

City of Solana Beach Energy Roadmap



Prepared through the SANDAG
Energy Roadmap Program

June 2015

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



Energy Roadmap for the City of Solana Beach

Table of Contents

	Acknowledgements and Program Contacts	ii
	Introduction	1
SAVING ENERGY IN CITY GOVERNMENT OPERATIONS		
	1. Save Energy in City Buildings and Facilities	6
	2. Green the City Vehicle Fleet	14
	3. Develop Employee Knowledge of Energy Efficiency	26
	4. Promote Commuter Benefits to City Employees	28
SAVING ENERGY IN THE COMMUNITY		
	5. Leverage Planning and Development Authority	34
	6. Market Energy Programs to Local Residents, Schools, and Businesses	46
	7. Support Green Jobs and Workforce Training	54
	8. Looking Forward	58

APPENDICES (provided under separate cover)

- A. City of Solana Beach Energy Management Plan: Pilot Sustainable Regions Program Report (2009)
- B. Chevron Energy Savings Company: City of Solana Beach Program Development Report (2012)
- C. Streetlight Retrofit Savings (List of Rate Changed Streetlights)
- D. ENERGY STAR Certification
- E. Municipal Rate Analyses (Fire Station and Marine Safety Center)
- F. Solar Feasibility Analysis of Municipal Facilities
- G. Alternative Fuel Options and Local Infrastructure Availability
- H. Transportation Demand Management Policies and Resources
- I. Sample Smart Growth Policies and Resources
- J. Sample Energy-Saving Policies and Resources
- K. Sample Clean and Efficient Transportation Policies and Resources

Acknowledgements and Program Contacts

Acknowledgements

The San Diego Association of Governments (SANDAG) would like to acknowledge and thank the following individuals for their contributions to this document.

City of Solana Beach

Dan King
David Ott
Mo Sammak
Wendé Protzman

San Diego Gas & Electric Company®

Kimberly Burke
McCarten Delany

The Energy Roadmap Program is a partnership between the San Diego Association of Governments and San Diego Gas & Electric Company® (SDG&E). It is funded primarily by California utility customers under the auspices of the California Public Utilities Commission. Transportation components are funded by SANDAG.

Program Contacts

Energy Roadmap Coordinators

Allison Wood, SANDAG, allison.wood@sandag.org, (619) 699-1973
Sarah Strand, SANDAG, sarah.strand@sandag.org, (619) 595-5609

Building Energy Audits

David Gordon, EFM Solutions, david.gordon@efm-solutions.com, (858) 717-9523
Jason Knight, EFM Solutions, jason.knight@efm-solutions.com, (619) 549-6695
John Woolsey, EFM Solutions, john.woolsey@efm-solutions.com, (951) 200-3178

Fleet Analysis

Kevin Wood, CSE, kevin.wood@energycenter.org, (858) 244-7295

iCommute Program

Maria Filippelli, SANDAG, maria.filipelli@sandag.org, (619) 515-1177

SDG&E® Energy Efficiency Programs

Kimberly Burke, KBurke@semprautilities.com, 858-503-5127

SDG&E Account Representative

McCarten Delaney, MDelaney@semprautilities.com, (858) 654-1842

Introduction

This energy management plan, or “Energy Roadmap,” prepared by SANDAG in consultation with city staff, provides a framework for Solana Beach 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 Solana Beach 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 already taken to become more sustainable. In 2008, Solana Beach participated as a pilot city in the Sustainable Region Program. Through the program, Solana Beach received free technical and policy guidance which identified energy saving opportunities in City facilities (**See Appendix A**).

Following the Sustainable Region Program, the City of Solana Beach partnered with Chevron Energy Solutions Company (Chevron ESCO) in 2011 to analyze energy upgrades at all City facilities, including streetlights. Chevron ESCO completed a Community Enhancement Program to help Solana Beach achieve goals of reducing energy costs,

improving budget predictability, improving City infrastructure, and demonstrating environmental leadership (**See Appendix B**).

Based on recommendations from the Sustainable Region Program and Chevron ESCO report, Solana Beach has successfully implemented a number of impactful energy conservation measures including significant retrofits to City Hall and city-wide LED streetlight retrofits through an Energy Efficiency and Conservation Block Grant (EECBG).

The Solana Beach “Green Flash” website can be a portal for local residents and businesses to access energy-saving programs

Building upon Solana Beach’s past efforts in energy management planning, this Energy Roadmap both evaluates progress made on previous recommendations and identifies new energy and cost saving opportunities for the City to consider. Solana Beach is also in the process of developing a Climate Action Plan (CAP), which will include a Greenhouse Gas (GHG) emissions inventory of both municipal and community-wide emissions and measures to reduce emissions into the future. The Energy Roadmap can help to guide and support implementations efforts for the forthcoming CAP.

In addition to energy efficiency measures, the City has displayed regional leadership in broad sustainability efforts. Recently, Solana Beach became the first City in the region to join the California Home Finance Authority Joint Powers Association (JPA) (previously only Counties were members) in order to participate in a Ygrene Works program that provides 100% financing to commercial and residential property owners for energy efficiency, renewable energy, and water conservation improvements through Property Assessed Clean Energy (PACE) financing. Further, the City has shown commitment to addressing the water-energy nexus in wide-ranging efforts to conserve water through efficiency upgrades, planting of native drought-tolerant landscaping on city-owned properties, and conducting feasibility studies to expand water recycling infrastructure.

By building on existing energy-saving efforts and taking advantage of some or all of the opportunities identified herein, Solana Beach can continue to 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 Solana Beach.

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 four distinct opportunities for Solana Beach to lead by example with its buildings and facilities, vehicles, and energy usage practices:

1. Save Energy in City Buildings and Facilities
2. Green the City Vehicle Fleet
3. Develop Employee Knowledge of Energy efficiency
4. 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:

5. Leverage Planning and Development Authority
 - a. Smart growth development policies
 - b. Energy-efficient building upgrades
 - c. Clean and efficient transportation options

6. Market Energy Programs to Residents, Schools, and Local Businesses
7. 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
- Implementing measures from the City's Climate Action Plan to reduce GHG emissions from government operations and community activities
- Integrating sustainability, energy efficiency, or GHG reduction measures into planning processes
- 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, email, and website
- 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.

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 website at 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 Solana Beach, Poway, and Carlsbad. 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.

This page left intentionally blank

Save Energy in City Buildings and Facilities

Energy is a major operating cost for local governments. As one of the first cities in the region to participate in the pilot Sustainable Region Program in 2008, Solana Beach has continued to demonstrate environmental leadership by implementing a number of energy conservation measures from previous

assessments of city operations. By evaluating energy usage in municipal buildings and facilities (“sites”) and acting on multiple energy-saving recommendations, Solana Beach has taken steps to further improve the energy efficiency of municipal buildings and save money through operational improvements.

Solana Beach has demonstrated environmental leadership by implementing energy efficiency upgrades at municipal sites.

This chapter highlights:

- Completed Energy Efficiency Efforts
- Energy and Cost Saving Opportunities
- ENERGY STAR Certification
- Solar Photo-Voltaic (PV) Feasibility Study

Completed Energy Efficiency Efforts

Having already taken steps to become more sustainable as a pilot city of the 2008 Sustainable Region Program, the City of Solana Beach continued to pursue efficiency by partnering with Chevron Energy Solutions Company (Chevron ESCO) in 2011, and has since implemented a number of recommendations set forth by both efforts. Actions taken to improve energy efficiency and reduce energy-related costs include:

- PVC “Cool Roof” system
- HVAC replacement
- New lower capacity heat pumps
- More efficient bulb technologies (CFL, LED, others) for indoor and outdoor lighting, including streetlights

- Rate code changes for municipal sites
- Water efficiency upgrades and drought-tolerant landscaping
- Water recycling infrastructure and feasibility study

City-Wide Street Lighting Retrofits

In 2012, the City conducted an energy audit of municipal facilities in partnership with Chevron ESCO. The Chevron ESCO audit report estimated that by switching all city-owned street lights to LED the City could receive approximately \$33,000 in savings on their annual utility bill. Solana Beach was the first city in San Diego County to implement city-wide LED retrofits to cut utility costs and energy consumption.

Approximately \$71,672 in savings from LED streetlight retrofits were realized through the Energy Roadmap audit.

Since 2012, the City of Solana Beach has successfully retrofitted all 527 city-owned street lights to a more energy-efficient LED technology. With the retrofits in place, the City was able to switch the LED street lights to a lower rate and conserve energy. Through an energy audit of municipal street light costs and rates, it was discovered that the City should have been realizing additional cost savings from the LED street lights. Because the savings are retroactive to the retrofit date, EFM Solutions estimates that the City will be credited with approximately \$71,672 on their utility bill and see a reduction in their monthly costs—savings that can now be reinvested into other city services. These savings are a direct result of the LED retrofit project spearheaded by the City. (See **Appendix C** for a listing of city-owned LED retrofit streetlights).

Energy Audit Findings

***ENERGY STAR**
Certification recognizes
energy-efficient top
performing buildings that
save money without
sacrificing performance.*

The energy audit assessed municipal sites for ENERGY STAR Certification by benchmarking energy use to reveal how a building's energy consumption compares to other similar buildings, based on a national average. Depending on the building type, facilities can receive a rating between 1 and 100 using the ENERGY STAR Performance Rating system. Earning a rating of 75 or above is the first step towards achieving the ENERGY STAR for a building.

The energy audit determined that Solana Beach City Hall was achieving an ENERGY STAR certification rating of 91, a significant efficiency rating that reflects the impact of energy efficiency improvements made to the high-performance facility (See **Appendix D**). As an

ENERGY STAR certified building, Solana Beach City Hall is helping to save energy, save money, and help protect the environment by generating fewer greenhouse gas emissions than typical buildings.

Energy and Cost Savings Opportunities

In addition, the energy audit revealed potential cost savings for the City of Solana Beach through simple utility rate changes at two municipal facilities, the fire station and the marine safety building. The City should consult historical usage data to help determine the most feasible savings opportunities. See **Appendix E** for the detailed rate analyses.

Potential Savings from Utility Rate Changes			
Location	Current Rate	Recommended Rate	Estimated Annual Savings
Fire Station	ATOU	ALTOU	\$8,100
Marine Safety	ALTOU	Schedule A	\$900
TOTAL			\$9,000

Fire Station

As part of the energy audit, it was discovered that the fire station site was being billed under an old rate code, ATOU. A utility rate code analysis showed that changing the rate code to ALTOU could yield approximately \$8,100 in potential cost savings.

Alternatively, the City could also consider switching to a Critical Peak Pricing (CPP) rate (ALTOU-CPP-D). Using a CPP rate, SDG&E would contact the City to request a reduction in energy consumption when electric supplies are expected to be low. However, it should be noted that the City could potentially incur higher charges if unable to comply with SDG&E reduction requests on low energy supply days.

Marine Safety Site

As part of the energy audit, it was noted that an Energy Conservation Measure (ECM-2) from the Chevron ESCO report recommended a utility rate change from ALTOU to a Schedule A rate and had not yet been implemented. The most recent energy audit determined that by switching to a Schedule A rate, the City could save roughly \$900 a year. However, it should be noted that at the time of this audit SDG&E reported possible changes to rate structures, including the termination of the Schedule A rate.

Alternatively, the City could also consider switching to a CPP rate (TOU-A-CPP-D). Again, it should be noted that the City could potentially incur higher charges if unable to comply with SDG&E reduction requests on low energy supply days. Any change to

current rates should be reassessed by municipal staff using the most current usage and rate data before making a decision.

Solar Photo-Voltaic Feasibility Study

As a pilot-city of the Sustainable Region Program, Solana Beach has shown ongoing leadership in energy efficiency. The City has continued to proactively pursue emerging technology and new opportunities to further increase energy and cost efficiency at city sites. As part of these efforts, the City requested a high level solar photo-voltaic (PV) feasibility study (Study) be conducted to determine whether the installation of solar PV systems would make economic sense at six sites in the City of Solana Beach, including:

- City Hall
- Lifeguard Headquarters
(Marine Safety Building)
- Fletcher Cove Community Center
- Fire Department
- La Colonia Community Center
- Public Works Yard

Solar Photo-Voltaic Feasibility Study Findings

The Study determined that if the City were to purchase PV systems for each of the six sites, the simple payback would be approximately 14.4 years. In general, rooftop space is limited by existing rooftop mounted heating, HVAC equipment, communication equipment, shade from trees and other constraining factors. The majority of the PV opportunities analyzed in the City of Solana Beach would have to be installed on the ground or over a parking lot, which would increase overall system costs and lessen economic feasibility.



The Study determined that a direct purchase of PV systems for city sites is not recommended at this time, however, other finance options could be considered (as described below). This recommendation was based on the:

- Low availability of rooftop space leading to increase overall system costs on the ground or over parking lots,
- Uncertain nature of utility rates for PV,

- Long payback period, and
- Inability of government agencies to take advantage of the federal tax credit at this time.

The full analysis, included as **Appendix F**, details the assumptions and recommendations for each of the six sites analyzed.

Finance Options for Solar Photo-Voltaic Projects

A number of financing options exist through the California Statewide Communities Development Authority (CSCDA) and others to assist local governments in purchasing Solar PV systems for municipal sites.

California Statewide Communities Development Authority California Lease Finance Program

The CSCDA California Lease Finance Program (“CaLease”) allows local agencies to finance solar PV using a Master Lease Agreement. CaLease provides local agencies with access to multiple funding institutions who competitively bid on their project, enabling local government to bid and manage leases without dedicating significant staff time to the process. To learn more about additional Energy Project Lease financing programs that may be available to local governments, visit energycenter.org/finance.

California Statewide Communities Development Authority - Foundation for Renewable Energy and Environment -Sustainable Energy Bonds Program

The CSCDA-FREE (Foundation for Renewable Energy and Environment) Sustainable Energy Bonds program (SEB program) provides public agencies and nonprofit organizations throughout California with access to tax exempt financing for sustainable energy investments. Under the SEB Program, participating agencies have the ability to contract with a pre-qualified Energy Service Company (ESCO) to complete energy and water conservation measures. Program participants receive substantial utility cost savings, including a contractual guarantee sufficient to cover the full cost of all retrofit work. All projects are financed through tax-exempt bonds.

Third-Party Solar Financing

Third-party financing of solar energy primarily occurs through two models: power purchase agreements (PPAs) and solar leases.

In the PPA model, an installer/developer builds a solar energy system on a customer’s property at no cost. The solar energy system offsets the customer’s electric utility bill,

and the developer sells the power generated to the customer at a fixed rate, typically lower than the local utility. At the end of the PPA contract term, property owners can extend the contract and even buy the solar energy system from the developer.

In the lease model, a customer will sign a contract with an installer/developer and pay for the solar energy system over a period of years or decades, rather than paying for the power produced. Solar leases can be structured so customers pay no up-front costs, some of the system cost, or purchase the system before the end of the lease term. Similar leasing structures are commonly used in many other industries, including automobiles and office equipment.

Please contact your Energy Roadmap coordinator with requests for assistance or questions about financing options.

Finance Options for Energy Efficiency Projects

SDG&E provides rebates, incentives, and financing options to pay for all or part of the costs of energy conservation measures. The SDG&E On-Bill Financing (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).

Zero-Percent Interest On-Bill Financing from San Diego Gas & Electric®

Through its OBF Program,¹ 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). 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 visit sdge.com/obf.

¹ The On-Bill Financing (OBF) program is funded by California utility customers and administered by SDG&E under the auspices of the California Public Utilities Commission. The OBF program may be modified or terminated without prior notice and is provided to qualified customers on a first-come, first-served basis until program funds are no longer available. Eligibility requirements apply.

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 November 2014, terms included a 1 percent fixed interest rate, a maximum loan of \$3 million per application, and a maximum loan term of 20 years.

For more program information, contact the CEC's Special Projects Office (916) 654-4104, email: pubprog@energy.state.ca.us, or energy.ca.gov/efficiency/financing.

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

The Energy Roadmap team can assist Solana Beach with Roadmap implementation over the duration of the Roadmap Program (until December 2015).

This page left intentionally blank.

Green the City Vehicle Fleet

The City of Solana Beach maintains a fleet of approximately 16 vehicles. These vehicles consist of mainly pick-up trucks and SUVs. 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.

Solana Beach's fleet is essential to the provisions of public services such as marine safety, street repairs and environmental services. The City of Solana Beach has programs in place to support the City's commitment to environmental protection and enhancement. Solana Beach has recognized that fleet operations contribute significantly to its total energy use and budget and has adopted practices to ensure the fleet is operated as efficiently as possible. As part of this effort, the City operates some of the smallest vehicles possible that meet required duty cycles, has recently purchased an electric vehicle, and installed EV charging stations at City Hall.

The City of Solana Beach is committed to environmental protection and enhancement.

This Roadmap chapter offers tools and information that can support Solana Beach'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 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 2022, 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 billion 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

Solana Beach's Fleet

Solana Beach's fleet supports the provision of essential public services such as street services and beach and park maintenance. Vehicles are replaced on regular schedules. Vehicle replacements offer the City the chance to adopt more efficient vehicles.

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, such as Ford Rangers and Dodge Dakotas.

The Solana Beach City Council has recently made progress toward a more efficient fleet by approving the purchase of an Electric Vehicle to join the city fleet, as well as installing EV charging stations at City Hall.

Online Fleet Planning Tools

The U.S. Department of Energy's (DOE) Petroleum Reduction Planning Tool (afdc.energy.gov/afdc/prep/), at the Alternative Fuels and Advanced Vehicles Data Center, could supplement Solana Beach's current fleet management system by evaluating and calculating petroleum reductions through three categories of reduction measures including efficiency (e.g., fuel economy, idling reductions), conservation (e.g., VMT reductions), and alternative fuels (e.g., vehicles that run on electricity, compressed natural gas). A petroleum reduction goal (e.g., 10 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 Vehicle Cost Calculator (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.

Argonne National Lab has developed a more advanced model called the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool (greet.es.anl.gov/afleet) for fleets to estimate petroleum use, greenhouse gas emissions, air pollutant emissions, and total cost of ownership of light-duty and heavy-duty vehicles using a spreadsheet format. The AFLEET tool allows comparisons between vehicles using different fuel technologies and is customizable with fleet specific inputs.

The FuelEconomy.gov website is a partnership between the DOE and the U.S. Environmental Protection Agency (EPA). 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.

When considering a new fleet vehicle purchase, the Cool Fleets website (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.

Solana Beach can also 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 G**.

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 G**. Opportunities for vehicle replacements specific to Solana Beach's fleet are described below.

Vehicle Replacement: Alternative Fuel Options for Solana Beach

SANDAG partnered with the Center for Sustainable Energy (CSE) to provide an assessment tailored to the City of Solana Beach's fleet and vehicle replacement protocols. CSE conducted the following analysis with information provided by city staff to identify suitable vehicles for replacement and analyze potential savings. Additional information and assumptions are provided in **Appendix G**.

The City of Solana Beach fleet vehicles contain a range of light-duty trucks and SUVs. As older vehicles and high-usage vehicles reach retirement, selecting high-efficiency or alternative fuel vehicles as replacements will provide the City with cost savings and emission reductions. The City operates several light-duty trucks which could be replaced with compressed natural gas (CNG), liquid petroleum gas (LPG) or plug-in hybrid electric vehicles.

The table below shows fuel costs and petroleum displacement from converting vehicles to LPG. CNG and LPG fuel technology was selected based on vehicle availability and the potential for high fuel cost savings. Based on current fuel prices¹, CNG costs \$1.74 less and propane costs \$1.04 less than gasoline per gallon of gasoline equivalent (GGE). For vehicle models full-size pickups such as the F-150 and F-250 there are CNG and LPG up-fits available. For compact trucks such as the Ford Ranger and Dodge Dakota there are no alternative fuel up-fits. However, there are CNG vehicles available that could fit the city's needs, such as the Transit Connect commercial van. In the *Potential Vehicle Replacement and Vehicle Savings* table below, the calculations reflect replacing the Ford Ranger and Dodge Dakota with a CNG 2014 Transit Connect.

¹ Fuel prices used in this analysis are from the Department of Energy January 2014 Clean Cities Alternative Fuel Price Report
<afdc.energy.gov/uploads/publication/alternative_fuel_price_report_january_2014.pdf>

Potential Vehicle Replacements and Savings						
Vehicle	Fuel Tech ¹	Annual Mileage	Gallons Fuel Reduced/ Displaced ²	Estimated Annual Savings ³	Years to Payback ⁴	mtco2e
F-150	CNG	3,600	277	\$701	8.3	1.1
F-250	CNG	6,000	600	\$1,134	5.1	1.3
Ford Ranger	CNG	8,400	560	\$1,354	4.3	2.0
Dodge Dakota	CNG	7,200	514	\$1,294	4.5	2.0
F-150	LPG	3,600	277	\$490	20.0	0.9
F-250	LPG	6,000	600	\$714	13.7	1.1
Notes: Ford Ranger and Dodge Dakota replaced by CNG Transit Connect 1. CNG = compressed natural gas, LPG = liquid petroleum gas 2. Reducing/ displacing the petroleum-based fuels is a goal of state policy and the federal Energy Policy Act and Energy Independence and Security Act 3. Includes maintenance and fuel cost savings 4. CEC Gaseous Vehicle Buy-down Program incentives are limited and may not be available at time of vehicle purchase Source: Center for Sustainable Energy						

As displayed in the table above, both CNG and LPG offer savings in fuel costs. CNG or LPG vehicles could offer savings of \$500 to \$1,350 a year based on fleet vehicle usage recorded in Solana Beach. Substantial fuel savings and quicker payback is seen in high fuel-use vehicles. For example, a vehicle using 500 gallons of fuel per year would save around \$700, but a vehicle using 1,000 gallons of fuel per year would save around \$1,500. CNG or LPG vehicles can cost between \$10,000 and \$15,000 more than their gasoline- or diesel-fueled counterparts before rebates and could require additional fueling infrastructure. Currently there are a number of public CNG and LPG fueling stations located in surrounding cities, such as San Diego and Carlsbad.

CNG or LPG vehicles could offer savings of \$700 to \$1,350 a year based on fleet vehicle usage seen in Solana Beach.

Solana Beach city vehicles generally have low annual mileage due to the city's limited geographic area. City vehicles travel an estimated average of 6,000 miles a year and 24 miles per work day, making the city fleet a good candidate for electric vehicles (EV) and plug-in hybrid electric vehicles (PHEV). There are EV models capable of traveling 80 to 100 miles on a single charge and PHEV trucks capable of driving 40 miles in all-electric mode. The table below details the cost savings for replacing City vehicles with electric alternatives.

Potential Electric Vehicle Savings									
Vehicle	MPG	Gas cost/year	Vehicle Replacement ¹	Fuel Tech ²	miles per kWh	kWh/year	Electricity Cost/year	Maintenance Savings	Total Cost Savings ³
F-150	13	\$1,795	Via Motors VTRUX	PHEV	1.8	3333.3	\$533	\$120.00	\$1,382
Ford Expedition	10	\$2,334	Toyota RAV4	EV	2.6	2307.7	\$369	\$120.00	\$2,084
Dodge Dakota	14	\$1,667	Nissan e-NV200	EV	2.5	2400	\$384	\$120.00	\$1,403
Notes: 1. VTRUX is a Via Motors extended-range electric truck, capability of running 40 miles in all electric mode (available in CA soon); , RAV4 is an all-electric vehicle with a range of 103 miles (currently available in CA), e-EV200 is an all-electric van with a range of 80 miles (available in CA soon). 2. PHEV= Plug-In Hybrid Electric Vehicle, EV= Electric Vehicle 3. Includes maintenance and fuel cost savings									

Since the City fleet averages an estimated 24 miles a day, an EV or PHEV would have the range to meet the City's needs. The vehicles can be charged at night for use the following day. For PHEVs, the gas engine is always available for circumstances when a vehicle needs to travel farther than the electric range. The cost of electricity is significantly lower than gasoline. The City could see savings of \$1,400 to \$2,000 a year by replacing a gasoline vehicle with an EV or PHEV. EVs and PHEVs can cost between \$15,000 and \$25,000 more than gasoline or diesel fueled vehicles before rebates and could require additional charging infrastructure.

The City has several vehicles that are model year 2000 or earlier. These older vehicles have low fuel economy and likely require frequent and costly maintenance. Replacing older vehicles with newer, more fuel efficient models can lead to significant reductions in maintenance costs and fuel consumption.

Solana Beach 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 Solana Beach

Additional fueling infrastructure throughout the region is needed for widespread adoption of alternative fuel vehicles. Available refueling sites near Solana Beach are identified in the *Summary of Alternative Fuel Infrastructure Availability* table below.

Appendix G 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 Solana Beach City Hall	Availability of Production-Distribution Infrastructure
Electricity	There are number of public charging locations in and near Solana Beach.	Existing electricity grid and distributed energy sources.
Biodiesel	No fueling sites in or near Solana Beach.	Storage tanks needed; Local producer is New Leaf Biofuel, located in San Diego.
CNG	No public access station in Solana Beach. One public station is nine miles from the City.	Existing natural gas pipeline network.
Propane (LPG)	No public access station in Solana Beach. Two public stations are nine miles from the City.	Existing distribution by multiple vendors.
E85	No fueling sites in Solana Beach. Two public stations are nine miles from the City.	Storage and distribution facilities needed in order to scale-up consumption.
LNG	No fueling sites in or near Solana Beach.	Existing.
Hydrogen	No fueling sites in or near Solana Beach. One station is planned about 5 miles from the City	Significant investment required.

Source: afdc.energy.gov/afdc/locator/stations/

Notes:

1. Site names, addresses, and distances are provided in **Appendix G**.
2. Contact your Energy Roadmap coordinator for information regarding the installation of publicly available EVSE at city government sites.

The infrastructure for alternative fuels is currently limited in the region, but is expanding slowly. As more fueling infrastructure becomes available, the alternative fuel vehicles could be more seriously considered.

The San Diego Regional Clean Cities Coalition, along with its members, have committed to addressing the need for more fueling choices across the region. The Coalition can provide more information on alternative fuel infrastructure and vehicles in the region.

State Grants and Rebates

The California Air Resources Board (ARB) and California Energy Commission (CEC) offer grants and rebates for alternative fuel and advanced technology vehicles. Funding is allocated annually and the FY 2014-2015 budget for the CEC Alternative and Renewable Fuel and Vehicle Technology Program (energy.ca.gov/altfuels/) is about \$100 million. Historically, ARB has managed about \$30 million in projects through the Air Quality Improvement Program. ARB staff's FY 2014-2015 funding plan also includes about \$200 million in Low Carbon Transportation Allocations (arb.ca.gov/msprog/aqip/aqip.htm). The 2013 passage of Assembly Bill 8 (AB 8) extended funding for the Carl Moyer Program, local diesel emission reduction programs and the Alternative and Renewable Fuel and Vehicle Technology Program through 2022. These programs accelerate the turnover of older vehicles and equipment and invest in the development and deployment of advanced clean emissions technology. Additionally, AB 8 allocates \$20 million in funding toward the installation of hydrogen fueling infrastructure and supports the deployment of hydrogen fuel cell electric vehicles.

The CEC has allocated \$11.5 million in funding for light-, medium- and heavy-duty natural gas vehicles. Natural gas trucks are gaining increased market share due to their lower fuel costs, ability to reduce greenhouse gas emissions by 15-20 percent, and decreased NO_x emissions. Expanding alternative fuel infrastructure is another funding priority with allocations for electric vehicle charging stations and CNG station upgrades or expansions.

CEC Gaseous Vehicle Buy-Down Incentives

Gross Vehicle Weight in Pounds (lbs.)	Natural Gas
Up to 8,500	\$1,000
8,501 – 16,000	\$6,000
16,001 – 26,000	\$11,000
26,001 -33,000	\$20,000
33,001 & greater	\$25,000

Notes:

Buy-down funding must be secured through an eligible dealer.

CSE manages ARB's Clean Vehicle Rebate Project (CVRP) (energycenter.org/cvrp), which provides rebates of up to \$2,500 for light-duty battery electric and plug-in hybrid vehicle purchases. CSE received approximately \$50 million in funding for FY 2013-2014. The FY 2014-2015 funding plan boosts rebate funds to more than \$100 million. The *CVRP Rebate Amounts for Light-Duty Vehicles* table summarizes the available incentives.

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) (californiahvip.org). As of July 2014, available funding was approximately \$9,350,000. A summary of available incentives is provided in the *ARB HVIP Voucher Amounts for Trucks and Buses* tables below.

HVIP Voucher Amounts for Zero-Emissions Trucks & Buses

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

VIP Voucher Amounts for Hybrid Trucks & Buses

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

Note: The **first three vouchers** redeemed by a fleet 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.

Regional Electric and Alternative Fuel Vehicle Planning

Electric vehicle adoption is increasing rapidly by consumers as well as fleets. The San Diego region was selected to take part in the largest EV rollout in U.S. history, through the EV Project (theevproject.com). In the San Diego region, work towards increasing EV infrastructure through the EV Project began in 2011 and continued through 2013, with more than 500 public charging stations installed. SANDAG and SDG&E were local project partners and provided in-kind assistance.

As a result of the project, many public sites throughout the region were identified as potential locations for EV charging stations including restaurants, community and regional shopping centers, large venue entertainment centers, transportation corridors, schools, hotels, airports, convenience retail, and retail shopping. Since then, a number of public chargers were installed in or near Solana Beach, including at City Hall. The City has shown strong support for growing a regional

Through the EV Project, about 500 public electric vehicle (EV) chargers have been installed around San Diego County. More than 10,000 EVs are now on the road in the region.

network of charging stations through planning and implementation of chargers on city-owned property. Through collaboration with the North County Transit District (NCTD), the City is currently exploring opportunities to install additional EV charging stations at the Solana Beach Train Station.

Most major automobile manufacturers have now introduced plug-in electric vehicles. Since December 2010, the Nissan Leaf and Chevrolet Volt have been available in San Diego. Additional plug in vehicles are available from BMW, Fiat, Ford, Honda, Mitsubishi, Toyota, Tesla, and other manufacturers. There are more than 10,000 EVs on the road in the region, with that number increasing by approximately 100 per month. Regional infrastructure also continues to grow. NRG's eVGo subsidiary has recently installed a DC fast charge station near Solana Beach, as well as others along major regional transportation corridors.

San Diego Regional Electric Vehicle Infrastructure Working Group

Through a grant from the California Energy Commission, SANDAG established the San Diego Regional Electric Vehicle Infrastructure Working Group (REVI) to develop a readiness plan for the San Diego region. The REVI has been meeting since March 2012 in order to share experiences to address regional barriers to PEV infrastructure and discuss potential best practices for incorporation into a PEV readiness plan.

Through earlier PEV planning and siting efforts, several barriers had been identified as obstacles to charging infrastructure installation and PEV adoption. The REVI built upon these efforts and identified challenges, successes, and outstanding issues for continued PEV adoption and charging infrastructure deployment.

The San Diego Regional Plug-in Electric Vehicle Readiness Plan was accepted by the SANDAG Board of Directors as a regional guide for use by local governments, public agencies, and others to support plug-in electric vehicle adoption and electric vehicle charging station deployment throughout the region. This Plan is designed for local government officials, such as planners and building staff, as a resource to assist them in helping their local governments prepare their communities for a growing PEV market. The Readiness Plan is available for download at: sandag.org/uploads/publicationid/publicationid_1817_17061.pdf.

San Diego Regional Alternative Fuel Readiness Project

With a grant from the California Energy Commission, SANDAG will be expanding upon previous electric vehicle and infrastructure planning efforts to other alternative fuels including compressed natural gas, propane, ethanol, biodiesel, and hydrogen, beginning in summer 2014,. SANDAG will be working with the San Diego Regional Clean Cities Coalition to develop a San Diego Regional Alternative Fuel Readiness Plan to address barriers and provide support for greater deployment of alternative fuel vehicles (AFV) and alternative fuel infrastructure (AFI) in the San Diego region. Building on the lessons learned from REVI, an Alternative Fuel Coordinating Council will be created for alternative fuel stakeholders in the region to discuss challenges and best practices for AFV and AFI deployment. The project will consist of an assessment to identify the key needs in the San Diego region, followed by toolkits to provide resources and best practices to assist stakeholders in overcoming barriers and preparing for alternative fuel deployment.

This page intentionally left blank

Develop Employee Knowledge of Energy Efficiency

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

Overview

This chapter identifies free educational seminars offered by San Diego Gas & Electric® (SDG&E) and the Center for Sustainable Energy (CSE) 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); and
- Workshops or trainings that Solana Beach may be interested in hosting at a city facility.

SDG&E and CSE 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. Building Operator Certification is a nationally-recognized training and certification program offering improved job skills and more comfortable energy-efficient facilities. The training is led by experienced, professional instructors.	Facilities, public works staff
Certified Energy Manager (CEM)	Certification is through the Association of Energy Engineers (AEE). CEM distinguishes high levels of competency and proficiency in energy management, demonstrating expertise in several areas ranging from standards, air quality, energy audits, lighting, procurement, and financing.	Facilities, public works staff
NATE Certification Exam (HVAC)	SDG&E and the Institute of Heating and Air Conditioning Industries, Inc. (IHACI) co-sponsor seminars designed to help experienced HVAC professionals prepare for successfully completing the North American Technician Excellence (NATE) Certification Exam.	Facilities, public works staff
LEED® Professional Credentials	The Leadership in Energy and Environmental Design (LEED®) designation acknowledges expertise in green planning, design, construction, operations, neighborhood development, and other sustainable practices. SDG&E will cover the cost of appropriate city employees to undergo training for a LEED® Professional Credential.	City administration, planning, facilities, public works, environmental services
Online Workshop Calendar	To view upcoming workshops, visit sdge.com/seminars	

4

Implement a Commuter Benefit Program

The City of Solana Beach has displayed a sustained commitment to integrating transportation demand management (TDM) strategies for local businesses, residents, and city staff through a variety of existing programs. Previous and ongoing efforts include updating the Circulation Element of the General Plan to include TDM strategies that reduce vehicle trips, save energy, and improve air quality, as well as participation in a TDM outreach program through collaboration with the cities of Encinitas and Del Mar, SANDAG, and CivicSpark (via AmeriCorps).

In addition, the City is currently collaborating with the North County Transit District (NCTD) to explore concepts for integrating a “Mobility Hub” at the Solana Beach Train Station. Mobility hubs provide an integrated suite of transportation services, supporting amenities, and urban design enhancements that reduce the need for single occupant vehicle trips by increasing first mile/last mile access to high-frequency transit stations.

Commuter Benefit Programs can help to:

- Improve traffic flow
- Reduce employee parking congestion
- Set example for residents and businesses
- Reduce commuter-related expenses
- Add commuter benefits to employee compensation packages at little or no cost
- Measure and reduce petroleum consumption and carbon footprint

By exploring opportunities to expand commuter benefits currently offered to municipal employees, the City could achieve additional transportation-related energy savings. Commuter Benefit programs provide alternative transportation choices to driving alone and incentives to use them. Suggested strategies in this chapter were customized to address specific needs of the City and its employees, identified through city staff direction, a survey of employee commute habits and preferences, and by mapping employee commutes.

How it Works

A Commuter Benefit Program provides employees with alternative transportation choices for their commute, as well as incentives for using them. To assist in implementing additional programs for municipal staff, iCommute consultation services

are offered at no cost to the City, in addition to other programs that are inexpensive for the City to implement or come with subsidies sponsored by SANDAG.

Existing Commuter Benefits

The City already offers a variety of incentives to encourage eligible City employees to use alternative transportation rather than driving to work alone. The City has developed a program to offer employees incentives to use alternative transportation in an effort to improve air quality in the Southern California region, reduce peak hour traffic congestion, and lower energy consumption.

The incentives currently offered to eligible City employees for using alternative transportation include:

- Preferred parking for those who carpool/rideshare
- Guaranteed Ride Home Program through SANDAG's RideLink program
- Financial incentive of \$80.00 per month for taking alternative transportation
- Staggered work hours whenever possible to allow for public transportation and/or carpool schedules

Existing Commuter Trends

An employee survey was conducted in January 2015 and 27 of the approximately 50 employees participated. The survey showed that 30% of respondents use an alternative mode at least one day per week with carpooling and riding a motorcycle as the top choices. Eighty-one percent of employees drive alone to work at least two days per week.

When considering alternative transportation, employees responded with great interest - 67% are willing to try a different commute choice at least once per week. The most interest was in bicycling, carpooling, and vanpooling. A full survey assessment and customized commuter program is available to the City at no-cost through the iCommute employer services program.

Commuter Program Considerations

iCommuteSD.com

TripTracker is a convenient way for employees to record trips made by alternative modes of transportation. The system converts trips logged into the number of gallons of fuel saved, monetary savings, pounds of carbon dioxide not emitted into the atmosphere, and how many miles an employee has not traveled alone. Logging trips

automatically enters employees that carpool, vanpool, take transit, ride their bike, or walk to work 4+ days per week into an iCommute monthly prize drawing that can include gift cards valued at \$100 and free bicycles.

By leveraging these existing resources, the City of Solana Beach has already established an employee network using the iCommute website, where incentives are managed and employees use the trip planner to find other employees who have similar commutes. The City can further reduce local energy consumption and congestion by continuing to encourage carpools, vanpools, and bicycling.

iCommute Diamond Awards

The iCommute Diamond Awards recognize employers in the San Diego region who have made strides to promote alternative commute choices in the workplace. Diamond Awards employers help people get to work or school without adding traffic to the region's roads and freeways, reduce greenhouse gas emissions, and improve mobility. This is accomplished by promoting alternatives to driving alone: vanpool, carpool, walk, bike, take transit, telework, try a compressed workweek schedule, or a combination of these. Some organizations also provide their employees with incentives, subsidies, or pre-tax deductions to support their participation in eligible programs.

In 2009, the City of Solana Beach was received the SANDAG Silver Diamond Award for their Employee Commuter Program.

In 2009, the City of Solana Beach Employee Commuter Policy was recognized by SANDAG by being awarded the Silver Diamond Award for their leadership in the region.

Regional Vanpool Program

For city employees that have longer distance commutes (20 miles or more), vanpools are a comfortable, cost-effective, and convenient way for groups of seven to fifteen people to share their commute. Employees, or the employer, can lease a vehicle through one of the vanpool vendors contracted by SANDAG and receive up to \$400 per month to help offset the cost of the lease. On average, vanpool participants cut their commute costs by many hundreds of dollars per year. Typical savings to each passenger:

- 20 miles round-trip commute = \$1,000/year
- 50 miles round-trip commute = \$4,000/year

The City of Solana Beach currently offers this option to city employees.

Guaranteed Ride Home

To support alternative modes, iCommute offers the Guaranteed Ride Home Program. Enrollment in this program allows for the use of a rental car or taxi in the case of:

- Personal or family illness or emergency
- Unscheduled overtime
- Your rideshare partner is unavailable

Employees who carpool, vanpool, or take transit three or more times per week are eligible. In addition, commuters that walk or bike 75% or more of their trip, three or more days per week, are eligible. This program may be used up to three times per year at no cost to the commuter.

The City of Solana Beach currently offers the Guaranteed Ride Home service to eligible city employees through their Employee Commuter Program.

Transit

Solana Beach is well served by transit, with COASTER stations near multiple municipal facilities including City Hall. To further promote usage of public transportation, employer supplied transit passes and pretax incentives could be effective tools. With minimal cost to the City there is an option to subsidize part of the employees' commuting costs, allowing employees to pay for the remainder with pre-tax dollars. Alternatively, the City could offer discounted monthly transit passes as part of the overall employee benefits package.

Due to the City's proximity to the COASTER and NCTD bus 101, Solana Beach has been identified as a potential candidate for our Try Transit pilot program¹, which offers employees a complimentary 30-Day Pass to introduce transit as an alternative to driving alone to commuters who have never used transit. There are no costs to your organization beyond the time to promote the program to your employees.

Flexible Schedules and Telework

Flexible schedules offer hours outside the traditional Monday to Friday, 9 a.m. to 5 p.m. Employees can work a compressed week, which is often a 4/10 (4 days per week, 10 hours per day). Teleworking, which allows employees to work from home or a remote location one or more days per week, has shown to help recruit and retain high

¹icommutesd.com/docs/default-source/employer/try-transit-pilot-participant-guidelines-8272014-final.pdf?sfvrsn=2

performing employees and help employees become more productive and happier. Employees gain additional benefit from the reduction of commute-related expenses. Jobs that are most suited for teleworking are those that require reading, writing, researching, working with data, and talking on the phone, often referred to as “information-based jobs.”

The City of Solana Beach Employee Commuter Program currently offers staggered work hours whenever possible to eligible city employees to allow for public transportation and/or carpool schedules.

Bicycling

Bicycling is an excellent choice for commuting that saves employees money, reduces stress, benefits employee health, and helps the environment. iCommuteSD.com has resources and tools for commuters that help plan routes, provide safety education, and learn more information about bike events. Bicycling is also a first or last mile solution for transit as bicycles are allowed on the COASTER, SPRINTER, and buses. SANDAG, through iCommute, maintains bicycle parking throughout San Diego County located at many transit stations and Park & Ride lots.

Pretax Incentive

Employers can take advantage of employee and employer payroll pre-tax savings offered through the IRS Commuter Fringe Benefit Program ([IRS Section 132²](#)). The IRS allows employers to offer employees the opportunity to set aside a portion of their pretax salary to pay for transit and vanpooling. Bicyclist can also receive up to \$20 per month, but this cannot be combined with other incentives. Employers benefit by not paying payroll taxes on that money, while in effect adding value to their employee’s compensation package. Consult with your payroll department to take full advantage of this option.

Next Steps

Support services from the SANDAG TDM Division, which oversees the iCommute program, are offered at no cost to the City as part of the Energy Roadmap. At any time, the City can request assistance from the SANDAG iCommute team to develop a customized commuter benefit program and take full advantage of these no-to-low cost programs. Actions could include:

² irs.gov/pub/irs-pdf/p15b.pdf

- Meet with iCommute representative to obtain and review a full survey analysis and develop a customized commuter program
- Include commuter benefit information in new employee orientation packets and link to iCommute on your intranet site
- Participate in and promote iCommute annual events such as Rideshare Week, Bike to Work Day, and Walk and Bike to School Day. Join the Rideshare Week Corporate Challenge to showcase your commitment to sustainable commute choices.

For additional TDM policies and resources, see **Appendix H**. For more information on iCommute programs and services, contact employersupport@sandag.org.

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 efficiency planning and permitting
3. Clean and efficient transportation planning

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. In January 2015, Solana Beach joined the North Coast Energy Action Collaborative, a group composed of planning and facilities staff from the region’s North Coast cities funded through SANDAG’s Local Government Partnership with SDG&E. Subregional collaboration can support peer-sharing between municipalities on energy efficiency, fosters local partnerships, supports unified messaging around sustainability efforts, and helps local governments tap into relevant resources.

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 (Steinberg, 2008) (SB 375), SANDAG and regional planning agencies across the state are required to develop a Sustainable Communities Strategy (SCS) in order to reduce per capita 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 (MPO) 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 CO₂ 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: CO₂ = carbon dioxide.

CARB identifies CO₂ as the GHG whose concentration is being most affected directly by human activities. CO₂ 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% residential with a density of at least 20 units per acre and be within a half-mile of a major transit stop or a high quality transit corridor included in the 2050 RTP. **Appendix I** contains larger definitions for what projects could qualify for this type of CEQA streamlining.

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 late 2015, and will include a review of smart growth designated areas in relation to the SCS.

Solana Beach General Plan

A comprehensive update of the Solana Beach General Plan is being completed in phases. Phase I was completed in late 2014 and included an update of the Land Use, Circulation, and Housing Elements which serve as foundational components of the larger plan. In order to inform the City's General Plan, Solana Beach undertook a visioning process beginning in 2012 to gain input from residents on developing the core values for their community. Community input provided at a series of workshops held over the past two years has helped to guide the update of the Solana Beach General Plan. The City asked residents to suggest different ways for Solana Beach to be a model community, create a sustainable system, engage Solana Beach residents, take a proactive approach to sustainability in city policy, and develop a sustainable community-based and cost-effective program.

Solana Beach General Plan

"Solana Beach is known for its environmental stewardship and has taken many steps towards becoming a more sustainable community. Furthering the use of green building techniques, reducing greenhouse gas emissions, improving water quality, promoting alternative modes of transportation, reducing energy and water consumption, and increasing energy efficiency and the availability of renewable resources are very important considerations of future development."

In November 2014, the City of Solana Beach adopted updates to the General Plan, throughout which the theme of sustainability resonates. The Land Use Element establishes sustainable development patterns that seek to decrease dependency on the automobile and support multimodal transportation options. The Circulation Element emphasizes balanced transportation choices and improving connectivity within the City, especially in providing infrastructure for bicyclists and pedestrians. Solana Beach will be developing a forthcoming Climate Action Plan (CAP) as an Implementation Measure of the General Plan, which will include specific targets and programs for GHG reductions in the City.

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.

The SANDAG Smart Growth Concept Map, last updated in 2014, identifies locations of existing, planned, and potential smart growth areas. An existing/planned smart growth area in Solana Beach is the Solana Beach



Town Center, which includes the Train Station and Highway 101 Specific Plan area.

Solana Beach Town Center includes approximately 151 acres within the City's adopted Highway 101 Corridor Specific Plan Area. This area allows for a variety of mixed use development projects including multi-family residential of up to 20 dwelling units per acre. A key facility in this smart growth area is the Solana Beach Train Station property owned by North County Transit District (NCTD). This train station includes operation for COASTER/Amtrak rail service.

A goal for the overall area is to plan for a variety of well-balanced mixed use projects that provide exemplary site planning and design and meet the goals and objectives of the Highway 101 Corridor Specific Plan Area and General Plan for the City of Solana Beach. Also included in this area are new pedestrian bridge rail crossings, the Coastal Rail Trail (eight acre rail-trail linear park), and other planned pedestrian and traffic improvements (Highway 101 Streetscape Plan).

The Land Use Element states that the majority of redevelopment, infill, and new growth is expected to occur within the "downtown" or "town center" area of Solana Beach, generally located along Highway 101 and North and South Cedros, and is intended to accommodate compact, mixed use, and walkable areas that are connected to the regional transportation system.

Funding for Smart Growth Planning

SANDAG manages the *TransNet* Smart Growth Incentive Program (SGIP), which funds transportation and transportation-related infrastructure improvements and planning efforts that support smart growth development. The SGIP awards 2% of the annual

TransNet revenues to local governments through a competitive grant program. For more information on the SGIP, and upcoming funding cycles, visit sandag.org/smartgrowth.

The City's General Plan policies call for concentrating commercial, mixed use, and medium to high density residential development along transit corridors and near activity centers that can be served efficiently by public transit and alternative transportation modes (Policy LU-3.1), as well as consulting with SANDAG regarding Active Transportation programs and grant opportunities for capital and planning-related bicycle, pedestrian, and traffic calming efforts (Policy C-6.2).

Solana Beach General Plan

"Provide safe alternatives to motorized transportation that meet the needs of all city residents, reduce vehicle trips, save energy, and improve air quality."

In addition to the policies in the Solana Beach General Plan, **Appendix I** contains further sample policies that encourage smart growth development. Solana Beach could determine which measures are most appropriate for the City to consider. 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 (2014).

2. Energy-Efficient Building Upgrades

On a statewide scale, three decades of energy efficiency programs have saved Californians \$65 billion and avoided the need for 30 additional power plants. In addition, most energy efficiency measures boost the local economy since retrofits must be performed by a local labor force. In 2012, California-based clean-energy startups brought in nearly \$9 billion in investments over the previous three years, enough to surpass the sum of activity in all 49 other states.

Energy Codes and Permits Review

Through building codes, local governments require a minimum level of protection to occupants on many fronts. Fire safety and electrical codes save lives. Energy codes improve indoor air quality, make homes and offices more comfortable, and reduce utility bills.

The Solana Beach General Plan contains goals and policies to promote energy efficiency and conservation, through green building programs and sustainable energy projects (Policy LU-3.4 through LU-3.10; Goal C-8.0; Policy C-11.1). The forthcoming CSP (Policy LU-3.11) will include measures to further encourage energy efficiency in

residential, commercial and city facilities, and will support the policies and goals of the General Plan.

The State’s framework for energy efficiency strategies is the *California Long Term Energy Efficiency Strategic Plan (LTEESP)*, prepared by the California Public Utilities Commission’s (CPUC). The LTEESP identifies the following areas where local government authority can influence 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 – Home Retrofit Programs

Energy Upgrade California (EUC) (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 Center for Sustainable Energy (CSE) is collaborating with SDG&E to coordinate the EUC program. CSE 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 7.)

The San Diego Regional Energy Partnership (SDREP) has tasked CSE with continuing several local EUC programs that were previously funded through American Recovery and Reinvestment Act grants from the City of Chula Vista, City of San Diego and County of San Diego and expanding them regionally. 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 through 2015. 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.”

Solana Beach residents can take advantage of this program to reduce their energy consumption while improving the comfort of their homes. **Appendix J** includes details about regionwide projects underway through the SDREP.

Property Assessed Clean Energy Programs

Property Assessed Clean Energy, or PACE, is a financing mechanism that allows property owners to pay for energy and water efficiency upgrades and renewable energy improvements without having to pay the costs upfront. PACE affords a qualifying home or business owner a loan for eligible upgrades or improvements, which is paid back via their tax bill. Assembly Bill 811 (Levine, 2008) and Senate Bill 555 (Hancock, 2011) serve as legislative authority for PACE operations. These two legislative actions enable the use of PACE as a financing tool, but provide slightly different structures.

PACE participation throughout the San Diego region varies by jurisdiction, and several companies offer PACE programs. Solana Beach has joined four PACE programs, allowing residents and businesses to participate in CaliforniaFIRST, HERO, Figtree, and Ygrene Works financing. HERO, a residential PACE program, has taken over 200 applications from the San Diego region's participating cities with over \$7.5 million worth of energy retrofit projects under review for financing. CaliforniaFIRST has 16 active commercial applications in the region valued at over \$16.5 million which should be funded in summer 2014. Most recently, Solana Beach became the first city to join the California Home Finance Authority Joint Powers Association (JPA) in order to provide Ygrene Works PACE financing, providing greater options and potentially greater benefits to local businesses and residents. More information on PACE programs including which jurisdictions are participating is available in **Appendix J**.

3. Clean and Efficient Transportation Options

Saving energy through clean and efficient transportation options includes reducing petroleum use by reducing single occupancy driving and increasing use of electric vehicles and alternative fuels. This section describes Solana Beach's current efforts to promote clean and efficient transportation options and additional resources for active transportation, Transportation Demand Management (TDM), and alternative fueling infrastructure.

Active Transportation

Active transportation includes biking and walking as a means of getting from one place to another. Having facilities to support active transportation offers multiple travel choices for residents, fosters healthy lifestyles, and provide sustainable transportation options. The Solana Beach General Plan calls for increasing travel options through enhanced pedestrian and bicycling systems, and the updated Circulation Element contains a number of policies that support active transportation.

To support the City's active transportation plans and projects, Solana Beach was awarded a *TransNet* Active Transportation grant in 2012 totaling \$136,000 to fund the Solana Beach Comprehensive Active Transportation Strategy (CATS), which will conduct a comprehensive update of the bicycle master plan, and evaluate pedestrian facilities and traffic calming needs, especially around schools, transit, and commercial neighborhoods.

The CATS will lay the foundation for improved bicycle and pedestrian facilities within the City of Solana Beach, and provides a comprehensive update to the City's Bicycle Master Plan (BMP). The plan will focus on enhancing the safety and comfort of existing bicycle and pedestrian facilities and propose new linkages to increase connectivity to key

attracting land uses such as schools, commercial/retail districts, and recreational resources. Additional emphasis will be placed on the consideration of pedestrian facilities and traffic calming needs, especially around schools, transit and commercial neighborhoods.

In 2012, improvements were made to the Highway 101 corridor to better support alternative modes of transportation, including biking and walking. The Highway 101 Westside Revitalization incorporated sharrows, sidewalk widening, traffic calming measures, bus stop shelters, and improved lighting and landscaping to provide a safe and supportive complete street that balances the needs of all users. The project was funded using *TransNet* local streets and roads revenues and has since received award recognition for its design.

Mobility Hubs

Mobility hubs provide an integrated suite of transportation services, supporting amenities, and urban design enhancements that reduce the need for single occupant vehicle trips by increasing first mile/last mile access to high-frequency transit stations. Examples of mobility hub features may include: bikeshare, carshare, secure group bike parking, priority vanpool and carpool parking at employment sites, demand-based shuttle or jitney services, bicycle and pedestrian facility improvements, coordinated wayfinding, and urban design enhancements that balance the access needs of all users.

In partnership with the NCTD, the City of Solana Beach is exploring concepts for integrating a “Mobility Hub” at the Solana Beach Transit Station, and would also incorporate EV (electric vehicle) charging stations and parking management strategies.

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 City’s General Plan supports transportation and parking demand programs. Circulation Element policies call for developing flexible parking requirements (Policy C-11.1) and also provides a number of policies that encourage and support TDM programs such as employer programs, carpooling, and bicycle facilities (Policies C-8.1 – C-8.7). The iCommute program offers free assistance to regional businesses and agencies in establishing and implementing customized TDM policies and

programs that reduce traffic congestion, fuel use, air pollution, and GHG emissions. SANDAG recently completed a TDM tool for city planners: *Integrating Transportation Demand Management into the Planning and Development Process - A Reference for Cities*. The report is available as part of the SANDAG smart growth toolbox at the following link: sandag.org/uploads/publicationid/publicationid_1663_14425.pdf.

Starting in late 2014, the City of Solana Beach partnered with the City of Encinitas, the City of Del Mar, SANDAG, and CivicSpark, an AmeriCorps program, to promote the SANDAG iCommute program to residents and small businesses in the San Diego County North Coast Corridor. Objectives of the project were to reduce GHG emissions, advance community-based TDM, and reduce VMT, congestion, and parking issues by encouraging use of transportation alternatives. The program involved public outreach on the SANDAG iCommute program and ridesharing/public transit/bicycling resources for commuting within the north county coastal corridor of San Diego County, targeting residents and small to mid-size businesses.

Another TDM strategy is parking management, which provides a variety of parking options to reduce the amount of driving. 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. In 2010, SANDAG published *Parking Strategies for Smart Growth: Planning Tools for the San Diego Region* and continues to work with local governments on innovative parking policies.

Additionally, a parking management plan can assist with reducing parking demand while encouraging the use of transportation alternatives. In 2014, SANDAG developed a Regional Parking Management tool box to provide a framework for evaluating, implementing, and managing parking management strategies that can be tailored to support individual community economic development, sustainability, and mobility goals. This interactive document provides a broad set of tools and step-by-step instructions for shaping successful parking management programs that address the unique challenges and needs of different types of communities. More information and resources on parking are available at sandag.org/TDM.

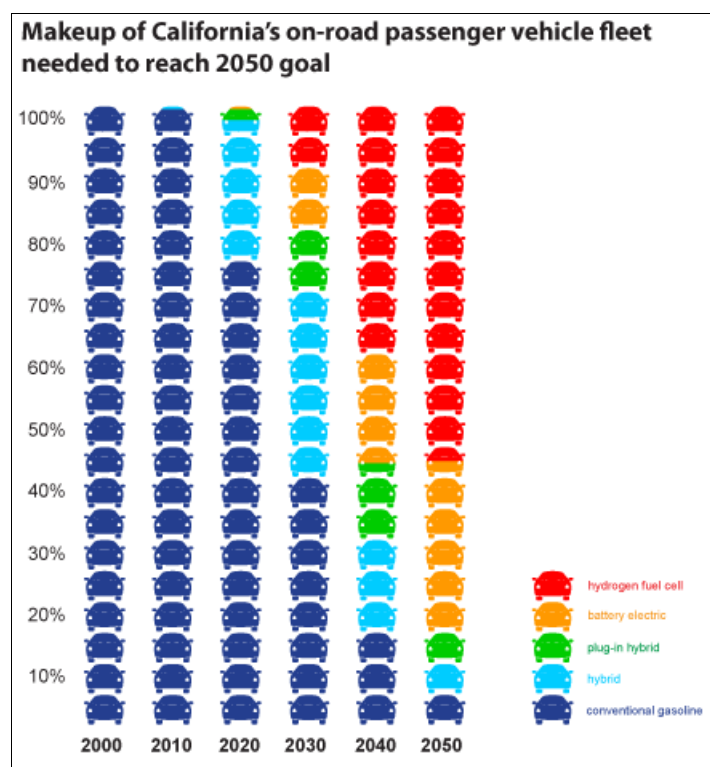
Alternative Fueling Infrastructure

As automakers offer greater numbers of vehicles powered by a variety of fuels, infrastructure must keep up to enable this market growth. For example, Cadillac, Chevrolet, Daimler, Fiat, Ford, Honda, Mitsubishi, Nissan, Tesla, and Toyota all offer

plug-in electric vehicles (PEVs) today. Also, Honda, Toyota, General Motors, Daimler, Hyundai, and Nissan have stated they plan to bring hydrogen fuel cell vehicles to market in the 2015-2017 timeframe.

In order to keep pace with the market and reach State petroleum reduction targets, regional planning and actions are necessary to incorporate alternative fuel infrastructure (e.g., fueling stations and EV chargers) where little to none exist today. Requests for availability of EV chargers and other fueling infrastructure will grow in the near future.

The chart shown below demonstrates how California's on-road passenger vehicle fleet is planned to change overtime. The State goal is for 95 percent of vehicles on California roadways to be powered by alternative fuels by 2050. Car, SUV and pick-up drivers will be using vehicles powered from natural gas, electricity, biofuels, and hydrogen fuel cells. The City of Solana Beach has installed three level car charging stations at City Hall, as well as worked to streamline the permitting process for EV infrastructure in support of EV Readiness. The city is in the process of updating their fleet with the addition of a new EV.



Source: California Air Resources Board

Recognizing these factors, the SANDAG Board included several Recommended Actions in the 2050 RTP/SCS (2011) to begin planning for an increase in alternative fuel vehicles.

Specifically, Sustainable Communities Strategy Actions 21, 22, and 24 addressed alternative fuels, the transportation network, and the need for adequate infrastructure.

- 21. Support planning and infrastructure development for alternative fueling stations and plug-in electric vehicle (EV) chargers.
- 22. Develop or facilitate a regional approach to long-term planning for alternative fuel infrastructure that includes the continued development of public-private strategic alliances.
- 24. Integrate alternative fuel considerations into the development of the regional transportation network by, for example, integrating infrastructure for electric vehicle charging into regional Park & Ride lots and transit stations.

Siting alternative fueling stations 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 also can 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 CSE, have committed to addressing the need for more fueling choices across the region. A list of both publicly and privately available alternative fueling stations is included in **Appendix G**.

SANDAG received a \$200,000 Energy Commission grant in 2012 to work with local governments and stakeholders to prepare a regional readiness plan for EVs. Subsequently, SANDAG has received a \$300,000 grant to expand the EV planning effort and develop a regional readiness plan for all alternative fuels. Planning and related staff from Solana Beach and other local governments are encouraged to participate. The San Diego Regional EV Readiness Plan was accepted by the SANDAG Board of Directors in January 2014 and the alternative fuel readiness plan is to be completed in summer 2016. Factsheets and best practices on permitting EV chargers, parking accessibility, types of chargers and other topics are included in the San Diego Regional PEV Readiness Plan at: sandag.org/uploads/publicationid/publicationid_1817_17061.pdf.

Market Energy Programs to Local Residents, Schools, and Businesses

This chapter provides Solana Beach with internet links to existing energy efficiency and fuel-saving resources that the city could include on its website, newsletters, and email alerts. This would enable Solana Beach 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 San Diego Gas & Electric® SDG&E programs and rebates and related resources on the Solana Beach – Green Flash website.
2. Include articles about opportunities to save energy with links to existing programs and community resources, like the California Center for Sustainable Energy (CSE), in city newsletters (print or email) 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, CSE, and SANDAG iCommute can provide materials about programs and services for residents and businesses.
4. Invite SDG&E, SANDAG iCommute and/or CSE 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 Websites

Residential Energy-Saving Programs	sdge.com/residential/rebates.shtml
Commercial Energy-Saving Programs	sdge.com/business/rebatesincentives
Educational Resources for All	SDG&E and CSE 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. 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. icommutesd.com/
Energy Upgrade California	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 LEED (Leadership in Energy & Environmental Design) Platinum buildings open to the public. The EIC is a community resource to explore the latest green technologies and learn about energy efficiency. It hosts a variety of workshops and includes a Food Service Demonstration Kitchen that hosts free seminars on energy-efficient cooking, equipment, lighting and food safety. Additionally the California Center for Sustainable Energy (CSE) 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 sdge.com/eic. For information related to solar programs and workshops, contact CSE at 858-244-1177 or visit energycenter.org.

SANDAG iCommute Programs for the Community

In addition to supporting city-employee commuter programs like those identified in Chapter 5, Solana Beach 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 City Hall, local libraries, and other public sites, and/or on municipal websites and newsletters. Include links to the 511 transit trip planner, iCommute online ridematching service, and an online cost-of-commute calculator.
- Continue participation in annual events and campaigns that encourage commute alternatives to driving alone such as Bike to Work Day, Dump the Pump, Rideshare Week, Walk and Bike to School Day:
 - Adopt proclamations and celebrate these events in your community.
 - Participate in the Bike to Work and Rideshare Week Corporate Challenges to demonstrate your commitment to sustainable commute choices.
 - Host a Bike to Work Day pit stop(s)
- Recognize and/or honor local commuters and employers who have demonstrated a commitment to sustainable commute choices.

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

Parents who use SchoolPool to find bike buddies and walking school buses can receive a free helmet for each child who bikes and a free baseball cap for each child who walks. All children who either bike or walk can receive reflective backpacks. Safety vests are provided for parent leaders.

National Educational Resources

Encourage the School District and/or individual schools to enroll in SchoolPool to provide multiple benefits, including:

- A transportation solution in districts where school bus services have been cut
- Enabling 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.
- Helping 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.



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 energystar.gov.

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

WaterSense® 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 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 epa.gov/watersense/partners/promotional.html.

Energy Programs for Residential and Business Audiences

Renewable Energy Programs

Self-Generation Incentive Programs	energycenter.org/index.php/incentive-programs/self-generation-incentive-program
The California Solar Initiative (CSI)	energycenter.org/index.php/incentive-programs/california-solar-initiative
CSI Thermal Program (Solar Water Heating)	energycenter.org/index.php/incentive-programs/solar-water-heating
Sustainable Communities Program	sdge.com/environment/sustainable-communities-overview/
SDG&E Solar Initiative	sdge.com/clean-energy/going-solar/solar-rebate-programs
Net Energy Metering	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. 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. sdge.com/smartgrid
--------------------------	--

Clean Transportation and Petroleum Reduction Programs

Clean Vehicle Rebate Project	energycenter.org/cvrp
SANDAG iCommute	icommutesd.com/
SDG&E Clean Transportation	sdge.com/cleantransportation/
The EV (Electric Vehicle) Project	theevproject.com/
SANDAG SchoolPool Program	icommutesd.com/Schoolpool

Energy Programs and Assistance for Local Businesses

Energy efficiency and Demand Response

Business Incentives	sdge.com/business/rebatesincentives
Critical Peak Pricing	sdge.com/cpp
Technical Assistance and Technology Incentives	sdge.com/tati
Project Management Builder Services	sdge.com/builderservices
Summer Saver	sdge.com/vendor/summersaver/
On-Bill Financing	sdge.com/obf
Energy Savings Bid	sdge.com/bid
Energy Challenger (energy audit tool)	sdge.com/save-money/no-cost-audits/business-energy-assessment-program
Energy efficiency Seminars	sdge.com/training
PACE Financing: CaliforniaFIRST	californiafirst.org

New Construction

Savings by Design	sdge.com/clean-energy/savings-design/savings-design
Sustainable Communities Program	sdge.com/environment/sustainablecommunities/

Energy Programs and Assistance for Residents

Comprehensive Residential Websites

SDG&E's Residential Rebates and Services	All SDG&E residential programs can be accessed from this website. sdge.com/saveenergy
Energy Upgrade California	EUC is a statewide brand for all energy-saving building retrofit programs. EUC coordinates federal, state, utility, and local retrofit program outreach, incentives, training, and qualifications. Locally, CSE is collaborating with SDG&E to coordinate the program. 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. pacenow.org

Energy efficiency and Demand Response

Advanced Home Program	californiaadvancedhomes.com/
Air Conditioning Tune-Ups	actimeprogram.com/ProjectCenter/
Summer Saver Program	sdge.com/summersaver/
Refrigerator-Freezer Recycling Program	arcaincutility.com/CA/SDGE/Step2_ZipCode.cfm?ServiceCompany=43
Clothes Washer Rebate Program	20gallonchallenge.com/programs_residential.html or (888) 376-3314
Residential Energy Survey	sdge.com/energy-efficiency-survey-0 (800) 411-SDGE (7343)
Lighting Turn in Program	sdge.com/lighting
Tax Credits	energytaxincentives.org/

New Construction Programs

Advanced Home Program	californiaadvancedhomes.com/
New Solar Homes Partnership	sdge.com/clean-energy/going-solar/applying-solar-rebates

Low Income Assistance

Residential Rate Assistance Program	sdge.com/residential/assistance/assistServCare.shtml
The Energy Team Program	sdge.com/energy-savings-assistance-program
Programs for Customers with Special Needs	sdge.com/available-assistance-programs
Multi-Family Affordable Solar Housing	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. wecalc.org/
SoCal Water Smart for Residential Customers	Available water efficiency product rebates. socalwatersmart.com/
Clothes Washer Rebate Program	20gallonchallenge.com/programs_residential.html or (888) 376-3314

This page intentionally left blank

7

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

Solana Beach 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 attemiramar.com for more information.



C U Y A M A C A
· C O L L E G E ·

**Cuyamaca Community College's San Diego Green
Building Training Collaborative**

The Grossmont-Cuyamaca Community College District (GCCCD) was awarded American Recovery and Reinvestment Act of 2009 (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 cuyamaca.edu/preview/cleanenergy/.

The San Diego Workforce Partnership

The San Diego Workforce Partnership (sandiegowork.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 (WIB).

The nearest One-Stop Career Center to Solana Beach is:

- North County Coastal Career Center, located at 1949 Avenida del Oro, Ste. 106, Oceanside CA, 92056. For more information, visit northcountycareercenters.com/

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 sdge.com/eic.

Statewide Resources for Training and Education



Grid Alternatives

Grid Alternative (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 (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 (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.

This page intentionally left blank

Looking Forward

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

Energy-Saving Funding Opportunities

Local Government Partnerships with San Diego Gas & Electric®

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

Prior to the start of new program cycles, SDG&E announces a request for abstracts for future local government partnership programs. The next program cycle, to be determined by the CPUC, will likely begin in January 2016. Using its Energy Roadmap as a guide, Solana Beach 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, and
- Energy plan development.

Emerging Cities Program with San Diego Gas & Electric

SDG&E has developed a smaller grant program that cities can apply to for funding to implement specific components of their Energy Roadmaps that cannot be funded through the SANDAG LGP. The program is available through 2015, and your Energy Roadmap coordinator can arrange a meeting with the appropriate SDG&E program staff to learn about this grant opportunity. In 2014, activities funded at local cities include:

- Expansion of a green business program
- Assessment of PACE programs for City consideration
- Greenhouse gas inventory
- Energy chapters for a Climate Action Plan
- Energy-related implementation measures for an adopted Climate Action Plan



State Energy Program Grants and Energy efficiency and Conservation Block Grants

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

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



Clean Vehicle Rebate Project

The Clean Vehicle Rebate Project (CVRP) is funded by the California Air Resources Board (CARB) and administered statewide by the California Center for Sustainable Energy (CCSE). A total of \$109.6 million was appropriated for FY 2014-2015 to promote the production and use of zero-emission vehicles (ZEV), 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 AB 118: Alternative and Renewable Fuel & Vehicle Technology Program

Assembly Bill 118 (AB 118): Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) authorized 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. The program runs through 2024 and the 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 the ARFVTP and the associate investment plan can be found on the CEC website: energy.ca.gov/altfuels.



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 sandag.org/cycle3grants.

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 sandag.org/cycle3grants.

Non-Financial Resources for Local Governments



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 energystar.gov.

The U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy 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 energystar.gov/index.cfm?c=government.bus_government.

WaterSense® WaterSense Promotional Partners

The EPA also promotes water conservation efforts through its WaterSense program that helps consumers identify water efficient products and programs that meet EPA's 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 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 epa.gov/watersense/partners/promotional.html.



The Beacon Award

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

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

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

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

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

San Diego Gas & Electric

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

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



California Center for Sustainable Energy

The California Center for Sustainable Energy (CCSE) (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 (REVI), 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 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, sfr@sandag.org or visit sandag.org/energy.



SANDAG iCommute Program

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



Statewide Energy Efficiency Best Practices Coordinator

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

Statewide Energy Efficiency Collaborative

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

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



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 California Center for Sustainable Energy (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 sdcleancities.org.



www.sandag.org/energy

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

