix D** contains details on each location and the costs of installing each type of fueling infrastructure.

Summary of Alternative Fuel Infrastructure Availability		
Fuel	**Existing Fueling/Charging Sites within Ten Miles of Coronado's Public Services Yard[1]**	**Availability of Production-Distribution Infrastructure**
Electricity	The EV Project is deploying up to 1000 level 2 electric vehicle chargers across San Diego County through 2012.	Existing electricity grid and distributed energy sources.
Biodiesel	B100 is available directly from a producer and B20 is available in San Diego. Other blends could be delivered to the City.	Storage and blending terminals, port off-loading sites needed. Local producer is New Leaf Biofuel.
CNG	One public and two private access stations.	Existing natural gas pipeline network.
Propane (LPG)	Two public access sites, one in Chula Vista and one in San Diego.	Existing distribution by multiple vendors.
E85	One public station is located near the city.	Storage and distribution facilities needed in order to scale-up consumption.
LNG	No fueling sites in or near the city	Existing, but West Coast off-shore LNG terminals needed.
Hydrogen	No fueling sites in or near the city	Significant investment required.

Source: http://afdc.energy.gov/afdc/locator/stations/.
Notes:
1. Site names, addresses, and distances are provided in **Appendix D**.
2. Contact your Energy Roadmap coordinator for information regarding the installation of publicly available EVSE at city government sites.

State Grants and Rebates

The California Energy Commission (CEC) and ARB offer alternative transportation grants and rebates through 2015 under the AB 118 Program. Funding is allocated annually and the FY 2011-2012 budget for the CEC AB 118 Program (www.energy.ca.gov/altfuels/) is about $100 million. ARB manages about $85 million in rebates and projects through the Air Quality Improvement Program (www.arb.ca.gov/msprog/aqip/aqip.htm).

The CEC has allocated funding for light-, medium-, and heavy-duty vehicles that use natural gas ($6.5 million), as well as light- and medium-duty vehicles that use propane ($5.2 million). Incentives amounts are displayed below in the table *CEC Gaseous Vehicle Buydown Incentives*. Expanding alternative fuel infrastructure is another funding priority for the energy commission.

CEC Gaseous Vehicle Buydown Incentives

Gross Vehicle Weight in Pounds (lbs.)	Natural Gas	Propane
Up to 8,500	$3,000	$3,000
8,501 – 14,000	$8,000	$6,000
14,001 – 26,000	$20,000	$10,000
26,001 & greater	$26,000 [1]	NA
	$32,000[2]	NA

Notes:
1. With fuel tank capacity less than 190 Diesel Gallon Equivalent (DGE)
2. With fuel tank capacity of at least 190 Diesel Gallon Equivalent (DGE)

CCSE manages the ARB Clean Vehicle Rebate Project (CVRP) (www.energycenter.org/cvrp), which provides rebates of up to $2,500 for light duty battery electric and plug-in hybrid vehicle purchases. CCSE received $15 million in funding for FY 2011-2012. The *CVRP Rebate Amounts for Light-Duty Vehicles* table summarizes the rebates available.

CVRP Rebate Amounts for Light-Duty Vehicles

Vehicle Class	Maximum Incentive
Light duty zero emission vehicles (ZEV)	$ 2,500
Plug-in hybrid electric vehicles (PHEV)	$1,500
Zero emission motorcycles (ZEM)	$ 900
Neighborhood electric vehicles (NEV)	$ 900

Note: Eligible vehicles and associated rebate amounts are subject to change. Visit the CVRP program site for eligible vehicle models and associated rebates.

Rebates for commercial vehicles including trucks and buses are available through ARB's Hybrid Truck and Bus Voucher Incentive Project (HVIP) (www.californiahvip.org). As of May 2012, the HVIP estimated fund balance was over $10 million. A summary of the incentives available is provided in the *ARB HVIP Voucher Amounts for Trucks and Buses* table below.

ARB HVIP Voucher Amounts for Trucks and Buses

Gross Vehicle Weight in Pounds (lbs.)		Base Incentive[1]
5,001 – 8,500 lbs[2]	Zero emission	$12,000
8,501 – 10,000 lbs	Plug-in hybrid	$ 10,000
	Zero emission	$ 15,000
10,001 – 19,500 lbs.		$ 15,000[3]
19,501 – 33,000 lbs.		$ 20,000
33,001 – 38,000 lbs.		$ 25,000
> 38,000 lbs.		$ 30,000

Notes:
1. The first HVIP-eligible vehicle purchased by a fleet and ARB-certified hybrid vehicles above 14,000 lbs. are each eligible for an additional $5,000 voucher.
2. The first voucher received by a fleet is increased by $3,000, for a total of $15,000..
3. Zero-emission commercial vehicles in this weight category are eligible for $20,000. Public school districts receive an additional $10,000 for school buses

The Electric Vehicle Project

The San Diego region was selected to take part in the largest electric vehicle (EV) rollout in U.S. history, through the EV Project (www.theevproject.com). The national project targets 16 major population areas in the U.S. as first markets for EVs. As such, the project includes deployment of nearly 15,000 EV chargers to create robust charging networks for EV drivers to utilize. Half of the EV Project funding (over $100 million) comes from a competitive ARRA grant awarded to Ecotality North America, an EV charger manufacturer. Nissan North America, General Motors/Chevrolet, and the U.S. Department of Energy are national project partners. SANDAG and SDG&E are local project partners providing in-kind assistance.

Coronado has installed two public access charging stations at City Hall. Many public sites throughout the region have been identified as potential locations for EV charging stations including marinas, restaurants, community and regional shopping centers, large venue entertainment centers, transportation corridors, schools, hotels, airports, convenience retail, and retail shopping. A number of public chargers are expected to be installed in and near Coronado.

Over the next five years, most major automobile manufacturers are expected to introduce plug-in electric vehicles. Beginning in December 2010, two major automobile manufacturers began selling EV sedans, the Nissan Leaf and Chevrolet Volt, in San Diego County. Additional plug in vehicles are available from Mitsubishi, Toyota, and other manufacturers. All vehicles will be compatible with the standardized EV chargers installed through the EV Project.

Through the EV Project, up to 1,000 electric vehicle public chargers can be installed around San Diego County by the end of 2012. Coronado has installed two public charging stations at City Hall.

The City of Coronado is also participating in the Regional Electric Vehicle Infrastructure Working Group (REVI). Building on previous PEV planning efforts, REVI will serve as a coordinating body that can help streamline and address barriers to EV adoption as well as provide best practices and real-time learning across jurisdictions. Through its involvement with REVI, the City can stay up to date on EV infrastructure needs for fleets and consumers.

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4

Develop Employee Knowledge of Energy Efficiency

Developing employee knowledge of energy efficiency is another way for Coronado to promote energy savings in city government operations and throughout the community.

Overview

This chapter identifies free educational seminars available to city employees at the San Diego Energy Resource Center (SDERC) and the SDG&E Energy Innovation Center (EIC). The SDERC is located at the California Center for Sustainable Energy (CCSE) in Kearny Mesa, and the EIC is located in Clairemont Mesa. In addition to these facilities, local colleges and universities host educational programs. Professional certifications in the energy management field also are identified. If City staff is interested in one of these courses, your Energy Roadmap coordinator can help facilitate participation in certification programs and may be able to assist with enrollment costs.

Getting Started

As a first step in identifying educational, training, and certification opportunities, the City is asked to please identify the following:

- Staff positions or employees that could benefit from energy-related workshops and trainings such as those listed in this section,
- Other workshops or trainings of interest (even if not listed here); and
- Workshops or trainings that Coronado may be interested in hosting at a City facility.

SDG&E and CCSE conduct hundreds of expert-facilitated seminars on a broad spectrum of energy topics at the SDERC and EIC. Workshop costs are covered by California utility customers under the auspices of the California Public Utilities Commission unless otherwise posted. An RSVP is generally requested for workshops to ensure that adequate space and food are provided. For more information on programs hosted by the SDERC, contact CCSE at (858) 244-1177. For SDG&E workshops e-mail: seminars@sdge.com. CCSE and SDG&E publish a quarterly workshop calendar in print and online at: www.energycenter.org/erc.

The following table identifies quarterly workshops offered at the SDERC and EIC as well as energy-related training and certification programs that could benefit city employees.

Free Educational Seminars		Audience
Building Performance and Monitoring	▪ Energy management systems ▪ SDG&E's kWickview energy management tool ▪ Energy Star Portfolio Manager ▪ Benchmarking tools ▪ Building information modeling (BIM)	Facilities, public works
General Energy Workshops	▪ Energy efficiency 101 ▪ Electricity 101 ▪ Basics of solar, basics of solar water heating ▪ Lunch and learn topics	Layperson
Best Practices and Programs	▪ ENERGY STAR best practices ▪ Rebate programs	Planning, public works, city administration
Online Workshop Calendar	To view upcoming workshops, visit www.energycenter.org/attend.	
Training and Certification Programs		**Audience**
Building Code Inspector Training	SDG&E offers free inspector training for city employees. Curriculum includes equipment identification and compliance, residential and commercial California Energy Code documentation and compliance, building plan verification for energy efficiency standards, and 2010 California Green Building Code.	Code inspectors, planning staff
Building Operator Certification (BOC)	SDG&E offers BOC Level 1 and 2 trainings and certifications to city staff at a reduced rate. Building Operator Certification is a nationally-recognized training and certification program offering improved job skills and more comfortable energy-efficient facilities. The training is led by experienced, professional instructors.	Facilities, public works staff
Certified Energy Manager (CEM)	Certification is through the Association of Energy Engineers (AEE). CEM distinguishes high levels of competency and proficiency in energy management, demonstrating expertise in several areas ranging from standards, air quality, energy audits, lighting, procurement, and financing.	Facilities, public works staff
NATE Certification Exam (HVAC)	SDG&E and the Institute of Heating and Air Conditioning Industries, Inc. (IHACI) co-sponsor seminars designed to help experienced HVAC professionals prepare for successfully completing the North American Technician Excellence (NATE) Certification Exam.	Facilities, public works staff
LEED® Professional Credentials	The Leadership in Energy and Environmental Design (LEED®) designation acknowledges expertise in green planning, design, construction, operations, neighborhood development, and other sustainable practices. SDG&E will cover the cost of appropriate city employees to undergo training for a LEED® Professional Credential.	City administration, planning, facilities, public works, environmental services

5

Promote Commuter Benefits to City Employees

The City can achieve transportation-related energy savings by building on the Commuter Benefit Program offered to its employees. Such programs provide alternative transportation options to driving alone – and incentives to use them. As part of the Energy Roadmap Program, Coronado is offered free assistance and tools to design and implement a more customized commuter benefit program, also known as a Transportation Demand Management (TDM) program. This program encompasses a three-pronged approach:

1. Develop and implement a TDM program for the employees of the City of Coronado,
2. Provide TDM information and guidance for the employers in the City of Coronado, and
3. Integrate TDM into the Planning and Development Process for future development or redevelopment.

How it Works

A Commuter Benefit Program provides employees with alternative transportation options for their commute, as well as incentives for using them. It starts by bundling various commuting-related programs that meet the needs of your city and employees, and including them in the benefits package for city employees.

A commuter program stands side-by-side with your agency's health benefits, helping to attract and retain talented staff, as well as improve overall employee satisfaction. A custom program could include helping connect employees who want to carpool or vanpool with one another, offering flexible work schedules and telework options, or providing free or reduced-cost transit passes.

Some of the programs are offered free by SANDAG. Others are inexpensive or come with subsidies. For example, SANDAG provides a $400 per month subsidy for qualifying vanpools. The Commuter Benefit Starter Kit for Employers available through iCommute

Commuter Program Benefits

By providing alternative transportation choices for its employees Coronado can:

- Improve traffic flow
- Set an example for residents and businesses
- Reduce commuter-related expenses
- Reduce oil consumption
- Help employees save time and reduce stress
- Reduce air pollution and greenhouse gas emissions

provides your agency with the tools to get started, including an overview of your options, sample policies, promotional materials, and tax benefit information.

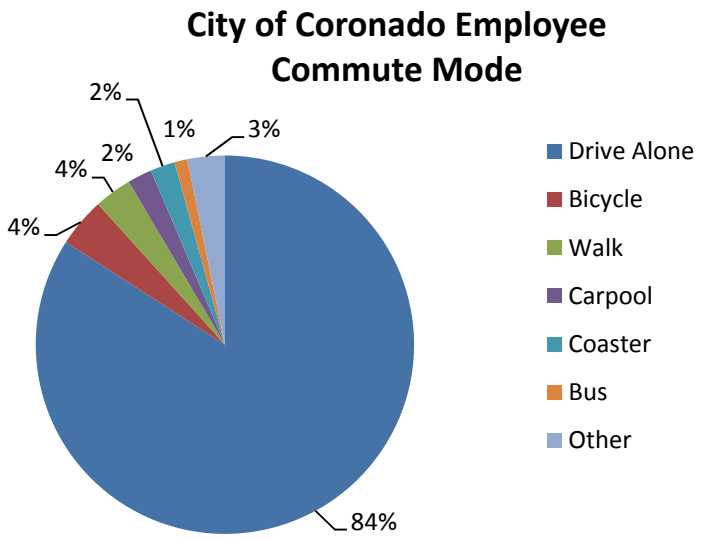
Survey results demonstrate an interest in using alternative modes of transportation by City of Coronado employees.

The iCommute on-line system offers employees free and convenient ride matching and trip tracking tools. The site also allows your agency to create customized incentive programs for rideshare participants. It's convenient reporting feature details how many of your employees are participating and measures the agency's and employees' financial and environmental savings, including the amount of air pollution and greenhouse gas emissions avoided, cost savings, and fuel savings.

City of Coronado Employee Commuter Survey

During the month of January 2012, SANDAG conducted a Baseline Commuter Survey of the employees of the City of Coronado to establish existing commuter trends of City employees. A total of 98 surveys were completed. The data revealed that the most prevalent mode of commuting was driving alone, at 84 percent. Even though a high percentage of employees drive alone, the survey revealed that 61 percent of employees were "somewhat interested" or "more than somewhat interested" in commuting by other modes of transportation at least once a week. The survey results are summarized below.

Of the 98 respondents, 95 answered the question: What mode of transportation do you usually take to get to work? The results are presented in the graph below.



The top three reasons for driving alone were: irregular work schedule (18 percent), no reasonable transit option (14 percent) and prefer to drive my own car (13 percent). The employees who already do not drive alone cited cost savings and stress reductions as the main factors for using an alternative mode of transportation.

Of the 98 respondents, 79 answered the question: How interested are you in taking an alternative mode of transportation (carpool, vanpool, public transit, bike, and/or walk) to work at least once a week?

- 8 percent very interested
- 13 percent interested
- 41 percent somewhat interested
- 39 percent not interested at all

Of the 98 respondents, 48 answered the question: Please select which mode you are interested in using. (Please select all that apply.)

- 44 percent carpool rider
- 31 percent public transit (bus/trolley)
- 29 percent walking or biking
- 25 percent carpool driver
- 19 percent vanpool driver or passenger
- 4 percent other

Please note that the total percentage is higher than 100 percent due to the fact that respondents were allowed to choose more than one option. The iCommute program's free ride matcher tool can assist those employees who would like to carpool, vanpool or find a "Bike Buddy."

The results of the survey demonstrate that there is an interest in using alternative modes of transportation. Access to commuter assistance tools and commuter programs tailored to the specific needs of Coronado's municipal employees will be important to reduce trips generated by solo drivers.

Specific Commuter Programs for the City

Carpool Incentive Pilot Program

The City of Coronado is one of nine employers selected to be part of iCommute's Carpool Incentive Pilot Program. This pilot program, which ran from April to June 2012, incentivized carpooling by rewarding drivers and passengers with a $50 gas card each month for a three month period ($150 total per carpooler). The pilot sought to gain 600

new carpoolers in the iCommute system, encourage carpoolers to use the iCommute TripTracker tool to log their trips, test the type and level of carpool incentive, and measure retention rates after one year. The results will be available in August 2013 and will help determine whether SANDAG will continue or expand a regional carpool incentive program. If the pilot does continue, the City could provide information to other local employers on how to participate.

SchoolPool

Schools in several local cities are taking advantage of iCommute's SchoolPool program as a resource for parents and students. The City of Coronado could encourage its schools to learn more about program options and enroll. SchoolPool is open to all public and private elementary schools, middle schools, and high schools in the San Diego region. The program promotes carpooling, biking and walking to and from school, which reduces congestion around schools, promotes fitness, and helps the environment. SchoolPool also puts an emphasis on safety. Safety events are held at various schools throughout the year. The City of Coronado could encourage its schools to contact iCommute for more information.

Vanpools

Navy personnel use 96 vanpools subsidized by SANDAG to commute to and from duty in Coronado, reducing traffic coming into the City by 600 to 1,300 vehicles each day.

There are currently 96 vanpools that serve the Naval Air Station, North Island and the Naval Amphibious Base. Vanpooling is an excellent way to save money because it splits the cost amongst several riders and reduces greenhouse gas emissions. The City of Coronado could facilitate vanpool informational meetings for other employers and provide links on the City Web site for the iCommute Vanpool program.

Transportation Demand Management and the Planning Process

In May 2012, SANDAG published a study to serve as a resource guide for cities on ways to address TDM in local planning. The study, *Integrating Transportation Demand Management Into the Planning and Development Process*, is available online at: www.sandag.org/uploads/publicationid/publicationid_1663_14425.pdf.

Getting Started

At the request of City staff, SANDAG gave an overview presentation on the iCommute program at the city in Fall 2011. The iCommute team has since begun working with City staff to learn more about the city's existing commuter benefits and discuss potential ways to enhance the city's existing commuter policies through the iCommute program.

Implementing a program can be an easy and cost-effective way to reduce energy consumption: many commuter policies and benefits can be offered at no or little cost to the City of Coronado.

For more information on iCommute programs and services and to download the Commuter Benefit Starter Kit for Employers, visit www.icommutesd.com, or contact Kimberly Weinstein at (619) 699-0725 or Kimberly.Weinstein@sandag.org, or Alexander Lukes at (619) 515-1178 or Alexander.Lukes@sandag.org.

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6

Leverage Planning and Development Authority

Local governments can promote energy efficiency in their communities by leveraging their authority over local land use and development activity. This chapter addresses ways in which energy considerations can be integrated into local land use and transportation planning. These energy efficiency and/or petroleum reduction measures are consistent with regional and state energy policies, and fall under the following categories:

1. **Smart growth development policies**
2. **Energy-efficient building upgrades**
3. **Clean and efficient transportation options**

The built environment is comprised of private development and land uses, roadways and pedestrian facilities, the open space system, and other public facilities such as parks and schools. The energy demand of the built environment is strongly dependent upon the design and orientation of individual buildings; the distribution and density of development; the siting, sizing, and design of transportation infrastructure; and other public facilities.

The Planning Role of Local and Regional Governments

Regional energy consumption is strongly related to urban form – i.e., the physical features and composition of the built environment. Local governments and SANDAG can influence the built environment, including the amount of energy consumed, through regulations, incentives, collaborative planning, and infrastructure investments that affect land use patterns, the transportation system, and other public facilities.

State law specifically vests local governments with authority over land use and development activities within their jurisdictions in accordance with their general plans and other policy documents that address land use, circulation (transportation), housing, public facilities, environmental management (open space, conservation, safety, scenic

highways), and economic development. Local governments develop regulations and programs to implement their planning policies and goals.

Sustainable Communities Strategy

Pursuant to Senate Bill 375 (SB 375) (Steinberg 2008), SANDAG and regional planning agencies across the state are required to develop a Sustainable Communities Strategy (SCS) in order to reduce greenhouse gas (GHG) emissions from passenger vehicles consistent with targets set by the California Air Resources Board (CARB). The following table, *GHG Reductions in the SANDAG Sustainable Communities Strategy*, presents the assigned CARB targets and the projected GHG reductions and vehicle miles traveled (VMT) reductions projected in the SCS. On October 28, 2011, SANDAG became the first metropolitan planning organization in the state to adopt a SCS as part of its 2050 Regional Transportation Plan (2050 RTP). SANDAG is using this strategy as the foundation for updating its Regional Comprehensive Plan (RCP), which provides a long-term strategic planning framework for the region based on "smart growth" and "sustainability." These principles are described in the next section.

GHG Reductions in the SANDAG Sustainable Communities Strategy

Average Weekday Per Capita CO_2 and VMT Reductions for Cars and Light Trucks from 2005

Target Year	CARB Target	GHG	VMT
2020	7%	14%	12%
2035	13%	13%	10%
2050	N/A	10%	7%

Notes: CO_2 = carbon dioxide.
CARB identifies CO_2 as the GHG whose concentration is being most affected directly by human activities. CO_2 also serves as the reference to compare all other GHGs.

SB 375 also provides an opportunity for streamlining the California Environmental Quality Act (CEQA) process for certain local redevelopment projects, if they are consistent with the SCS as either a "residential/mixed use project" or as a "Transit Priority Project" (TPP). Environmental review of a residential/mixed use project consistent with the SCS would not need to consider growth-inducing impacts or increases in GHG emissions from passenger cars and light trucks. For a TPP, the project would need to be at least 50 percent residential with a density of at least 20 units per acre and be within a ½ mile of a major transit stop or a high quality transit corridor included in the 2050 RTP.

SANDAG, working closely with all local jurisdictions, will undertake an update to its RCP over 2012 and 2013, including a review of smart growth designated areas in relation to the SCS. **Appendix F** contains larger definitions for what could qualify for CEQA streamlining.

1. Smart Growth Development Policies

Smart growth can be defined as a compact, efficient, and environmentally sensitive pattern of development that provides people with additional travel, housing, and employment choices by focusing future growth away from rural areas and closer to existing and planned job centers and public facilities, while preserving open space and natural resources. Smart growth policies fit into the broader context of sustainability by guiding development to preserve access to natural resources. The principles of sustainability are based on achieving conservation goals and objectives in three broad areas: a prosperous economy, a healthy environment, and social equity. With the adoption of SB 375, the state is recognizing the influence that smart growth policies have on long term sustainability.

Coronado has been integrating smart growth principles into local plans for several redevelopment areas. The Housing Element of the City's General Plan promotes "'smart growth' that accommodates higher-density residential uses near transit, bicycle, and pedestrian-friendly town centers that encourage and facilitate energy, time, land, and clean air conservation by reducing the need for car and truck use" (Policy 1.2). Two examples are the existing Downtown Coronado Town Center, and the Ferry Landing neighborhood and commercial node. These sites have been included in a region wide Smart Growth Concept Map, last updated by SANDAG in 2012.

1. **Downtown Coronado Town Center** is oriented to the community's primary transit lines operating on Orange Avenue, encompassing most of the community's commercial development, lodging establishments such as the Hotel Del Coronado, some mixed-use residential development, and the community's library. There is no potential for additional smart growth/mixed-use development in this area.

2. **The Ferry Landing Community Center** is the approximate center of a neighborhood and tourist-serving commercial node that encompasses the pedestrian/bicycle ferry terminal and mixed-use residential and medium-density condominium complexes that are oriented to the community's shuttle bus system.

Funding for Smart Growth Planning

SANDAG manages the *TransNet* Smart Growth Incentive Program (SGIP), which funds transportation and transportation-related infrastructure improvements and planning efforts that support smart growth development. The SGIP awards two percent of the annual *TransNet* revenues to local governments through a competitive grant program. For more information on the SGIP, and upcoming funding cycles, visit www.sandag.org/smartgrowth.

In addition, **Appendix F** contains additional sample policies that encourage smart growth development. Coronado could determine which measures are most appropriate for the City and consider these measures in any future general plan update, climate action plan, or in its development review process. This appendix also contains the existing and potential "smart growth opportunity areas" that the City provided SANDAG for inclusion in the adopted Smart Growth Concept Map (2012).

2. Energy –Efficient Building Upgrades

The *California Long Term Energy Efficiency Strategic Plan*, the California Public Utilities Commission's (CPUC) framework for energy efficiency in the State, describes local governments' authorities and opportunities for promoting energy efficiency in new and existing buildings. Through the Energy Roadmap program, SDG&E can offer free energy code training for local code inspectors. In addition, local governments can promote residential programs like *Energy Upgrade California (EUC)*, which help homeowners undertake building retrofits that save energy and reduce monthly utility bills. The EUC program also provides local workforce training.

City of Coronado General Plan
"The City's goal is to achieve maximum use of conservation measures and alternative, renewable energy sources in new and existing residences."
Housing Element

Additionally, **Appendix G** provides a series of energy-related policy measures that reflect the goals of State agencies like the California Energy Commission (CEC), CPUC, and Office of the Attorney General. The appendix includes further information on EUC and financing mechanisms for energy-efficient building retrofits.

Codes, Permits, and Compliance

Local governments are required to adopt and enforce building codes and regulate development activity within their jurisdictions. The *California Long Term Energy*

Efficiency Strategic Plan identifies the following areas where local government authority can impact energy use in new and existing buildings:

1. Ensuring compliance and enforcement of the Title 24 energy code for residential and commercial buildings.
2. Adopting and implementing voluntary and mandatory "reach" (enhanced energy efficiency) codes beyond Title 24's energy requirements (and potentially other "green" requirements).
3. Supporting highly efficient projects that voluntarily exceed minimum energy codes through favorable fee structures, fast-tracked permitting and other innovative and locally appropriate approaches.
4. Enacting ordinances with point-of-sale or other approaches that spur efficiency actions in existing, privately-owned buildings.
5. Applying efficiency-related "carrots" and "sticks" using local zoning and development authority.

If the City has interest in learning more about code, permit and compliance options, the Energy Roadmap coordinator and SDG&E can provide assistance. For example, the City can receive free energy code compliance training for local building inspectors, or receive materials needed to consider adoption of voluntary reach codes, which go beyond the traditional minimum code requirements to make buildings more energy-efficient.

Energy Upgrade California

Energy Upgrade California (EUC) (www.energyupgradeca.org) is a statewide comprehensive retrofit program for residential and small commercial buildings. The program coordinates federal, state, utility, and local retrofit program outreach, incentives, training, and qualifications. Locally, the California Center for Sustainable Energy (CCSE) is collaborating with SDG&E to coordinate the EUC program. CCSE manages additional EUC rebates offered by some of the local governments in San Diego County; as well as workforce training that qualifies local contractors to perform the work. Residents of Coronado can take advantage of this program to reduce their energy consumption while improving the comfort of their homes.

Currently, the cities of San Diego and Chula Vista, and the County of San Diego, have used a portion of their Energy Efficiency and Conservation Block Grants (EECBG) to augment state and utility rebates available to their residents. As the EUC program grows, more local governments may choose to formally support the EUC through passage of resolutions or dedication of funds (if available) for increased rebates to their residents. EUC can support Coronado's goal to "achieve maximum use of conservation measures and alternative, renewable energy sources in new and existing residences", as articulated in the General Plan's Housing Element.

The EUC program promotes a "whole house" performance approach to efficiency that focuses on the elements within a home that affect energy use, how they interact, and how they influence health and safety. This approach diverges from the traditional "widget" approach to energy efficiency program delivery, which targets only one building aspect at a time, such as lighting, air conditioners, or insulation. To determine the best approach for improvements to an individual home, a home energy assessment is done. The assessment can pinpoint exactly what upgrades can be made, the costs, and the rebates or incentives that may apply. The home assessments and retrofit projects are performed by licensed building contractors that have been trained for the EUC program. (More information on workforce development programs is contained in Chapter 8.)

3. Clean and Efficient Transportation Options

Transportation Demand Management

Transportation demand management (TDM) is the application of strategies to reduce single occupancy vehicle travel by encouraging alternative transportation options. Including TDM measures in the development review process may offer developers creative, affordable, and effective ways to reduce vehicle trips and their impacts. TDM measures also contribute toward Leadership in Energy and Environmental Design (LEED) certification.

The SANDAG iCommute program offers free assistance to San Diego regional businesses and agencies in establishing and implementing customized TDM policies and programs that reduce traffic congestion, fuel use, air pollution, and GHG emissions. Active transportation choices like biking and walking provide a healthier alternative to driving and reduce petroleum consumption and pollution locally. In addition, smart growth land use patterns, like those characterized in the SANDAG Smart Growth Concept Map, accommodate biking and walking as mobility choices. They typically contain a diverse mix of land uses, complemented by sidewalks, bike paths, a variety of housing types, and an interconnected and rich street grid that can slow and disperse vehicle traffic.

To reduce traffic congestion and emissions from the use of vehicles in the City and promote alternative forms of transportation such as walking and bicycling, Coronado can apply for grant funds through the *TransNet* SGIP, discussed previously, and the Transportation Development Act (TDA) *TransNet* Bicycle and Pedestrian grant programs.

SANDAG allocates funds under the TDA and *TransNet* local sales tax program to support bicycle and pedestrian transportation projects through a competitive process on an annual basis.

Alternative Fueling Infrastructure

One of the six early actions identified in the SANDAG *Regional Energy Strategy* is to support the planning for electric vehicle charging and alternative fueling infrastructure. Siting alternative fueling stations, electric charging points, vehicle maintenance facilities, and other infrastructure in coordination with vehicle availability is important to provide customers like fleet managers and the general public with a level of certainty that infrastructure will be available to support their investment in an alternative fuel vehicle.

Support for alternative fuel infrastructure can also help attract private investment associated with alternative transportation to the region. The San Diego Regional Clean Cities Coalition, along with its members including the County, SANDAG, local cities, the Airport Authority, the Port of San Diego, and CCSE, have committed to addressing the need for more fueling choices across the region. A complete list of both publicly and privately available alternative fueling stations is included in **Appendix E**.

Plug-in Electric Vehicles and Charging Stations

The San Diego region is at the forefront of plug-in electric vehicle (PEV) deployment with the highest per capita amount of PEV purchases and electric vehicle supply equipment (EVSE) installations in the United States. By the December 2012, the EV Project will have installed up to 1,000 home (or fleet) Level 2 EVSE; 1,000 publicly accessible Level 2 EVSE at commercial properties, city streets, municipal buildings, and San Diego destinations like Balboa Park; and 30 DC fast charge EVSE along the region's transportation corridors. Coronado is a member of the EV Project and is currently hosting two EV charging stations at City Hall in order to help the City meet its clean air goals and reduce GHG emissions while addressing energy security issues and encouraging the use of clean air vehicles.

Several barriers have been identified through the region's early experiences, which need to be addressed in a strategic and coordinated manner to enable widespread regional PEV adoption and efficient deployment of EVSE. Assisted by a California Energy Commission grant, SANDAG and CCSE formed a working group of local governments, regional agencies, SDG&E, and other stakeholders to address these PEV issues. The San Diego Regional Electric Vehicle Infrastructure Working Group (San Diego REVI) held its kickoff meeting in March 2012 and is holding bimonthly meetings over a two-year period. Coronado staff is actively participating in the working group.

Sample mandatory and voluntary ordinances for including TDM, alternative fueling infrastructure, and other transportation-related measures in development projects are provided in **Appendix H**.

7

Market Energy Programs to Local Residents, Schools, and Businesses

This chapter provides Coronado with internet links to existing energy efficiency and fuel-saving resources that the city could include on its Web site, newsletters, and e-mail alerts. This would enable Coronado to serve as a conduit to its constituents on energy-saving residential, commercial, and school programs. The City could help promote messages of sustainability that foster a greater local understanding of the connection between energy/fuel use and environmental impacts. The City also could become a local government partner with national energy-saving educational campaigns like *ENERGY STAR* and *WaterSense*.

California's Vision for Marketing, Education, and Outreach
Californians will be engaged as partners in the state's energy-efficiency, demand-side management, and clean energy efforts by becoming fully informed of the importance of energy-efficiency and their opportunities to act.
California Long-Term Energy Efficiency Strategic Plan

The following five outreach mechanisms are provided as sample ways in which the City can engage residents and businesses in energy programs:

1. Provide summary descriptions and links to SDG&E programs and rebates and related resources on the City's Web site.
2. Include articles about opportunities to save energy with links to existing programs and community resources, like the California Center for Sustainable Energy (CCSE), in Coronado Currents Provide educational materials on saving energy at city venues such as the permit desk, parks and recreation areas, libraries, and the civic center. SDG&E, CCSE, and SANDAG iCommute can provide materials about programs and services for residents and businesses.
3. Invite SDG&E, SANDAG iCommute and/or CCSE to host an information booth on energy-saving programs or commuter programs at community events.
4. Help coordinate presentations by SDG&E and SANDAG iCommute to community organizations such as a neighborhood planning group or local chamber of commerce.

Comprehensive Energy Program Websites

Residential Energy-Saving Programs	www.sdge.com/residential/rebates.shtml
Commercial Energy-Saving Programs	www.sdge.com/business/rebatesincentives
Educational Resources for All	CCSE and SDG&E conduct hundreds of expert-facilitated seminars on a broad spectrum of energy topics at two locations in central San Diego, the San Diego Energy Resource Center (SDERC) and Energy Innovation Center (EIC). The online calendar lists workshops from both organizations and venues. www.energycenter.org/attend
SANDAG iCommute	Free online gateway to commuter choices in the San Diego region; hosted by SANDAG. Includes 511, transit trip planner, online ride matching service, and cost of commute calculator. www.icommutesd.com/
Energy Upgrade California	www.energyupgradecalifornia.org

Local Educational Resources

San Diego Regional Energy Resource Center

Jointly provided by the California Center for Sustainable Energy and San Diego Gas & Electric

The San Diego Energy Resource Center (SDERC) is a community resource for energy information and provides a variety of workshops, continuing education, and certification courses in energy efficiency, renewable energy, and green building including HERS training, BPI certification, LEED certification, and solar installation training.

The SDERC is located at the California Center for Sustainable Energy at 8690 Balboa Avenue, Suite 100, San Diego, CA 92123. Call (858) 244-1177 or visit www.energycenter.org. ERC hours are from 8 a.m. to 5 p.m. weekdays, excluding national holidays.

Resources available from the SDERC include:

- Online workshop, training, and events calendar: CCSE and SDG&E conduct hundreds of expert-facilitated seminars on a broad spectrum of energy topics at the SDERC.
- Energy Connection eNewsletter: CCSE's free monthly eNewsletter provides current information on resources, regional energy issues, news, and other features.
- Reference and tool-lending library: The reference library offers books, DVDs and periodicals on climate change, efficiency, green building, renewable energy, and transportation. Materials cover a broad range of information and are designed for those in a variety of professions and levels of education and knowledge.

SDG&E Energy Innovation Center

In January 2012, SDG&E opened the Energy Innovation Center (EIC), which was designed to be one of San Diego's first LEED (Leadership in Energy & Environmental Design) Platinum buildings open to the public. The EIC is a community resource to explore the latest green technologies and learn about energy efficiency. It hosts a variety of workshops and includes a Food Service Demonstration Kitchen that hosts free seminars on energy-efficient cooking, equipment, lighting and food safety.

The EIC is located at 4760 Clairemont Mesa Blvd, San Diego, CA 92117.
Call (800) 411-7343 or visit www.sdge.com/eic.

SANDAG iCommute Programs for the Community

In addition to supporting city-employee commuter programs like those identified in Chapter 5, Coronado could help educate its residents and local businesses about alternatives to driving alone in the community. The city could:

- Provide information on commuting resources at the Civic Center, libraries and other public sites, and/or on municipal Web sites and newsletters. Include links to the 511 transit trip planner, iCommute online ridematching service, and an online cost-of-commute calculator.
- Participate in annual events and campaigns that encourage commute alternatives to driving alone such as Bike to Work Day, Dump the Pump, Rideshare Week, Walk and Bike to School Day:
  - Adopt proclamations and celebrate these events in your community.
  - Participate in the Bike to Work and Rideshare Week Corporate Challenges to demonstrate your commitment to sustainable commute choices.
  - Host a Bike to Work Day pit stop(s)
- Recognize and/or honor local commuters and employers who have demonstrated a commitment to sustainable commute choices.

Through SchoolPool, parents can receive a free helmet for each child who bikes and a free baseball cap for each child who walks. All children who bike or walk can receive reflective backpacks, and safety vests are provided for parent leaders.

SANDAG SchoolPool Program

SchoolPool is iCommute's free ridematching service for parents of children who attend the same school anywhere in the region. With this safe and secure service, parents are matched with other parents in their neighborhood who are interested in sharing the

driving responsibilities or would like to have their kids bike or walk to school with other students and a parent leader. Coronado could:

- Encourage the School District and/or individual schools to enroll in SchoolPool, a secure online ride matching service administered by SANDAG for parents with children in kindergarten through 12th grade. SchoolPool can be a transportation solution for parents who live in districts where school bus services have been cut.
  - SchoolPool enables parents of children who attend the same school and live in the same neighborhood to share responsibilities of getting their children to and from school.
    - SchoolPool helps parents connect their children with bike buddies and "walking school buses" – groups that ride their bikes or walk to school together with one or more adults.
    - Parents who use SchoolPool to find bike buddies and walking school buses can receive a free helmet for each child who bikes and a free baseball cap for each child who walks. All children who either bike or walk can receive reflective backpacks. Safety vests are provided for parent leaders.

National Educational Resources

ENERGY STAR Government Partnerships

In addition to appliance labeling, the ENERGY STAR program seeks partnerships with local businesses, congregations, industries, schools, and others. By becoming a Government ENERGY STAR Partner, a local government can receive recognition nationally and can co-brand local energy-saving initiatives with ENERGY STAR. More information is available at www.energystar.gov.

The U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) also host an annual ENERGY STAR Awards ceremony to honor organizations that have made outstanding contributions to protecting the environment through energy efficiency. For more information on government partnerships, visit www.energystar.gov/index.cfm?c=government.bus_government.

WaterSense Promotional Partners

WaterSense helps consumers identify water-efficient products and programs that meet WaterSense water efficiency and performance criteria. Products carrying the WaterSense label perform well, help save money, and encourage innovation in manufacturing. More information is available at www.epa.gov/watersense.

Local governments, utilities, and other organizations can become WaterSense Promotional Partners to help provide outreach on water-efficiency measures. Jurisdictions can receive recognition nationally and can co-brand local water-saving initiatives with WaterSense as a promotional partner. For more information on promotional partners, visit www.epa.gov/watersense/partners/promotional.html.

Energy Programs for Residential and Business Audiences

Renewable Energy Programs	
Self-Generation Incentive Programs	www.energycenter.org/index.php/incentive-programs/self-generation-incentive-program
The California Solar Initiative (CSI)	www.energycenter.org/index.php/incentive-programs/california-solar-initiative
CSI Thermal Program (Solar Water Heating)	www.energycenter.org/index.php/incentive-programs/solar-water-heating
Sustainable Communities Program	www.sdge.com/environment/sustainablecommunities/
California Energy Commission's Emerging Renewables	www.consumerenergycenter.org/erprebate/index.html
SDG&E Solar Initiative	www.sdge.com/environment/solar/sdSolarInitiative.shtml
Net Energy Metering	www.sdge.com/nem/
Energy and Water	
20-Gallon Challenge	The 20-Gallon Challenge is a call for residents and businesses to reduce our region's water use on average by 20 gallons per person, per day. Hosted by the San Diego County Water Authority. http://20gallonchallenge.com/
Smart Grid	
SDG&E Smart Grid Program	Smart meter and smart grid technologies are being deployed throughout the San Diego region and across the state. www.sdge.com/smartgrid
Clean Transportation and Petroleum Reduction Programs	
Clean Vehicle Rebate Project	www.energycenter.org/cvrp
SANDAG iCommute	www.icommutesd.com/
SDG&E Clean Transportation	www.sdge.com/cleantransportation/
The EV (Electric Vehicle) Project	www.theevproject.com/
SANDAG SchoolPool Program	www.icommutesd.com/Schoolpool

Energy Programs and Assistance for Local Businesses

Energy efficiency and Demand Response	
Business Incentives	www.sdge.com/business/rebatesincentives
Critical Peak Pricing	www.sdge.com/cpp
Technical Assistance and Technology Incentives	www.sdge.com/tati
Project Management Builder Services	www.sdge.com/builderservices
Summer Saver	www.sdge.com/vendor/summersaver/
On-Bill Financing	www.sdge.com/obf
Energy Savings Bid	www.sdge.com/bid
Energy Challenger (energy audit tool)	www.sdge.com/audit
Energy efficiency Seminars	www.sdge.com/training
New Construction	
Savings by Design	www.sdge.com/builderservices/savingsBD.shtml
Sustainable Communities Program	www.sdge.com/environment/sustainablecommunities/

Energy Programs and Assistance for Residents

Comprehensive Residential Web Sites	
SDG&E's Residential Rebates and Services	All SDG&E residential programs can be accessed from this Web site. www.sdge.com/saveenergy
Energy Upgrade California	EUC is a statewide brand for all energy-saving building retrofit programs. EUC coordinates federal, state, utility, and local retrofit program outreach, incentives, training, and qualifications. Locally, CCSE is collaborating with SDG&E to coordinate the program. www.energyupgradeca.org
PACE and AB 811 Programs	Property Assessed Clean Energy (PACE) or AB 811 programs are intended to give cities and counties the ability to offer low-interest loans for energy efficiency and solar energy projects to commercial and/or residential property owners. *Residential PACE programs are currently on hold nationwide. Commercial programs are emerging in 2012. www.pacenow.org

Energy efficiency and Demand Response

Advanced Home Program	www.sdge.com/builderservices/programs/advancedhomes/index.shtml
Air Conditioning Tune-Ups	www.actimeprogram.com/ProjectCenter/
Summer Saver Program	www.sdge.com/summersaver/
Affordable Financing for Home Improvements	www.sdge.com/residential/homeImpFinance.shtml
Refrigerator-Freezer Recycling Program	www.arcaincutility.com/CA/SDGE/Step2_ZipCode.cfm?ServiceCompany=43
Clothes Washer Rebate Program	www.20gallonchallenge.com/programs_residential.html or (888) 376-3314
Residential Energy Survey	www.sdge.com/residential/resEnergyProfiles.shtml (800) 411-SDGE (7343)
Lighting Turn in Program	www.sdge.com/lighting
Tax Credits	www.energytaxincentives.org/

New Construction Programs

Advanced Home Program	www.sdge.com/builderservices/programs/advancedhomes/index.shtml
New Solar Homes Partnership	www.sdge.com/environment/solar/solarForNewHomes.shtml

Low Income Assistance

Residential Rate Assistance Program	www.sdge.com/residential/assistance/assistServCare.shtml
The Energy Team Program	www.sdge.com/residential/energyTeam.shtml or (866) 597-0597
Programs for Customers with Special Needs	www.sdge.com/residential/assistance/otherCustomerServices.shtml
Neighbor to Neighbor	www.sdge.com/residential/assistance/financialAssistance.shtml
Multi-Family Affordable Solar Housing	www.energycenter.org/index.php/incentive-programs/multifamily-affordable-solar-housing

Energy and Water

WECalc Home Water-Energy-Climate Calculator	Free online tool from the Pacific Institute that estimates home water-related energy use and associated greenhouse gas emissions. http://www.wecalc.org/
SoCal Water Smart for Residential Customers	Available water efficiency product rebates. www.socalwatersmart.com/
Clothes Washer Rebate Program	www.20gallonchallenge.com/programs_residential.html or (888) 376-3314

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Support Green Jobs and Workforce Training

Coronado can increase local awareness of workshops, training, and employment resources available to its constituents. It can make this information more widely available by including it on its Web site and/or providing handouts at local libraries and city hall.

Some of the training available in the region has been funded through the American Recovery and Reinvestment Act (ARRA), and may be discontinued after December 2012. Many other local resources identified in this section are available long term.

California's Vision for Workforce Education and Training
By 2020, California's workforce is trained and fully engaged to provide the human capital necessary to achieve California's economic, energy efficiency, and demand-side management potential.
California Long-Term Energy Efficiency Strategic Plan

Training and Education Resources

Sample Green Job Fields	Sample Green Jobs
Building retrofitting Mass transit-freight rail Smart grid Wind power Solar power Advanced biofuels Alternative transportation vehicles and infrastructure	Electricians, heating, ventilation and air conditioning (HVAC) installers, carpenters, construction workers and managers, home builders, roofers, building inspectors, engineers (civil, mechanical, environmental, electrical), welders, metal fabricators, assemblers, transit and truck drivers, dispatchers, software engineers, technicians, machinists, power line installers and repairers, iron and steel workers, sheet metal workers, equipment operators, chemists, chemical technicians, agricultural workers, farm product purchasers, agricultural inspectors

The Green Career Network

The Green Career Network (www.greencareernetwork.org) brings together green job seekers and green employers. Hosted by the California Center for Sustainable Energy (CCSE), this online portal provides job listings, trainings, and research in green jobs in renewable energy, energy efficiency, green building, transportation, sustainability, and environmental studies.

On the **Green Career Network** job seekers can:

- Access job postings and a Green Employers list
- Read a step-by-step guide to finding a green job
- Identify available workforce training and education opportunities
- Access studies and reports on the green economy, industries, and market analyses
- Network through free educational programs and events

Employers can:

- Use an on-line job board to post job announcements and review resumes
- Find information about on-the-job training programs that can reimburse up to 50 percent of wages or salaries earned by eligible new workers during training
- Find information on how to get help from groups like the Small Business Administration and the Small Business Development Center that provide free business counseling, workshops, and training to help grow businesses

San Diego Miramar College's Advanced Transportation Technology & Energy Center

Advanced Transportation Technology & Energy (ATTE) Centers were created as a means for keeping California competitive as a national leader in advanced transportation and energy technologies, and to transform the workforce in the rapidly developing, technology-driven transportation and energy industries. San Diego Miramar College's ATTE Center is the regional center for San Diego County.

Courses, assistance, and outreach programs are tailored to the needs of regional employers and employees in California. The ATTE Center provides students, technicians, faculty, public, and other initiative centers with the education, training, and resources they need to effectively learn, teach, and work with advanced transportation and energy technologies, including:

- Electric, hybrid, and hydrogen fuel cell programs
- Gaseous fuel programs for light and/or heavy duty vehicles
- Intelligent transportation systems programs
- Railroad operation programs
- Light rail maintenance aeronautics and flight
- Technology programs and energy programs
- Motorcycle maintenance programs
- Automotive clean-air car emissions programs

The Miramar College ATTE Center is located at 10440 Black Mountain Road, San Diego, CA 92126. Call (619) 388-7673 or visit www.attemiramar.com for more information.

Cuyamaca Community College's San Diego Green Building Training Collaborative

The Grossmont-Cuyamaca Community College District (GCCCD) was awarded ARRA funds to launch the San Diego Green Building Training Collaborative under California's Clean Energy Workforce Training Program. The collaborative trains unemployed or underemployed workers with previous construction experience to be building analyst professionals, water auditors, solar photovoltaic installers, and solar thermal installers.

Trainings serve all of San Diego County and are offered at Cuyamaca College in Rancho San Diego and Palomar College in San Marcos. Certificates of Achievement are awarded upon program completion. GCCCD plans to continue the green building training collaborative after ARRA funds are expended. Cuyamaca College already offers green workforce training certificates and degrees in water/wastewater technology, environmental health and safety, sustainable landscaping, and renewable energy. For more information, visit www.cuyamaca.edu/preview/cleanenergy/.

The San Diego Workforce Partnership

The San Diego Workforce Partnership (www.sandiegoatwork.com/) works with public and private agencies, local businesses, and educational institutions to create workforce solutions for the San Diego region. It provides services for employers and job seekers, online access to workforce training and resource, and has ten One-Stop Career Centers located throughout San Diego County. The Workforce Partnership serves as this region's Workforce Investment Board.

The nearest One-Stop Career Center to Coronado is the South Metro Career Center, located 4389 Imperial Avenue, San Diego, CA 92105. For more information, visit http://www.metrocareercenters.org/Contact.aspx.

San Diego Regional Energy Resource Center

Jointly provided by CCSE and SDG&E

The San Diego Energy Resource Center (ERC) provides a variety of workshops, continuing education, and certification courses in energy efficiency, renewable energy, and green building, including HERS training, BPI certification, LEED certification, and solar installation training. The ERC is located at CCSE, 8690 Balboa Avenue, Suite 100, San Diego, CA 92123. Contact (858) 244-1177 or visit www.energycenter.org.

SDG&E Energy Innovation Center

The Energy Innovation Center (EIC) also hosts a variety of workshops and includes a Food Service Demonstration Kitchen that hosts free seminars on energy-efficient cooking, equipment, lighting and food safety. The EIC is located at 4760 Clairemont Mesa Blvd, San Diego, CA 92117. Contact (800) 411-7343 or visit www.sdge.com/eic.

Statewide Resources for Training and Education

Grid Alternatives

Grid Alternative (www.gridalternatives.org) offers volunteer opportunities to gain hands-on solar experience and network with others interested in renewable energy, the environment, and our communities.

Solar Training Institute

The Solar Training Institute (www.trainingforsolar.com) provides accelerated training classes for contractors, electricians, engineers, solar energy entrepreneurs, sales people and anyone who is considering a career change to the growing solar industry.

California Community Colleges Economic and Workforce Development

The California Community Colleges Economic and Workforce Development (CCCEWD) program provides industry-specific workforce education, training, and consulting services to help California businesses compete. CCCEWD (www.cccewd.net/) is the state program from which the local Advanced Transportation Technology and Energy Center, San Diego Workforce Partnership, and One-Stop Career Centers stem.

Looking Forward

This Energy Roadmap provides Coronado with a framework for continued efforts to save energy in government operations and the community that supports the broad energy conservation goals articulated in its General Plan. After the city participates in the SANDAG Energy Roadmap Program, there may be local, state, and federal funding opportunities for the city to continue energy-saving activities, either on its own or in partnership with SANDAG. These funding sources are described below, followed by non-financial resources.

Energy-Saving Funding Opportunities

Local Government Partnerships with San Diego Gas & Electric

The SANDAG Energy Roadmap Program is primarily funded through a local government partnership with SDG&E. The utility manages several local government energy efficiency partnerships in the region for jurisdictions, public agencies, and the California Center for Sustainable Energy. The duration is typically three years, and they are approved by the California Public Utilities Commission (CPUC).

Prior to the start of new program cycles, SDG&E announces a request for abstracts for future local government partnership programs. The next program cycle, which will be determined by the CPUC, will likely begin in January 2015. Using its Energy Roadmap as a guide, Coronado can decide if it would like to propose to SDG&E its own local government partnership, have SANDAG continue to serve as a mechanism to provide member agencies with added energy efficiency services, or take a different course of action.

Local Government Energy efficiency Partnerships have three focus areas:

1. Identify energy efficiency savings in municipal sites
2. Utilize core energy efficiency programs
3. Engage the community on energy efficiency

The County of San Diego, City of Chula Vista, and the City of San Diego have their own local government partnerships with SDG&E. Examples of programs funded through these partnerships include:

- Municipal facility retrofit for energy efficiency improvements,

- Strengthened building energy codes and code enforcement,
- Land use planning and design,
- Education and outreach,
- Green building, permit expedite, and fee reduction programs,
- Peer-to-peer best practices and networking,
- Staff training programs, and
- Energy plan development.

State Energy Program Grants and Energy efficiency and Conservation Block Grants

The U.S. Department of Energy (DOE) and California Energy Commission release State Energy Program (SEP) solicitations that support transportation, residential, commercial, agricultural, industrial, institutional energy efficiency, and renewable energy programs.

Both agencies also release Energy efficiency and Conservation Block Grants (EECBG) solicitations. The EECBG provides local government grants to reduce fossil-fuel emissions, reduce total energy use, and improve energy efficiency and conservation in the transportation and building sectors. Grants originate from DOE and are released from both the Energy Commission and DOE. For program opportunities, visit www.energy.ca.gov/contracts/index.html.

Non-Financial Resources for Local Governments

The Beacon Award

The Institute for Local Governments' California Climate Action Network (CCAN) has created the Beacon Award to recognize cities and counties that reduce GHG emissions and save energy. To receive a silver, gold, or platinum Beacon Award, jurisdictions must achieve measurable GHG reductions and energy savings in agency facilities, and achieve measurable GHG reductions and promote energy conservation activities in the community.

Once a local government applies, it is designated as a Beacon Award program participant, and will then begin working toward achieving the first Beacon Award level. There is no deadline to apply; applications will be accepted on an ongoing basis.

Becoming a Beacon Award participant is a simple process. Agencies at every step of the climate action journey are welcome to consider applying. To be accepted as a Beacon Award participant, cities and counties will complete a simple application form and do the following:

- Adopt a resolution by the governing body committing the agency to participate in the program;
- Designate a lead staff person as a point of contact;
- Prepare, or commit to prepare, a baseline greenhouse gas emissions inventory for agency facilities and the community as a whole (previously completed inventories using a commonly accepted methodology will be accepted);
- Prepare, or commit to prepare, a climate action plan that includes actions in each of the Best Practice Areas (previously completed plans using a commonly accepted methodology will be accepted); and
- Demonstrate compliance with AB 939, the California Integrated Waste Management Act of 1989.

Visit www.ca-ilg.org/BeaconAward for more information.

San Diego Gas & Electric

As described in previous chapters, SDG&E (www.sdge.com) manages a variety of energy-saving programs that:

- Promote energy efficiency, demand response and conservation programs, services and resources
- Provide energy education and outreach to the community

California Center for Sustainable Energy

The California Center for Sustainable Energy (CCSE) (www.energycenter.org) works with local governments on several initiatives including:

- The San Diego Regional Retrofit Advisory Committee, that includes several local jurisdictions, SANDAG, and SDG&E
- The Energy Upgrade California program

Energy Policy Initiatives Center

The Energy Policy Initiatives Center (EPIC) is a nonprofit academic and research center of the University of San Diego, School of Law that studies energy policy issues affecting the San Diego region and California. EPIC serves as a source of legal and policy expertise, and provides information on the development of sustainable solutions that meet the region's future energy needs. For more information, contact (619) 260-4589 or visit www.sandiego.edu/epic/.

San Diego Association of Governments

SANDAG Energy and Climate Change Planning Program staff is knowledgeable about federal, state, regional, and local issues and can be a resource for jurisdictions after their Energy Roadmaps are completed. For more information on SANDAG energy and climate change planning, contact Susan Freedman at (619) 699-7387, Susan.Freedman@sandag.org, or visit www.sandag.org/energy.

SANDAG iCommute Program

The SANDAG iCommute team can assist local governments with staff commuter programs, transportation demand management (TDM) ordinances, online tools, and outreach on alternative transportation options for the commute. Contact Antoinette Meier at (619) 699-7381, Antoinette.Meier@sandag.org, or visit www.icommutesd.com.

Statewide Energy Efficiency Best Practices Coordinator

Patrick Stoner serves as the Statewide Local Government Energy Efficiency Best Practices coordinator. The position is part of the California Public Utilities Commission's 2010 through 2012 statewide energy efficiency programs. Like SANDAG is available to you locally, Mr. Stoner is a statewide resource. The statewide coordinator develops and distributes best practices case studies, provides information and examples of energy efficiency policies and programs, provides materials that may help local governments implement climate action plans, and serves as a resource to help local government energy programs achieve success. Mr. Stoner is housed at the Local Government Commission (LGC) and has been part of the LGC since 1993. He can be reached at (916) 448-1198, extension 309 or e-mail pstoner@lgc.org.

Statewide Energy Efficiency Collaborative

The Statewide Energy Efficiency Collaborative (SEEC) was formed in 2010 as an alliance to help cities and counties reduce greenhouse gas emissions and save energy. SEEC (www.californiaseec.org/) serves as a statewide local government partnership and is an alliance among the Local Government Commission, ICLEI – Local Governments for Sustainability, the Institute for Local Government, and California's four investor-owned utilities, including San Diego Gas & Electric. Resources provided by these agencies are described below.

- Local Government Commission provides free webinars, holds an annual statewide conference, and provides peer-to-peer networking opportunities
- ICLEI is conducting a series of workshops and trainings for local governments on taking key steps to reduce greenhouse gas emissions
- Institute for Local Governments' California Climate Action Network (CCAN) is providing recognition for cities and counties through the Beacon Award

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www.sandag.org/energy

This Program is a collaboration between SANDAG and San Diego Gas & Electric®

SANDAG

SDGE

A Sempra Energy utility®