



# **Ventura County Climate Change Actions**



# Climate Change Strategies in County Government

- Energy Efficiency in County Operations
  - New Construction
  - Existing Facilities
  - Fleet
  - Renewable Energy – Solar Electric
- VCREA Collaboration
- Education and Outreach
  - Air Pollution Control District
  - Resource Management Agency
- Regulatory
  - Resource Management Agency



# PWA's Climate Change Strategies

- Design new facilities to:
  - Reduce energy consumption
  - Increase energy efficiency
  - Promote sustainable living
- Participate in green building programs:
  - Leadership in Energy and Environmental Design (LEED)
  - Savings by Design
- Saves \$94,000 per year in energy costs

# PWA – What's Completed

## ■ Juvenile Justice Detention Center

- Reduced energy use by 584,000 kWh/yr
- Reduced CO<sup>2</sup> by 730,000 lbs/yr
- Cost savings of \$70,080/yr



## ■ Oak Park Library

- Reduced energy use by 31,000 kWh/yr
- Reduced CO<sup>2</sup> by 38,750 lbs/yr
- Cost savings of \$2,818/yr





# **PWA - What's Next**

## **New facilities considered for LEED certification**

- Fire Stations
- Todd Road Jail Expansion
- Juvenile Justice Center Office Complex



# GSA's Climate Change Strategies

- **Existing Facilities**
  - Conservation/Efficiency
- **Fleet**
  - Vehicles
  - Fuels
  - Emissions

# GSA – Facilities

## What's Completed - 2001-06

Project Description	Net Project Cost	Annual Pounds of CO2 Reduction	Annual Cost Savings
HVAC Replacement	\$ 1,563,176	480,335	\$ 49,146
Replace Chillers	\$ 704,000	1,125,000	\$ 117,000
Upgrade Boiler	\$ 343,639	378,455	\$ 34,405
Install VFD	\$ 172,219	960,828	\$ 85,371
Lighting Retrofit	\$ 436,896	1,250,193	\$ 130,315
Install Low-Flow Kitchen Sprayers	\$ -	80,729	\$ 7,339
<b>Totals</b>	<b>\$ 3,219,930</b>	<b>4,275,540</b>	<b>\$ 423,576</b>

- Received \$391,339 in incentives (from our partners at VCREA)
- Saving over \$400,000 per year through energy efficiency.
- Eliminating 2,138 tons of greenhouse gases per year.
- Average Payback Period = 7.6 Years
- Average Return on Investment = 13.15%



# GSA – Facilities

## What's Completed - 2005-06

- Completed over 23 energy efficiency projects in last 2 fiscal years
- Six county buildings recognized as ENERGY STAR Buildings in 2006
  - County is in top 18% nationally for energy efficiency
  - Over 642,000 SF of ENERGY STAR buildings
- Received approx. \$511,985 in incentives from our partners at VCREA
- Saving over \$237,000 per year through energy efficiency on 2005-06 projects
- Eliminating 1,250 tons CO<sup>2</sup> per year



# GSA – Facilities

## What's Next

- Approximately 20 GSA projects identified
- \$1.3 million cost after incentives
- Expected annual cost reduction of \$195K
  - (6.1 year payback) at today's rates
- Will reduce CO2 emissions by another 1015 tons. Again this will compound annually!!!

# GSA – Fleet Operations

## What's Completed

- 61 hybrid sedans (up from 44 last year)
- 14 hybrid SUVs (up from 7 last year)
- 13 Compressed Natural Gas (CNG) vehicles
- Converted to Ultra Low Sulfur Diesel ahead of State requirement
- On track to meet 2007 diesel emission rules

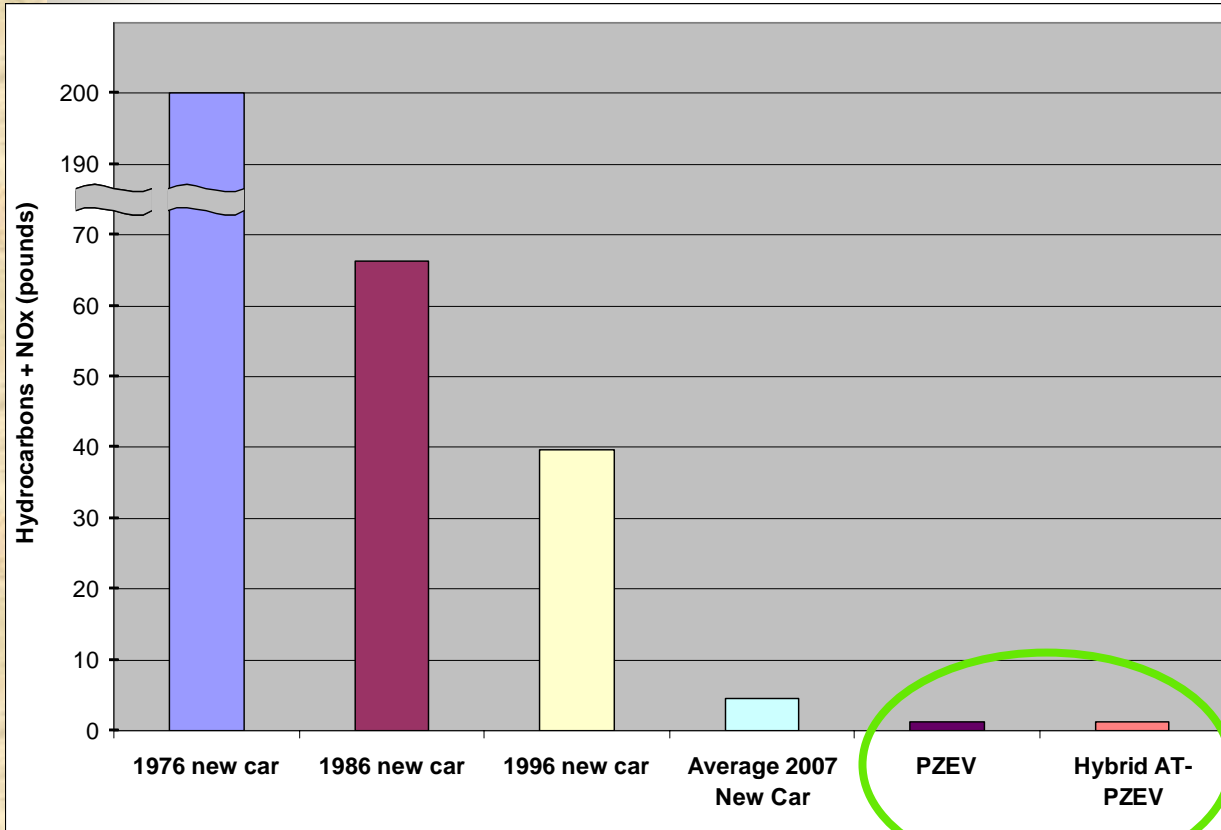


**Since implementing Hybrid policy in 2002:**

- @20K gallons of fuel saved
- @194 tons CO<sub>2</sub> reduced

# GSA - Fleet Operations - What's Next

## Partial Zero Emission Vehicle (PZEV)



*“[A new PZEV] is so clean, it would take 330 of them running at the same time to equal the smog-forming emissions of one typical 1971 car, the first California emission controlled vehicle.”*



Exponential emission reduction



# **GSA - Renewable Energy What's Next**

- **More Solar Projects under consideration**
  - Longer paybacks
  - May require special financing
  - Power Purchasing Agreements (PPA)
  - Opportunity for significant long term Greenhouse Gas Reductions



# Ventura County Benefits from VCREA Collaboration

- Provided project funds for retrofits that enhance and exceed standards
- Provided technical assistance
- Provided technical training
- Identified projects
- Developed funding strategies
- Developed bid specifications
- Participated in county events



# **VCREA – What’s Completed (in addition to GSA Projects)**

- Oxnard & Camarillo Airports-Lighting Retrofits
  - Saving over \$54,000 per year
  - Eliminating approx. 500,000 lbs CO2 per year
- Health Care Agency-Lighting Retrofits
  - Saving over \$120,000 per year
  - Eliminating 1,250,000 lbs of CO2 per year
- Fire Protection District
  - Solar Electric at 12 Fire Stations – 15% reduction
  - 10 new facilities exceed Title 24 requirements
  - Energy efficient lighting at most facilities
  - Tankless water heaters at 5 Fire Stations
  - Energy efficient HVAC systems in 9 buildings; replacing all HVAC over 15 yrs old with high efficiency units



# VCREA - What's Next

- Continue building efficiency upgrades at various county facilities
- Develop strategies for on site generation and renewables.
- Identify funding opportunities for energy efficiency and renewables
- Continue long term regional energy program support

# Air Pollution Control District What's Completed

## Public Information & Outreach Program

- VC Star – Clean Air Today Supplement
- Ongoing public education on reducing greenhouse gases





# Air Pollution Control District What's Next

- Prepare for AB 32 implementation
- CAPCOA Climate Change Committee
- Evaluate District Incentive Programs for GHG reduction opportunities
- Harmonize Criteria Pollutant Programs & Climate Change Programs when possible

The header features a collage of nature-related images: a white star-shaped flower on the left, a bird in flight in the center, and a close-up of blue and white flowers on the right. Below these images is a horizontal band with a yellow and white checkered pattern.

# Resource Management Agency Climate Change Strategies

- Education and Outreach
- Land Use Regulations

# RMA- Education and Outreach

## What's Completed

- Initiated “Build It Smart” website, describing energy efficiency tips for County residents
- Conducted Green Building presentations for other County agencies

**build it smart!**  
www.builditsmartvc.org

**why**  
why build smart?

**stories**  
smart building in ventura county

**ideas**  
energy smart design ideas

**david's picks**  
energy saving ideas from an expert

**expert advice**  
free design assistance

**guidelines**  
green building guidelines & certification

**rebates**  
rebates and incentives

**resources**  
resources and links

**background**  
energy basics, Title 24 info & more

**contact**  
contact us

county of ventura planning  
dept. home



### The Art of Climate Control



**Building Type:** Agricultural greenhouse  
**Location:** Victoria Avenue at Doris, Oxnard  
**Size:** 160,000 square feet  
**Owner:** Pyramid Flowers  
**Contact:** Fred Van Wingerden  
(805) 732-1462  
fred@pyramidflowers.com  
**Costs:** Greenhouse \$1.6 million;  
heat curtains \$160,000  
**Energy Savings:** \$25,000 per year in increased  
production and natural gas  
savings from heat curtains  
**Payback:** Six years  
**Other Savings:** Increased yield due to temperature  
and humidity management

To control the temperature and humidity in its 50 acres of outdoor flower fields in Oxnard, Pyramid Flowers is pretty much at the mercy of Nature. But inside its 20 acres of greenhouses it's a completely different story.



"We use and reuse heat. You're creating an artificial environment, so you want to do that as efficiently as possible."





# RMA - Education and Outreach

## What's Next

- Assist with Employee Energy Efficiency Education Program
- Pursuing funding to:
  - Expand Build It Smart website
  - Address Climate Change/Water Conservation connection



# RMA-Land Use Regulation

## What's Completed

- Prepared Draft Report on Energy-Related Land Use Planning Policies and Programs
  - Addresses opportunities to reduce energy consumption in the built environment
  - Identifies revisions needed to ensure additional savings



# RMA-Land Use Regulation What's Next

- Prepare revisions identified in Report on Energy-Related Land Use Planning Policies and Programs
- Coordinate with cities to implement regional, Climate Change-related policies on land use and transportation



# AB 32 – the Global Warming Solutions Act of 2006

- State requirement to reduce global warming emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.
- Local Governments will be required to participate.
- Comprehensive County Energy/Sustainability Policy will prepare the County for AB 32 mandates, minimizing expense and disruption.



# Climate Change Action–What’s Next?

- Analysis of Funding Mechanisms for CCAP planning and implementation
- Near Term Actions
  - Prepare Countywide Energy Policy
  - Form Countywide Coordinating Committee
  - Implement Employee Energy Efficiency Education Program
  - Join California Climate Action Registry (CCAR) and International Council for Local Environmental Initiatives (ICLEI)
  - Evaluate major capital building projects for LEED and/or Savings by Design
  - Promote County participation in “Energy Star Change a Light Campaign
  - Continue/expand partnership with Ventura County Regional Energy Alliance



# Climate Change Action–What’s Next?

- Prepare and implement Climate Change related land use and transportation policy revisions
- Pursue Grant funding
  - Many Grantor agencies are revising funding criteria to address Climate Change issues