

# Working with Our Customers to Address Climate Change



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# Putting Energy Efficiency First in Oakland

- Partnered with local chambers of commerce and Easy Bay Energy Watch to make almost 12,000 local businesses more energy efficient:
  - Saved 99 million kWh of electricity and 900,000 therms of natural gas, and reduced greenhouse gas emissions by approximately 75,000 metric tonnes of CO<sub>2</sub>
- Coordinated replacement of thousands of steam traps at dry cleaners to increase gas energy efficiency, saving over 100,000 therms.
- Facilitated installation of over 4,000 energy-efficient light bulbs in the Lake Merritt “Necklace of Lights,” reducing energy and maintenance costs.



# Energy Efficiency – The Savings Add Up

## Cumulative Savings

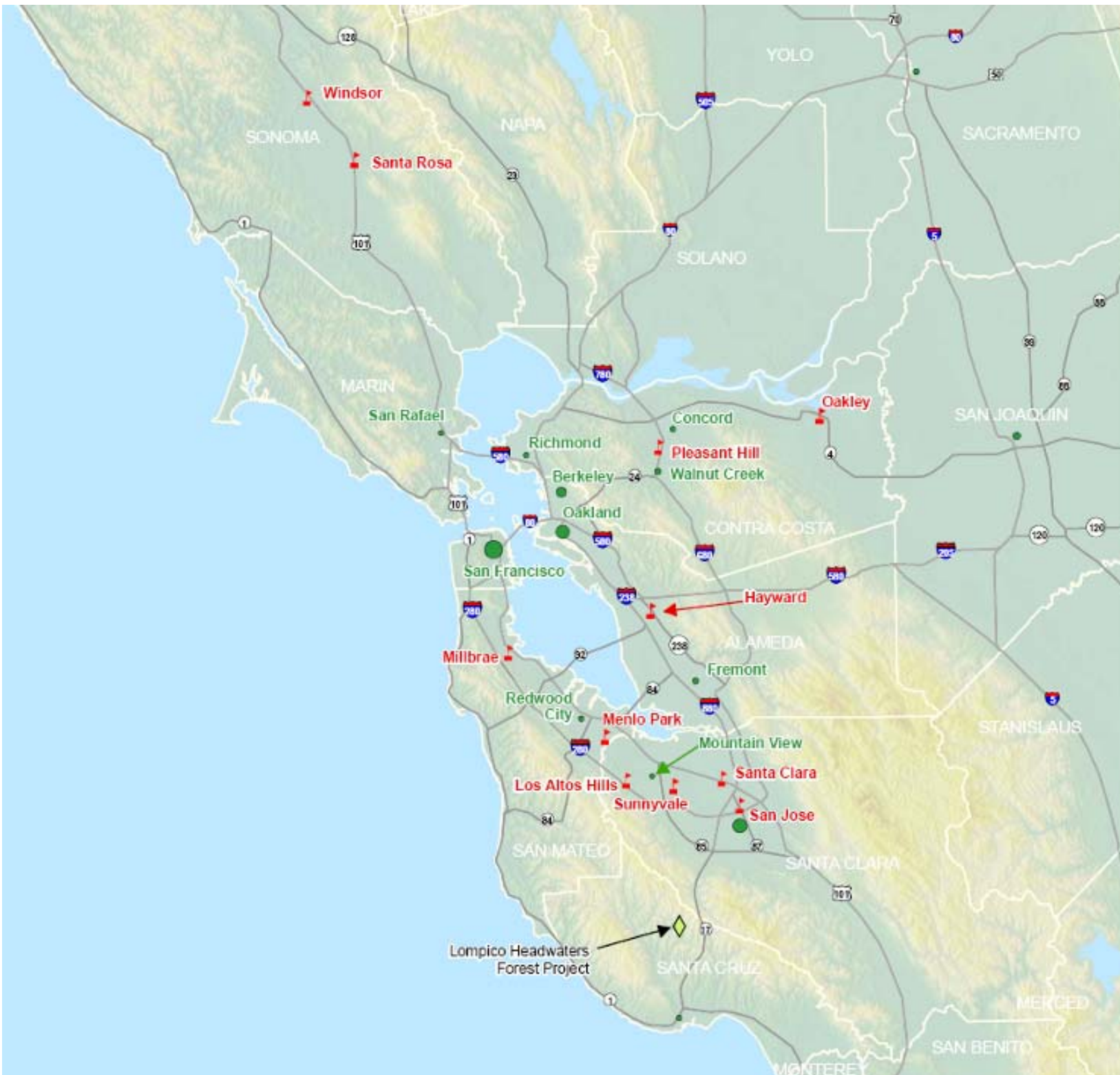
- Since 1976, PG&E has helped customers save almost \$24 billion and prevented more than 155 million tons of CO<sub>2</sub> from being emitted to the atmosphere, based on cumulative lifecycle savings.

## Potential Savings

- McKinsey found that, through energy-efficiency, it is possible to reduce the growth rate of global energy consumption by more than 50% over the next 15 years—with technology available today.



Through trials in Oakland and San Francisco, PG&E is demonstrating the energy-saving potential of LED streetlights.



-  Enrolled Cities
-  ClimateSmart Customers
-  Lompico Headwaters Forest Project

As of April 29, 2009

# ClimateSmart™ Projects



## Lompico Headwaters Forest

- Reduces greenhouse gas emissions by permanently preserving 202 acres of trees that were once slated for harvest and that continue to absorb and trap carbon.
- Located within the 425-acre Lompico Headwaters in the Santa Cruz mountains.



# California Eligible Renewable Resources

## Traditional:



Biomass Energy



Wind Energy



Small Hydropower  
( $<30\text{MW}$ )



Geothermal Energy

## Emerging:



Solar Energy



BioGas



Ocean Power

Also includes fuel cells using renewable fuel, biodiesel, and municipal solid waste conversion using a non-combustion thermal process

# Toward a Smart Grid

A smart grid has the potential to facilitate the move toward the low carbon economy



Renewable Electric Generation



Efficient Electric Delivery



Managed Electric Demand



- Cleaner generation portfolio
- Efficient use of grid resources
- Broad deployment of energy efficient infrastructure
- Increased energy awareness and conservation
- Plug-in hybrid electric vehicles

# Next Generation Technologies

