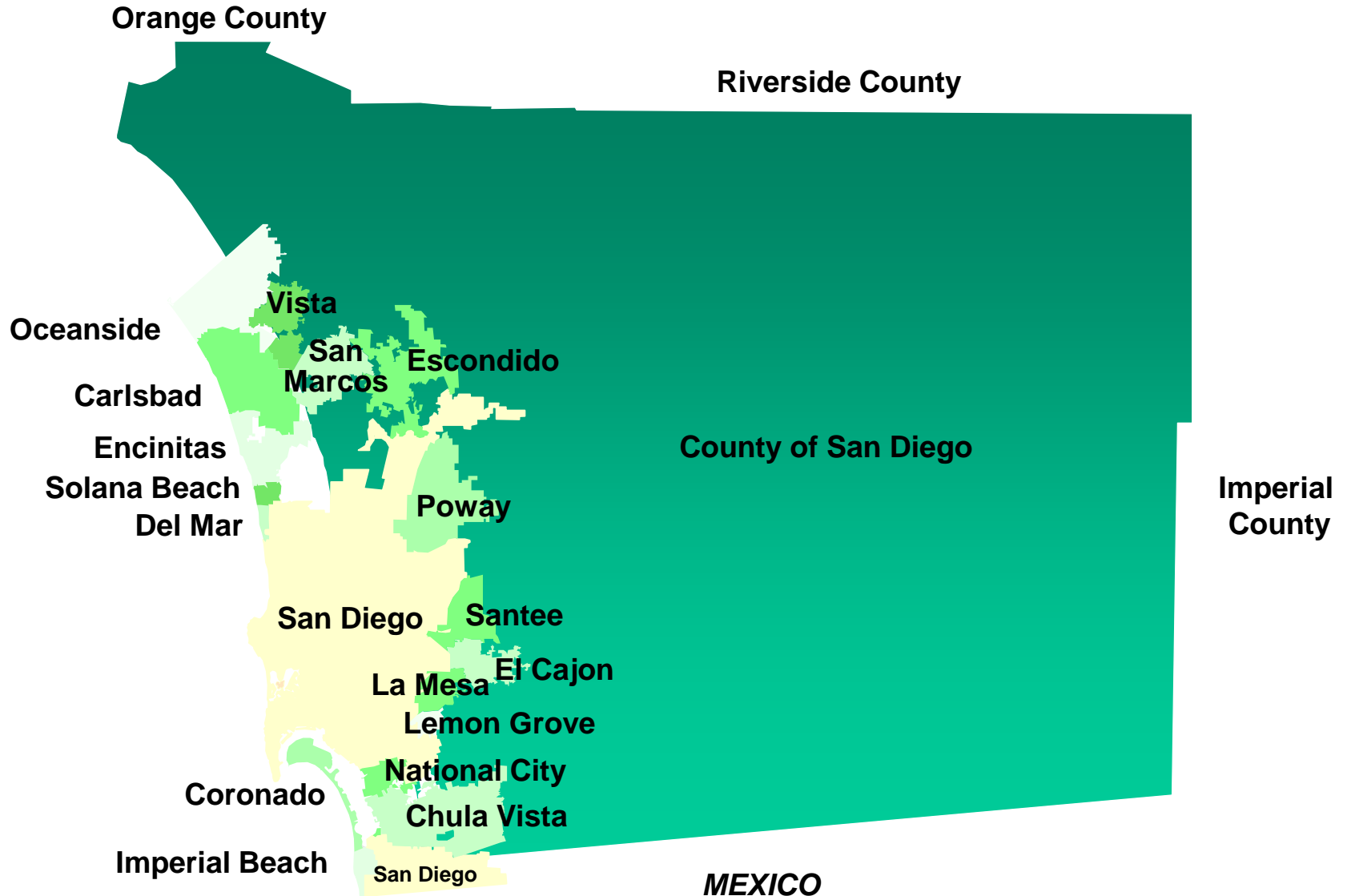


CLIMATE ACTION PLANNING: A REGIONAL PERSPECTIVE

November 21, 2014 – San Diego American Planning Association
Allison Wood, Associate Regional Energy/Climate Planner

San Diego Region



State Framework for Reducing GHGs

**Executive Order S-3-05
(2005)**

Two statewide goals:

- Return to 1990 GHG levels by 2020
- Reduce 80% below 1990 by 2050

Assembly Bill 32 (2006)

- Set the 2020 reduction target into law
- California Air Resources Board to prepare Scoping Plan

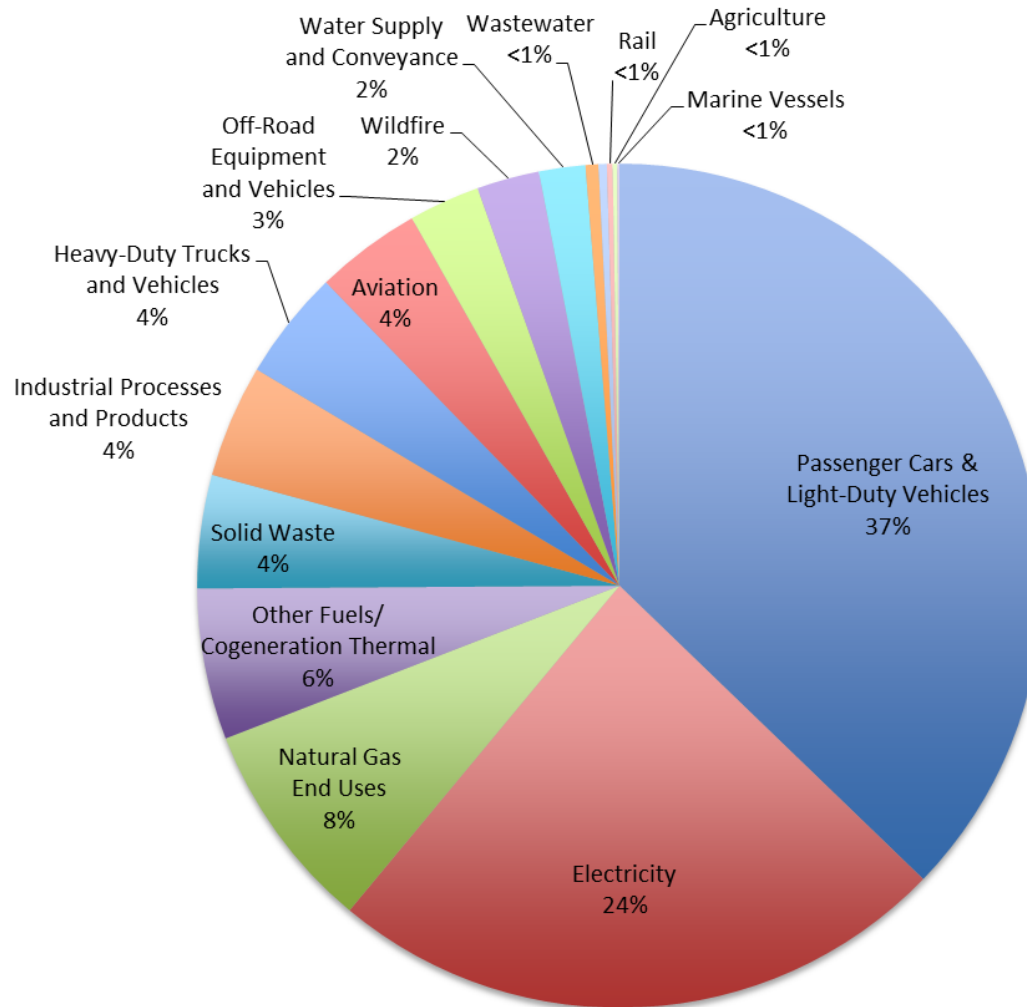
Senate Bill 97 (2007)

CEQA Amendments for GHG emissions

Senate Bill 375 (2008)

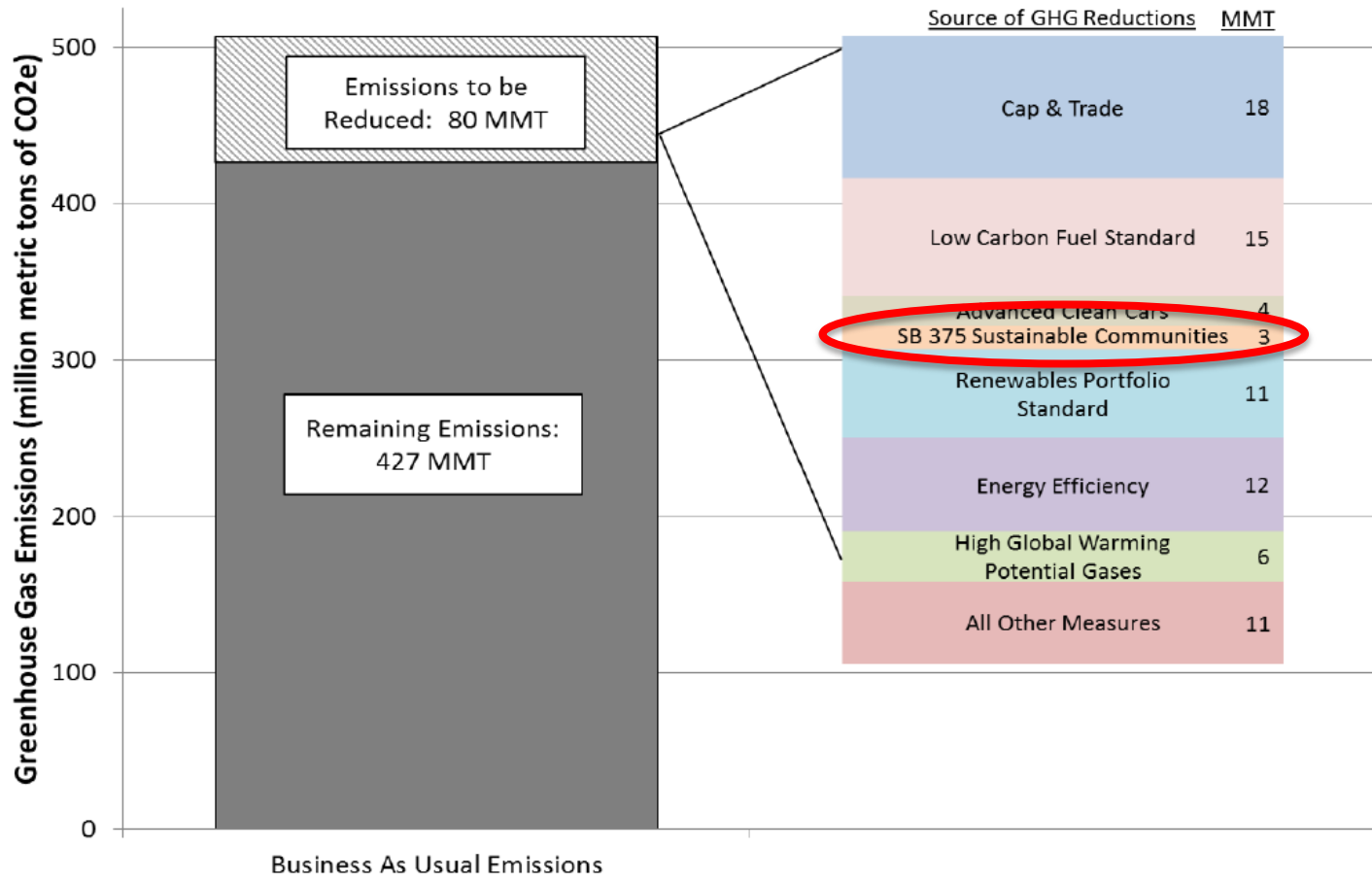
Metropolitan planning organizations to reduce transportation-related GHGs through land use and transportation planning

San Diego Region 2012 Greenhouse Gas Emissions Inventory



Source: Energy Policy Initiatives Center (EPIC)

Statewide 2020 GHG Emissions and Sources of Reductions



SANDAG Energy and Climate Planning

Regional Energy Strategy

for the
San Diego Region



December 2009
Updated June 2014



SAN DIEGO ASSOCIATION OF
GOVERNMENTS

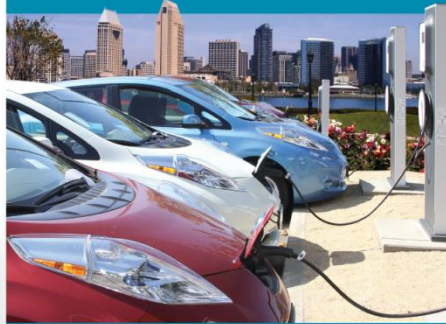
CLIMATE ACTION STRATEGY

FINAL

March 2010



San Diego Regional
PLUG-IN ELECTRIC VEHICLE (PEV) READINESS PLAN
Preparing the San Diego Region for Plug-In Electric Vehicles



November 2013



City of San Marcos Energy Roadmap



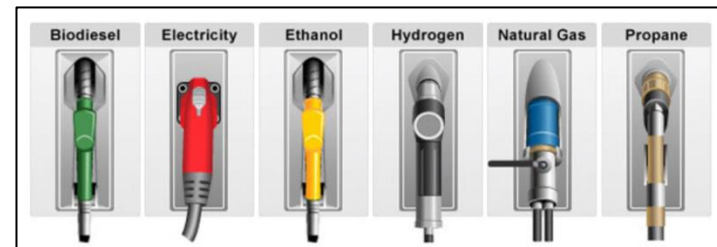
Prepared through the SANDAG
Energy Roadmap Program

November 2011

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



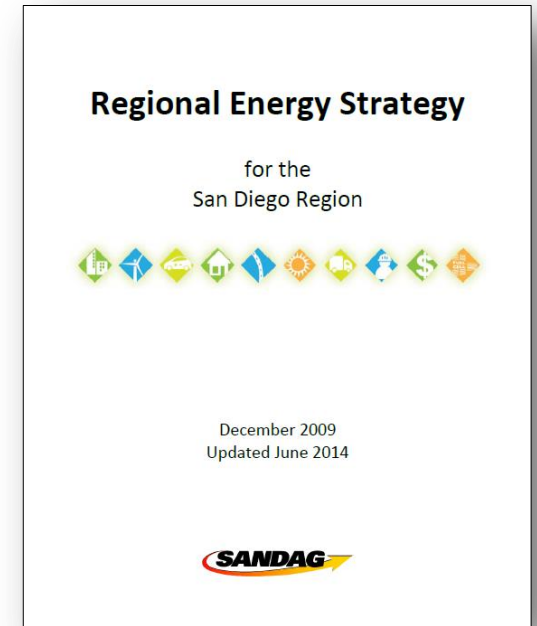
refuel



San Diego Regional Alternative Fuel
Coordinating Council

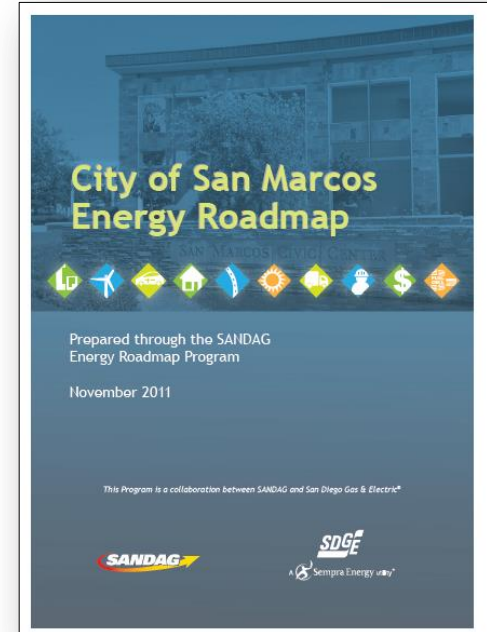
Regional Energy Strategy (RES)

- Energy policy guide for the region
- Used by:
 - SANDAG
 - Member agencies
 - Regional stakeholders
- Last RES adopted in 2009
- Technical update in 2014
 - Developed by Regional Energy Working Group
 - Existing conditions and forecast to 2050
 - Demonstrates progress toward 11 goals

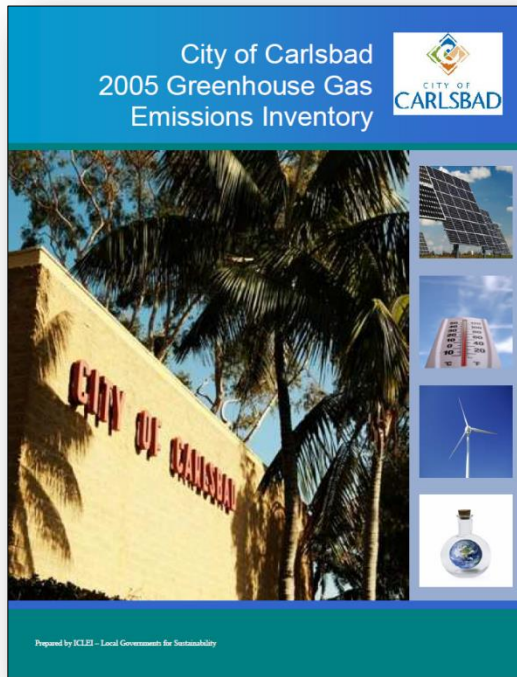


SANDAG Energy Roadmap Program

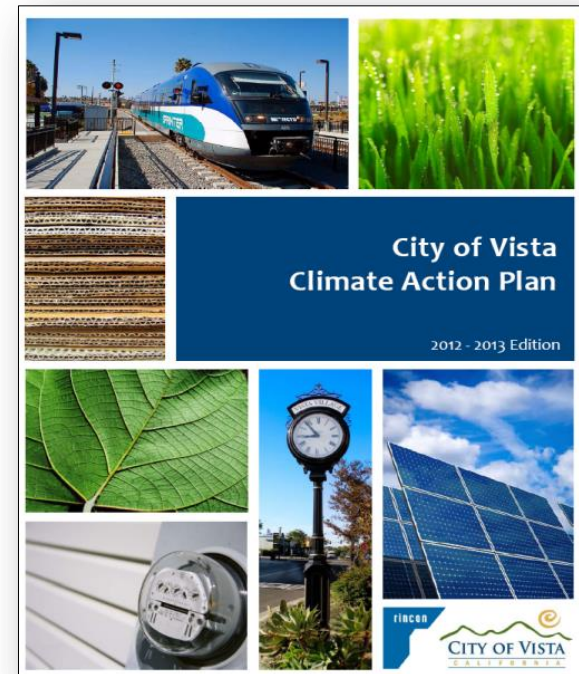
- Partnership with SDG&E
- Energy savings in government operations and community
- Roadmap implementation assistance:
 - Municipal retrofits
 - Energy/climate planning
 - Community outreach/programs
 - Green business
 - Subregional collaboration
- More info: www.sandag.org/energyroadmap



Local Government Climate Action Planning



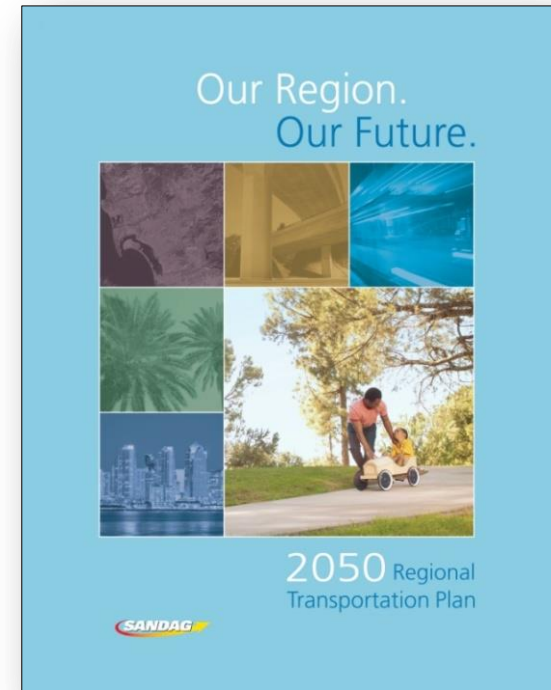
All 19 jurisdictions have completed a GHG inventory



Seven jurisdictions have adopted a Climate Action Plan, another six are in development

Transportation – Reducing VMT

- **SB 375 Requirements**
 - State sets regional targets for per capita GHG reductions from passenger vehicles
 - SANDAG develops SCS for acceptance by CARB
- **Efforts to Reduce VMT**
 - Smart growth development
 - Mobility options
 - Active transportation
 - iCommute/TDM strategies
 - Parking strategies



Transportation – Fuel Efficiency and Low Carbon Fuels

State

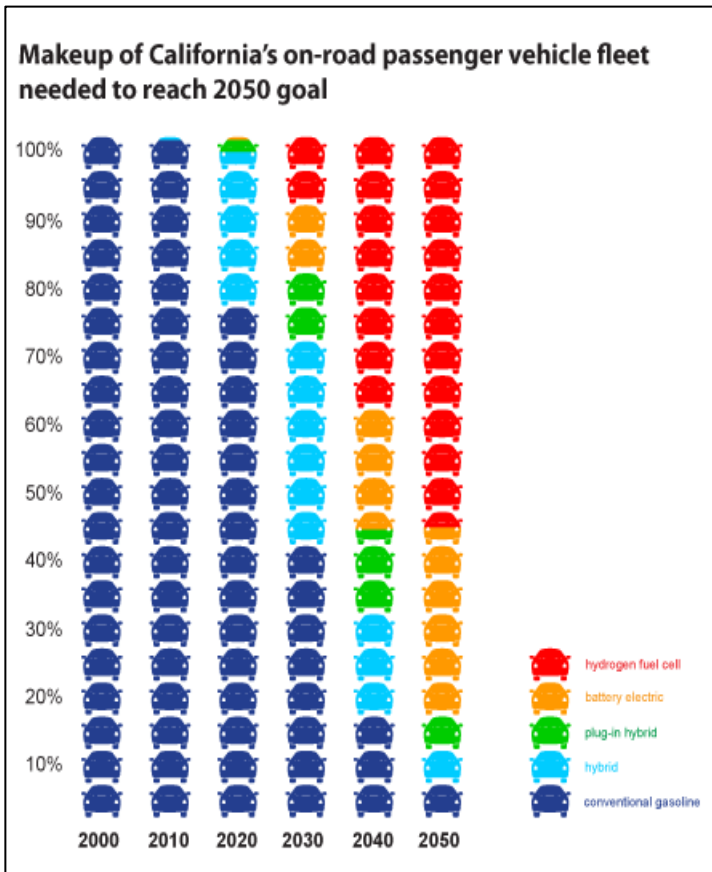
- Vehicle emissions standards
- Rebates for consumers
- Low Carbon Fuel Standard

SANDAG

- Readiness planning for EVs/alt fuels
- EV charging at transit facilities
- Energy Roadmap fleet assessments

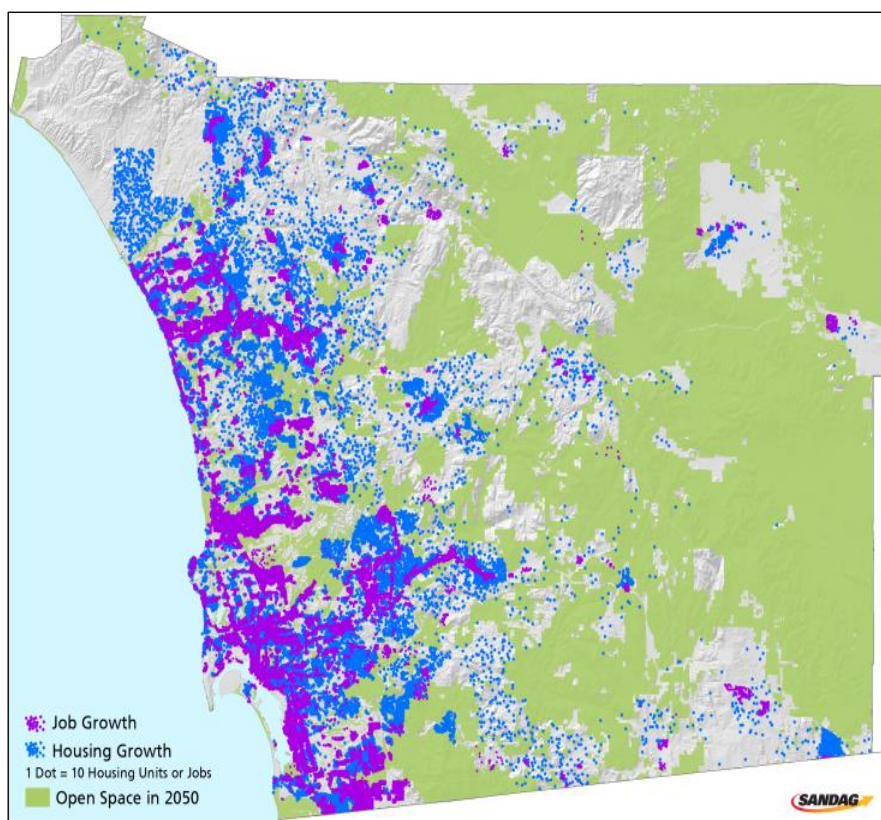
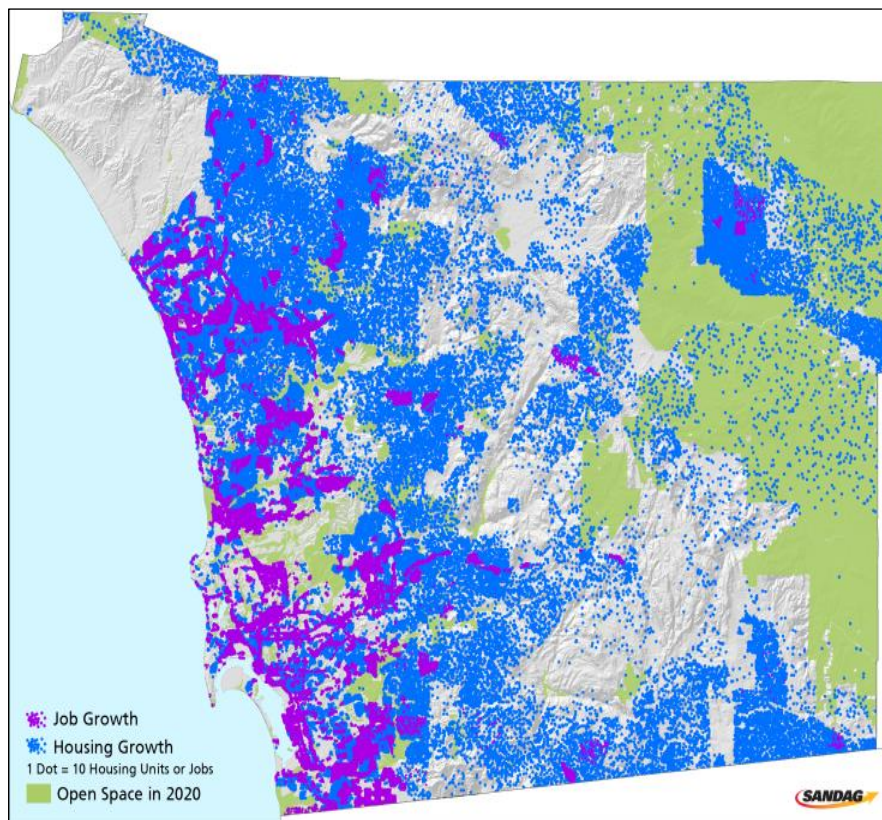
Local Governments

- Facilitate infrastructure installations
- Integrate EVs/alt fuels into gov't fleet
- Improve traffic flow and efficient driving




Land Use

Comparison of Housing and Job Growth Projected in 1999 vs. 2013



Electricity & Natural Gas



CA Energy Efficiency Strategic Plan
January 2011 Update

www.Engage360.com **Engage 360**

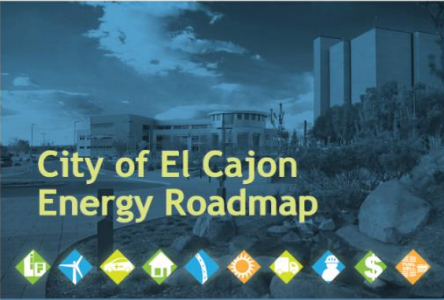


SANDAG
San Diego Association of Governments

REGIONAL ENERGY STRATEGY

2009

energy
regional energy and
products.
Board of Directors
2009



City of El Cajon Energy Roadmap

Prepared through the SANDAG Energy Roadmap Program
August 2013

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

SANDAG **SDGE**
A Sempra Energy utility

State Framework for Addressing Climate Impacts

**Executive Order S-13-08
(2008)**

- CA Sea Level Rise Assessment Report
- State Climate Adaptation Strategy
- Land use planning guidance

**CA Climate Adaptation
Strategy (2009)**

Describes impacts, risks and strategies for climate adaptation in several sectors

**CA Coastal Commission
Draft Sea Level Rise
Guidance (2013)**

Recommends steps for addressing sea level rise in coastal zones

**Safeguarding California:
Reducing Climate Risk
(2014)**

CA Natural Resources Agency update of the 2009 Adaptation Strategy with advances in climate science and risk management options

Climate Change Impacts



Climate Change Impacts

San Diego, 2050 Is Calling. HOW WILL WE ANSWER?



FACING THE FUTURE:

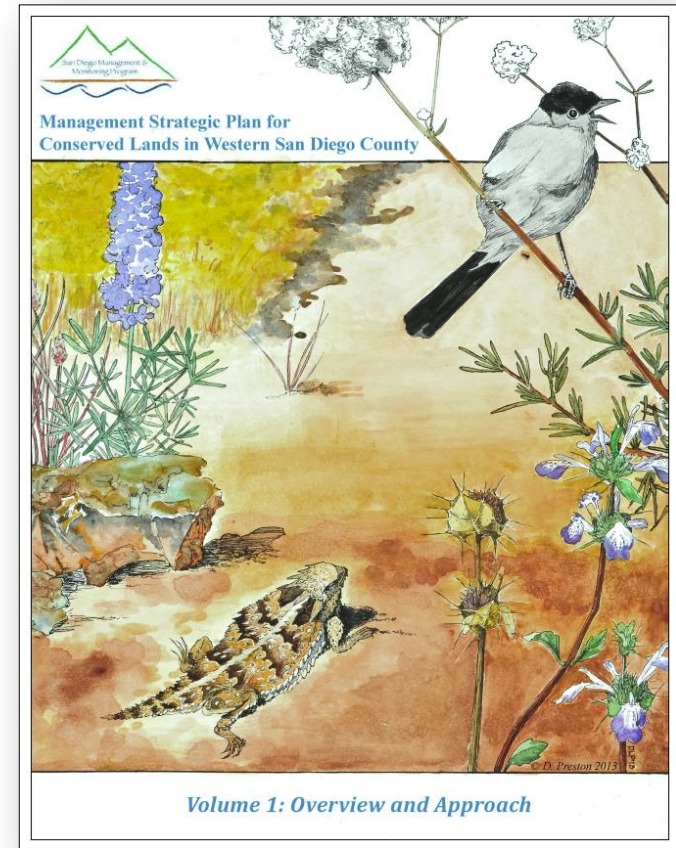
How Science Can Help Prepare San Diego Regional Leaders for Climate Change

Temperature	+4.8° F in annual average temperature
Precipitation	16% fewer rainy days, and 8% more rainfall during the biggest rainstorms
Water Resources	12% decrease in the runoff and streamflow due to less snowpack and greater evaporation
Sea Level Rise	5 to 24 inches of sea level rise
Wildfires	Longer and less predictable fire season; larger and more catastrophic fires; and higher number of poor air quality days as a result.
Habitat	Threats to coastlines and beaches, wetlands, and unique plants and animals
Public Health	7 times as many days of extreme heat per year

www.sandiego.edu/2050

SANDAG Adaptation Planning

- Consider impacts on transportation infrastructure
- Shoreline preservation
- Habitat conservation



Local Government Adaptation Planning

- Beginning to address adaptation in CAPs:
 - Reduce urban heat island
 - Water conservation
 - Emergency/disaster preparedness
 - Prepare for extreme heat events
- Collaborative efforts:
 - Sea Level Rise Adaptation Strategy for San Diego Bay
 - Climate change considerations in County of San Diego Multi-Jurisdictional Hazard Mitigation Plan

Interrelationships - Economics

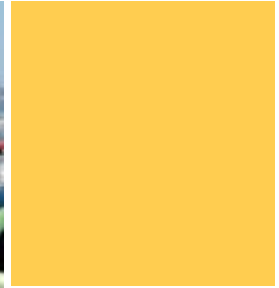
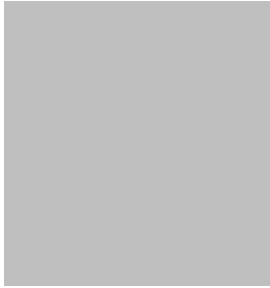
- Energy and water savings equate to economic savings
- Job growth opportunities:
 - Cleantech sector
 - Local jobs for energy contractors/engineering
- Preparing for impacts of climate change now can avoid or reduce costs in the future

Interrelationships – Social Equity and Public Health

Strategy to Reduce GHGs	Potential Health/Social Equity Co-Benefits
Reduce vehicle miles traveled	<ul style="list-style-type: none"> • Reduce air pollution • Increase physical activity • Reduce chronic disease (such as asthma and heart disease) • Improve mental health • Improve access to low-cost alternative transportation options
Increase fuel efficiency and use of cleaner fuels in vehicles	<ul style="list-style-type: none"> • Reduce air pollution
Reduce emissions through land use changes such as more compact growth	<ul style="list-style-type: none"> • Increase physical activity • Reduce chronic disease • Increase local access to essential services (affordable housing, jobs, amenities) • Enhance safety for biking and walking with reduced vehicle speeds and reduced collisions
Reduce residential building energy and water use	<ul style="list-style-type: none"> • Reduce household energy costs (especially beneficial for low-income households) • Promote healthy homes • Create local green jobs • Promote cooler communities through shade trees and cool pavements
Urban greening	<ul style="list-style-type: none"> • Reduce temperature and urban heat island health effects • Reduce air pollution • Reduce noise • Enhance safety

Moving Forward: Activities for 2015

- San Diego Forward: The Regional Plan
- Energy Roadmap Program Continuation
- Alternative Fuel Readiness Planning
- Electric Vehicle Readiness Implementation
 - New grant from CA Energy Commission
- Regional Collaboration



THANK YOU!

Allison Wood, Associate Regional Energy/Climate Planner

allison.wood@sandag.org