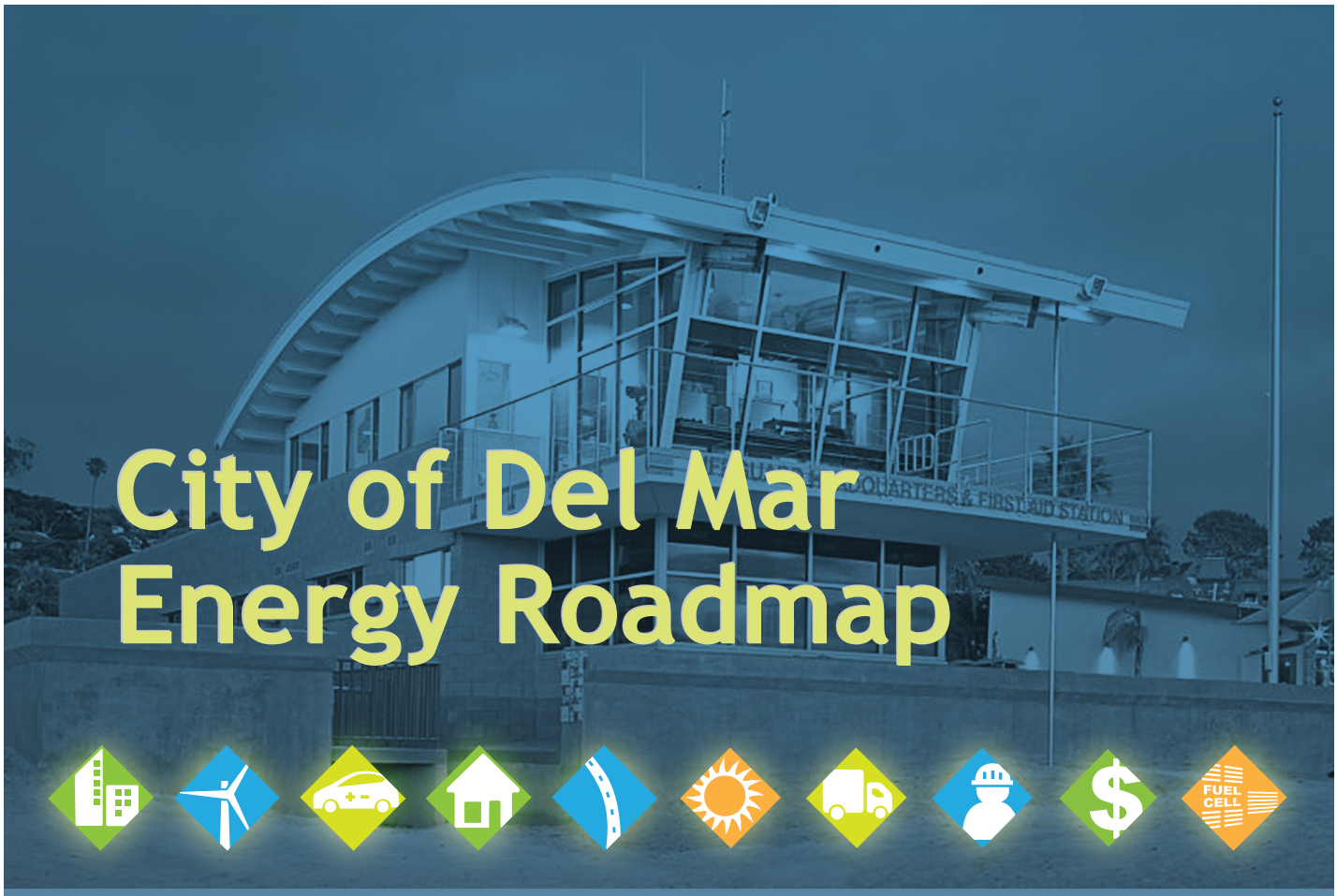

City of Del Mar Energy Roadmap

Prepared through the SANDAG Energy Roadmap Program

March 2013

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

SANDAG

SDGE
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Energy Roadmap for the City of Del Mar

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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 Del Mar 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 Del Mar 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
- 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), Del Mar retrofitted its streetlights and implemented other energy efficiency measures in its information technology department.

The Energy Roadmap identifies measures that Del Mar could include in a climate action plan. Del Mar has 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, Del Mar 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 Del Mar.

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

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 Del Mar 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.

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

6. **Leverage Planning and Development Authority**
   a. Smart growth development policies
   b. Energy-efficient building upgrades
   c. Clean and efficient transportation options
7. **Market Energy Programs to Residents, Schools, and Local Businesses**
8. **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 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

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.

Del Mar's Energy Roadmap Timeline				
Spring 2012	**Summer 2012**	**Fall 2012**	**Winter 2013**	**Through 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	
SANDAG drafts Roadmap chapters for city staff review →				

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. All 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. Del Mar has already taken steps to reduce energy usage in its operations using Energy Efficiency and Conservation Block Grant funding to retrofit streetlights and upgrade its network servers. By evaluating energy usage in municipal buildings and facilities (sites) and identifying additional energy-saving opportunities, Del Mar can further reduce its energy-related operating costs and use the savings for other government services. This chapter highlights:

Del Mar could save over $4,300 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 April, 2012, 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 seven municipal sites (listed below). 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
- Powerhouse Community Center
- Fire Station
- City Hall Annex
- Public Works Dept. Building
- 20th Street Lifeguard Tower
- 25th Street Lifeguard Tower

Benchmarking is a useful tool for judging 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 Del Mar 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
- City Hall Annex
- All 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

Del Mar has the potential to realize over $4,300 in annual savings on its utility bills by implementing the energy conservation measures in the *Potential Savings by Energy Conservation Measure* table on the following page.

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

Regarding energy-saving retrofit projects, Del Mar could undertake upgrades at its audited municipal sites through SDG&E's OBF 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).

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; skylights	4,270	0	$687	1.41
City Hall Annex	Programmable Theromostats	1,920	0	$309	0.63
	28W T8 Lamps	5,840	4.8	$940	1.93
All Sites	Outdoor Lighting	16,145	3.7	$2,422	5.33
	TOTALS	**28,175**	**8.5**	**$4,3558**	**9.3**

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.

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 *Energy Conservation Measure Economics* table below.

Energy Conservation Measure Economics

Location	Measure	Gross Project Cost	Total SDG&E Incentives	Net Project Cost	Simple Payback (years)
City Hall	Indoor lighting; skylights	$0	$0	$0	0
City Hall Annex	Programmable Theromostats	$200	$0	$200	0.6
	28W T8 Lamps	$3,456	$720	$2,736	2.9
All Sites	Outdoor Lighting	$13,345	$2,117	$11,228	4.6
	TOTALS	**$17,001**	**$2,837**	**$14,164**	**3.2**

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

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 OBF 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/.

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

Through its OBF 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 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.

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[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.

[2] The 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.

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 October 2012, terms included an interest rate of one percent (fixed), a maximum loan of $3 million per application, and a maximum loan term of 15 years. Again, EFM Solutions can assist Del Mar 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 Del Mar through the Energy Roadmap Program. Contact your Energy Roadmap coordinator for further assistance.

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 OBF 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 Del Mar with these implementation steps over the duration of the Roadmap Program (until December 2014).

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2

Demonstrate Emerging Energy Technologies

In addition to energy assessments and improving efficiency in city government facilities, Del Mar 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 Del Mar 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 Nathan Taylor, SDG&E's emerging technologies program manager directly at NTaylor@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 Del Mar maintains a fleet of approximately eight light duty pick-up trucks along with six other pieces of mobile equipment including a backhoe, sewer rodder, and air compressor. 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 Del Mar has adopted practices to ensure the fleet is operated as efficiently as possible

Del Mar 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, larger trucks have been replaced with smaller, more efficient models that still meet the required duty cycle. The City has also included transportation in its inventory of greenhouse gas (GHG) emissions and found that the fleet, along with employee commutes, contributes more than half of the emissions from City operations. This Roadmap chapter offers tools and information that can support Del Mar's efforts to maintain efficient fleet operations and meet its environmental goals 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

Del Mar's Fleet

Del Mar's fleet supports the provision of essential public services such as street services, park maintenance, and wastewater operations.

When replacing vehicles, city staff evaluates vehicle duty requirements and selects the most efficient vehicle that can do the job. The City currently operates the smallest trucks available for regular duty. Advanced technology or alternative fuel vehicles could help the city further reduce its fuel consumption and emissions.

Online Fleet Planning Tools

The U.S. Department of Energy's (DOE) Petroleum Reduction Planning Tool (www.afdc.energy.gov/afdc/prep/), at the Alternative Fuels and Advanced Vehicles Data Center, could supplement Del Mar'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., vehicle miles traveled reductions), and alternative fuels (e.g., vehicles that run on electricity, compressed natural gas). A petroleum reduction goal (e.g., 10 percent savings) can be set and the free online tool can identify potential savings based on the fleet information entered and petroleum reduction measures selected.

The FuelEconomy.gov Web site is a partnership between the DOE and the U.S. Environmental Protection Agency. It serves as the official U.S. government source for fuel economy information, and allows users to compare the efficiency of all vehicle models in production since 1984. It contains information on the energy and environmental performance of vehicles as well as tools to improve fuel economy. The Vehicle Cost Calculator (www.afdc.energy.gov/calc/) uses basic information on driving habits to calculate total cost of ownership and emissions for makes and models of most vehicles, including alternative fuel and advanced technology vehicles.

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.

Del Mar also can reduce fuel use by encouraging employees to use fleet 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 vehicle replacements specific to Del Mar's fleet are described below.

Vehicle Replacement: Alternative Fuel Options for Del Mar

SANDAG partnered with the California Center for Sustainable Energy (CCSE) to provide an assessment tailored to Del Mar's fleet and vehicle replacement protocols. Del Mar is currently operating a number of late model, compact pick-ups that represent the most fuel-efficient conventional vehicles available. The City also operates a few larger trucks.

Plug-in Hybrid and alternative fuel vehicles could offer savings of $650 to $3100 a year based on based on vehicle usage seen in Del Mar

The following *Potential Vehicle Replacements and Savings* table identifies alternative fuel replacement options that could be suitable for the pick-up trucks in the city's fleet. The table identifies potential fuel and cost savings on an annual and lifetime basis using mileage information provided by the City. Plug-in hybrid trucks are currently only available to fleets on a limited basis, but are expected to enter volume production by the end of 2013. Compressed Natural Gas (CNG) and propane vehicles are available now.

Potential Vehicle Replacements and Savings

Vehicle Model	Fuel Tech[1]	Annual Mileage	Gallons Fuel Reduced/ Displaced[2]	Estimated Annual Savings	Years to Payback w/ incentives	Yearly GHG Savings (MTCO2e)
F-250	CNG	11,000	1100	$1,890	3.1	1.6
Dodge Ram	CNG	2,850	438	$756	7.8	0.7
F-250	LPG	11,000	1100	$1,645	2.9	1.1
Dodge Ram	LPG	2,850	438	$661	7.3	0.5
Chevy Colorado	PHEV	18,256	1217	$3,120	6.4	5.8
Toyota Tacoma	PHEV	12,700	747	$2,055	9.7	3.6

Note:
1. PHEV= Plug-in hybrid electric vehicle, CNG = compressed natural gas, LPG= Liquefied Petroleum Gas (Propane)
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 uses current fuel prices, mileage, and fuel consumption of Del Mar's vehicles, details of which are provided in **Appendix D**. This analysis shows that the CNG or propane replacements for larger trucks could save $650-$1800 per year. With rebates, higher mileage vehicles may see payback periods as low as three years. If alternative fuel replacements are considered, the vehicles with the highest mileage and high fuel consumption are the best candidates. Replacements of smaller pick-up trucks with forthcoming plug-in hybrid versions could save $2000-$3000 dollars a year; however, the payback periods may be six to nine years or more, due to the high incremental cost of this new vehicle technology.

CNG or propane vehicles can cost between $10,000 and $16,000 more than their gasoline- or diesel-fueled counterparts before rebates 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. Currently the only public fueling stations for CNG or propane are located approximately eight miles away from Del Mar in the Miramar area of San Diego.

Plug-in hybrids show the greatest GHG reduction benefits, with reductions of 5.8 -3.6 $MTCO_2e$ per year. Propane and CNG vehicles showed savings of 0.5-1.6 $MTCO_2e$. These savings support the City's climate goals.

Del Mar 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 Del Mar

Additional fueling infrastructure throughout the region is needed for widespread adoption of alternative fuel vehicles. The City currently fuels at local commercial fueling stations, and moving towards alternative fuels would greatly increase the distances that City employees travel to refuel. Other available refueling sites near Del Mar 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 Sites within Ten Miles of Del Mar City Hall	Availability of Production-Distribution Infrastructure
Electricity	The City has installed charging equipment at two city sites. Dozens of additional charging stations are located near the city	Existing electricity grid and distributed energy sources.
Biodiesel	No sites near the city. B20 is available in central San Diego.	Storage and blending terminals, port off-loading sites needed. Local producer is New Leaf Biofuel.
CNG	One public access station near Miramar.	Existing natural gas pipeline network.
Propane (LPG)	One public access station near Miramar.	Existing distribution by multiple vendors.
E85	No fueling sites in or 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.

The City recently installed EV charging stations at the beach safety center and near City Hall. The infrastructure for other fuels is currently very limited near the City of Del Mar.

State Grants and Rebates

The California Energy Commission (CEC) and Air Resources Board (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 CEC.

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 ARB's 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 $18 million in funding for FY 2012-2013. 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 November 2012, the HVIP estimated fund balance was over $16 million. A summary of the incentives available is provided in the *HVIP Voucher Amounts for Trucks and Buses* tables below. In addition to the rebates described in the tables, the first three vouchers redeemed by a fleet per funding year are eligible for the following additional voucher amount:

- $2,000 per vehicle if below 8,500 lbs.
- $5,000 per vehicle if 8,501 to 10,000 lbs.
- $10,000 per vehicle if over 10,000 lbs.

HVIP Voucher Amounts for *Zero-Emissions* Trucks & Busses

Gross Vehicle Weight (in pounds)	
5,001 – 8,500 lbs	$12,000
8,501 – 10,000 lbs	$18,000
10,001 – 14,000 lbs	$30,000
14,001 – 19,500 lbs	$35,000
19,501 – 26,000 lbs	$40,000
> 26,000 lbs	$45,000

HVIP Voucher Amounts for *Hybrid* Trucks & Busses

Gross Vehicle Weight (in pounds)	
6,001 – 8,500 lbs (plug-in hybrids only)	$8,000
8,500 – 10,000 lbs (plug-in hybrids only)	$10,000
10,001 – 19,500 lbs	$15,000
19,501 – 33,000 lbs	$20,000
33,001 – 38,000 lbs	$25,000
> 38,000 lbs	$30,000

Regional Electric Vehicle Planning

San Diego Regional Electric Vehicle Infrastructure Working Group

Through a grant from the California Energy Commission, SANDAG and CCSE established the San Diego Regional Electric Vehicle Infrastructure Working Group (REVI) to develop a readiness plan for the San Diego region. The ability for public agencies to site plug-in electric vehicle chargers on public property is one barrier that REVI is developing a template and best practices to address. Del Mar participates on REVI.

Through the EV Project, Del Mar has plug-in EV chargers available at City Hall and the Beach Safety Center

The Electric Vehicle Project

The San Diego region was selected to take part in the largest 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 DOE are national project partners. SANDAG and SDG&E are local project partners providing in-kind assistance.

The City of Del Mar has installed stations at City Hall and at the Beach Safety Center under this project. 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.

Over the next five years, most major automobile manufacturers are expected to introduce plug-in electric vehicles. All vehicles will be compatible with the standardized EV chargers installed through the EV Project.

4

Develop Employee Knowledge of Energy Efficiency

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

Overview

This chapter identifies free educational seminars offered by SDG&E and the California Center for Sustainable Energy (CCSE) available to city employees at the SDG&E Energy Innovation Center (EIC), located in Clairemont Mesa. Additionally, 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)
- Workshops or trainings that Del Mar 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 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 EIC, contact SDG&E: seminars@sdge.com.

The following table identifies quarterly workshops offered at the 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

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. BOC 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. 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
North American Technician Excellence Certification Exam (NATE)	SDG&E and the Institute of Heating and Air Conditioning Industries, Inc. co-sponsor seminars designed to help experienced HVAC professionals prepare for successfully completing the North American Technician Excellence 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
Online Workshop Calendar	To view upcoming workshops, visit www.sdge.com/seminars	

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, Del Mar is offered free assistance and tools to design and implement a customized commuter benefit program, also known as a Transportation Demand Management program.

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 everything from helping connect employees who want to carpool or vanpool with one another, to offering flexible work schedules and telework options, to providing free or reduced-cost transit passes.

Some of the programs are offered free by SANDAG. Others are inexpensive for the city to implement or come with subsidies sponsored by SANDAG. For example, SANDAG provides a $400 per month subsidy for qualifying vanpools. The Commuter Benefit Starter Kit for Employers, available through iCommute, provides your agency with the tools to get started, including an overview of your options, sample policies, promotional materials, and tax benefit information.

The iCommute online 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. Its convenient

Commuter Program Benefits

By providing alternative transportation choices for its employees Del Mar 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

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.

Existing Commuter Trends

During the months of March and April 2012, SANDAG staff conducted a Baseline Commuter Survey of the employees of the City of Del Mar. A total of 15 surveys were completed. The data revealed that the most prevalent mode of commuting was driving alone at 80 percent. Even though a high percentage of employees drive alone, the survey also revealed that 92 percent of employees would consider taking other modes of transportation to get to work at least once a week. Below provides more detail to the commuting habits of the employees of the City of Del Mar.

Of the 15 respondents, 15 answered the question: What mode of transportation do you usually take to get to work? Note that respondents were able to select more than one.

- 80% drive alone
- 7% ride a bicycle
- 7% ride the Coaster
- 13% carpool
- 7% ride a bus

The top three reasons for driving alone were: anything else takes too long (21%), don't have anyone to ride with (21%) and no reasonable transit option (14%). The employees who already do not drive alone cited cost savings and save wear and tear on personal vehicle as the main factors for using an alternative mode of transportation.

Of the 15 respondents, 13 answered the question: If you normally drive alone, would you consider using an alternative mode to get to work on an occasional basis?

- 92% yes
- 7% no

Of the 15 respondents, 12 answered the question: Please select which mode you are interested in using. (Please select all that apply.)

- 67% carpool driver
- 67% carpool passenger
- 58% transit
- 58% bicycle
- 42% telework
- 33% vanpool passenger
- 17% walking
- 8% vanpool driver

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 RideMatcher 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 for the specific needs for the employees of the City of Del Mar are instrumental to reducing the trips generated by solo drivers.

Specific Commuter Programs

The programs, tools, and ideas below have been highlighted to illustrate how the City of Del Mar can reduce energy consumption and costs.

Carpool Incentive Pilot Program

The City of Del Mar was one of nine employers selected to be part of iCommute's Carpool Incentive Pilot Program. This pilot program, which ran from April 2012 to June 2012, incentivizes the use of carpooling by rewarding drivers and passengers with a $50 gas card each month for a total of three months ($150 total). The purpose of this pilot program is to gain at least 600 new carpoolers in the iCommute system, encourage carpoolers through the use of incentives to use the TripTracker tool and log their carpool trips for the duration of the three month trial, and test the type of incentive and measure retentions rates one year later. The results from this pilot program, including results from the participating employees from the City of Del Mar, will be available in August 2012. The City could provide information to other employers in Del Mar on how to participate in the Carpool Incentive Program if the program is continued after the Pilot.

RideMatcher – open up network to other employers in the area

Due to the limited number of employees who work for the City of Del Mar, it would be beneficial to employees to open up the RideMatcher network to other employers in the area. This would allow for a higher probability for employees to form carpools. This would also help to alleviate some pressure on parking in the area.

Restaurant shuttle

The City of Del Mar has a vibrant restaurant district and parking is at a premium. A restaurant shuttle funded by the Del Mar Business Association, the city, or a joint venture could help alleviate congestion due to vehicles circling to find parking. Employees could park at an offsite location and ride the shuttle to the restaurant. This shuttle could also be used for the general public creating less congestion and therefore less wasted energy. A further study would be needed to determine if a restaurant shuttle is feasible.

Bicycling

City Hall is located approximately three miles from the Coaster Station in Solana Beach. Employees could use bicycles to ride from the Coaster to City Hall. Bicycle lockers at the transit station could be utilized to store their bikes overnight if they do not want to take them on the train. There are also showers located at City Hall, the lifeguard headquarters and the public works yard. It was noted at the June 18, 2012, meeting with the City of Del Mar that the current city manager allows the use of Beach Cruiser bicycles to travel from one city facility to another. Through RideMatcher, employees can also find a "Bike Buddy" to accompany them during their commute.

Incentivize public transit/offer discounts

For those who are not interested in biking from the Solana Beach Coaster Station, bus route 101 provided by the North County Transit District has a stop located at the Coaster Station and at 9th Street & Camino Del Mar. The latter bus stop is approximately 200 yards from City Hall. The City of Del Mar could subsidize or discount the cost of a transit pass to take advantage of public transit.

Use the pretax incentive

Employers can take advantage of employee and employer payroll tax savings offered through the IRS's Commuter Fringe Benefit Program (IRS Section 132(f)). The IRS allows employers to offer employees the opportunity to set aside a portion of their salary, pretax, to pay for transit and vanpooling, up to $245 per month per employee (in 2013). Employers benefit by not paying payroll taxes on that money, while in effect adding value to their employee's compensation package.

Telework

By allowing an employee to work from home, the City of Del Mar would lessen the burden on transportation facilities, reduce energy consumption, and decrease congestion. The City of Del Mar could participate in the iCommute sponsored Telework Pilot Program beginning in Spring 2013. At the end of the pilot program, the city would determine if teleworking is a viable option for city employees. Teleworking has been shown to help recruit and retain high performing employees and help the employees become more productive and happier. The employee also benefits by not having to commute to work which puts money back into the employee's pocket. Jobs that are most suited for teleworking are ones that require reading, writing, researching, working with data and talking on the phone, or "information-based jobs."

Guaranteed Ride Home

In order to make alternative modes of transport a more feasible option, iCommute offers the Guaranteed Ride Home Program. Enrollment in this program allows commuters who carpool, vanpool, take a Premium Express Bus, the COASTER, walk, or bike to work three or more times per week to have the use of a rental car or taxi in the case of a family emergency, unscheduled overtime, or the commuter's rideshare partner becomes unavailable. A copay of $3.00 is required when the commuter requests the use of this program and may be used up to three times per year.

Getting Started

At the request of city staff, SANDAG staff made an overview presentation on the iCommute program to Gretchen Crowson at the city on June 18, 2012. 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 is an easy and cost-effective way to reduce energy consumption at the city: many commuter policies and benefits can be offered at no or little cost to the City of Del Mar.

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 an SCS as part of its 2050 Regional Transportation Plan (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%

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 one-half mile of a major transit stop or a high quality transit corridor included in the 2050 RTP.

SANDAG, working closely with all local jurisdictions, is undertaking a combined update to its RCP and RTP/SCS, called San Diego Forward: The Regional Plan. The Regional Plan is scheduled for adoption in 2015, and will include a review of smart growth designated areas in relation to the SCS. **Appendix F** contains larger definitions for what projects 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.

Sustainable Del Mar

"Our vision is to implement enduring development and living practices that meet the needs of the present while safeguarding and enhancing our future."

Del Mar's "*Vision 2020 Long Range Plan*" states, "Del Mar will be a walkable community with a network of pedestrian and bicycle friendly sidewalks, trails and paths. These will connect the Lagoons, the Central Village of Del Mar, the Beaches and Public Parks."[1] These principles are exemplified in two smart growth areas planned in Del Mar: the Del Mar Downtown Village, and the potential new COASTER station at the Del Mar Fairgrounds. These sites have been included in a region wide Smart Growth Concept Map, last updated by SANDAG in January 2012.

1. **The Del Mar Downtown Village,** located at Camino Del Mar and 10th, is an eight-block-long commercially zoned area fronting Camino del Mar and 15th Street. The existing Del Mar Community Plan encourages pedestrian and mixed use development in the Downtown Village.
2. **New COASTER Station:** The fairgrounds is proposing in its Master Plan to construct a COASTER platform at the west edge of the fairgrounds that can be used by people coming and going from the fairgrounds during the fair and race events on the property. This platform would be used seasonally and is being proposed to help mitigate the increasing traffic congestion caused by the increase in intensity of uses at the fairgrounds. The Master Plan is expected to propose increased frequency of uses and additional uses, which will include a substantial size conference hotel. All new aspects of the Master Plan are expected to increase employment opportunities to varied degrees. It may be another two years before the City knows whether this platform is feasible.

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

[1] TLS Management Consulting. *Results of Long Range Planning*. March, 2003.

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. Del Mar 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. 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.

Appendix G provides a series of energy-related policy measures that reflect the goals of State agencies like the California Energy Commission, 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

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 rebates offered in San Diego County; as well as workforce training that qualifies local contractors to perform the work.

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.)

The San Diego Regional Energy Partnership (SDREP) has tasked CCSE with continuing several local EUC programs through 2014, that were previously funded through ARRA grants from the City of Chula Vista, City of San Diego and County of San Diego. Those jurisdictions, along with SANDAG, have dedicated grant funds to the SDREP to provide additional EUC resources to all local jurisdictions in San Diego County. SANDAG's contribution is to:

> "Further develop and support regional Energy Upgrade California (EUC) implementation and the broader existing home retrofit market to facilitate "deep energy retrofits" (both in terms of high energy savings and untapped markets in existing residential buildings) for member jurisdictions."

Del Mar residents can take advantage of this program to reduce their energy consumption while improving the comfort of their homes, and municipal staff is

encouraged to participate in the planning and implementation of these programs through a regional Retrofit Advisory Council (RAC). **Appendix G** includes details about the RAC and the region-wide projects underway through the SDREP.

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 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 greenhouse gas emissions. SANDAG recently completed a study, *Integrating Transportation Demand Management into the Planning and Development Process - A Reference for Cities.* The report is available as part of the Smart Growth Toolbox at the following Web page:
http://www.sandag.org/uploads/publicationid/publicationid_1663_14425.pdf

Parking Management

Parking management, reform, and pricing strategies are options to reduce the amount of driving and are primarily implemented at the local government level. Parking strategies can be effective in, and complement, smart growth areas with compact land use patterns and alternative travel options. Parking policies complement many TDM efforts, and normally have included incentives or disincentives for fewer spaces per unit of development (parking maximums rather than minimums), encourage shared parking among land uses (retail and office for example) and/or a fee per parking space.

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. The EV Project, a federally-funded Department of Energy program, brought an influx of residential and publicly accessible EVSE installations to the San Diego region from 2010 to 2012. Del Mar is an EV Project participant and is hosting three EV charging stations: two at City Hall and one at the Beach Safety Center.

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 and develop a readiness plan for the San Diego region. The San Diego Regional Electric Vehicle Infrastructure Working Group (REVI) held its kickoff meeting in March 2012, and is holding monthly meetings over a two-year period. Del Mar staff participate at REVI meetings. More information on REVI and other PEV planning efforts in the region can be found on CCSE's Plug-in and Get Ready Web site: www.energycenter.org/pluginready.

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

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Market Energy Programs to Local Residents, Schools, and Businesses

This chapter provides Del Mar 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 Del Mar 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 Sustainable Del Mar 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 city newsletters (print or e-mail) or similar media.
3. Provide educational materials on saving energy at city venues such as the permit desk, parks and recreation areas and city hall. SDG&E, CCSE, and SANDAG iCommute can provide materials about programs and services for residents and businesses.
4. Invite SDG&E, SANDAG iCommute and/or CCSE to host an information booth on energy-saving programs or commuter programs at community events.
5. 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 Web sites

Residential Energy-Saving Programs	www.sdge.com/residential/rebates.shtml
Commercial Energy-Saving Programs	www.sdge.com/business/rebatesincentives
Educational Resources for All	SDG&E and CCSE conduct hundreds of expert-facilitated seminars on a broad spectrum of energy topics at two locations in central San Diego, the Energy Innovation Center (EIC). The online calendar lists workshops from both organizations and venues. http://www.sdge.com/energy-innovation-center/seminars
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

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 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. Additionally the CCSE hosts workshops related to renewable energy at the EIC.

The EIC is located at 4760 Clairemont Mesa Blvd, San Diego, CA 92117. Call (800) 411-7343, or visit www.sdge.com/eic. For information related to solar programs and workshops, contact the CCSE at (858) 244-1177, or visit www.energycenter.org.

SANDAG iCommute Programs for the Community

In addition to supporting city-employee commuter programs like those identified in Chapter 5, Del Mar 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.

- Continue to 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) - first year for Del Mar 2012!
- Recognize and/or honor local commuters and employers who have demonstrated a commitment to sustainable commute choices.

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. Del Mar could:

- Encourage the School District and/or individual schools to enroll in SchoolPool, a secure online ridematching 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.

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.

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 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/sustainable-communities-overview/
SDG&E Solar Initiative	http://www.sdge.com/clean-energy/going-solar/solar-rebate-programs
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/save-money/no-cost-audits/business-energy-assessment-program
Energy efficiency Seminars	www.sdge.com/training
PACE Financing: CaliforniaFIRST	www.californiafirst.org
New Construction	
Savings by Design	www.sdge.com/clean-energy/savings-design/savings-design
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)	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. www.pacenow.org

Energy efficiency and Demand Response	
Advanced Home Program	www.californiaadvancedhomes.com/
Air Conditioning Tune-Ups	www.actimeprogram.com/ProjectCenter/
Summer Saver Program	www.sdge.com/summersaver/
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	http://www.sdge.com/energy-efficiency-survey-0 (800) 411-SDGE (7343)
Lighting Turn in Program	www.sdge.com/lighting
Tax Credits	www.energytaxincentives.org/
New Construction Programs	
Advanced Home Program	http://www.californiaadvancedhomes.com/
New Solar Homes Partnership	http://www.sdge.com/clean-energy/going-solar/applying-solar-rebates
Low Income Assistance	
Residential Rate Assistance Program	www.sdge.com/residential/assistance/assistServCare.shtml
The Energy Team Program	http://www.sdge.com/energy-savings-assistance-program
Programs for Customers with Special Needs	http://www.sdge.com/available-assistance-programs
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

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

Del Mar 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.

Training and Education Resources

Sample Green Job Fields	Sample Green Jobs
• Building retrofitting • 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

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 Del Mar is:

- North County Coastal Career Center, located at 1949 Avenida del Oro, Ste. 106, Oceanside CA, 92056. For more information, visit http://www.rescare.com/nccc/contact.php

SDG&E Energy Innovation Center

The Energy Innovation Center (EIC) 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.

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Looking Forward

This Energy Roadmap provides Del Mar 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 San Diego Gas & Electric (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, to be determined by the CPUC, will likely begin in January 2015. Using its Energy Roadmap as a guide, Del Mar 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 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
- 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 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.

Clean Vehicle Rebate Project

The Clean Vehicle Rebate Project is funded by the California Air Resources Board and administered statewide by the California Center for Sustainable Energy (CCSE). A total of $45.2 million has been appropriated for FY 2009-2013 to promote the production and use of zero-emission vehicles, including electric, plug-in hybrid electric, and fuel cell vehicles. Rebates of up to $2,500 per light-duty vehicle are available for individuals and business owners who purchase or lease new eligible zero-emission or plug-in hybrid electric vehicles.

California Energy Commission Assembly Bill 118: Alternative and Renewable Fuel & Vehicle Technology Program

The Assembly Bill 118 (AB118): Alternative and Renewable Fuel and Vehicle Technology Program authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. CEC has an annual program budget of approximately $100 million to support projects that:

- Develop and improve alternative and renewable low-carbon fuels
- Optimize alternative and renewable fuels for existing and developing engine technologies
- Produce alternative and renewable low-carbon fuels in California
- Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability
- Expand fuel infrastructure, fueling stations, and equipment
- Improve light-, medium-, and heavy-duty vehicle technologies
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets
- Expand infrastructure connected with existing fleets, public transit, and transportation corridors
- Establish workforce training programs, conduct public education and promotion, and create technology centers

Additional information on AB 118 and the associate investment plan can be found on the CEC Web site (http://www.energy.ca.gov/altfuels/index.html).

Department of Energy Clean Cities Program

Clean Cities advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum consumption in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and emerging transportation technologies. A variety of Clean Cities tools and resources are available on the U.S. Department of Energy (DOE) Web site (http://www1.eere.energy.gov/cleancities/). The local affiliate of the DOE Clean Cities program is the San Diego Regional Clean Cities Coalition and is described on the following page.

TransNet: Smart Growth Incentive Program and Active Transportation Grants

The *TransNet* Smart Growth Incentive Program (SGIP) funds transportation-related infrastructure improvements and planning efforts that support smart growth development. The SGIP awards two percent of the annual *TransNet* revenues for the next 40 years to local governments through a competitive grant program to support projects that will help better coordinate transportation and land use in the San Diego region. Additional information on the current funding cycle is available at www.sandag.org/smartgrowth.

The goal of the Active Transportation Grant Program is to encourage local jurisdictions to plan and build facilities that promote multiple travel choices for residents and connectivity to transit, schools, retail centers, parks, work, and other community gathering places. The grant program also encourages local jurisdictions to provide

bicycle parking, education, encouragement, and awareness programs that support pedestrian and bicycle infrastructure. More information on current funding opportunities is available at www.sandag.org/active.

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 Greenhouse Gas (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 GHG 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)
- Demonstrate compliance with Assembly Bill 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 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
- San Diego Regional Electric Vehicle Infrastructure Working Group, in partnership with SANDAG, that includes representatives from local jurisdictions, regional agencies, SDG&E, workforce training partners, and electric vehicle and equipment manufacturers
- San Diego Regional Clean Cities Coalition
- California Clean Vehicle Rebate Project

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 ordinances, online tools, and outreach on alternative transportation options for the commute. For more information, contact Kimberly Weinstein at (619) 699-0725, Kimberly.Weinstein@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 by 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 SDG&E. 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' CCAN is providing recognition for cities and counties through the Beacon Award

San Diego Regional Clean Cities Coalition

The San Diego Regional Clean Cities Coalition is the local affiliate of the Department of Energy's Clean Cities program. Coordinated by the CCSE, the Clean Cities Coalition brings together stakeholders in the public and private sectors to increase the use of alternative fuel and alternative fuel vehicles. The Clean Cities Coalition holds educational events on a regular basis and board of directors meets monthly. More information and a calendar of events can be found at www.sdcleanfuels.org.

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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®