

**CALIFORNIA STREET LIGHT ASSOCIATION
ANNUAL CONFERENCE
SAN DIEGO, 2011**

**Financing Energy Efficiency
Projects for Local Government**

Adel Suleiman
California Energy Commission

MAY, 2011



Energy Commission & Its Functions

**Energy policy and information
advisor to the California governor
and the legislature**

- **Major functions:**
 - License power plants
 - Assess current and future energy trends
 - Advance energy technologies program (PIER)
 - Develop Buildings & Appliance Standards
 - Promote energy efficiency and renewable energy



Energy Commission Programs for Local Government

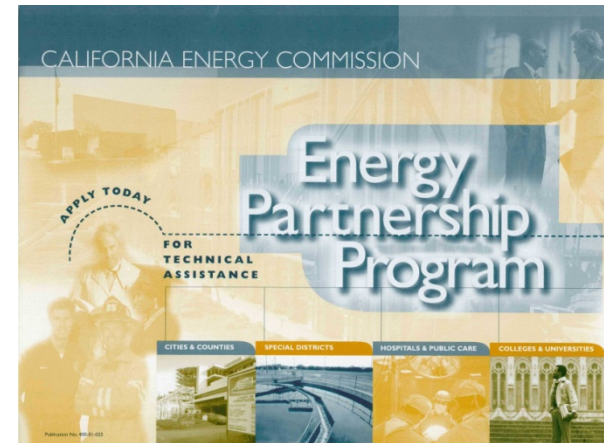
- Technical Assistance Programs to Help Identify Energy Saving Projects
 - ☑ Energy Partnership Program

- Energy Efficiency Financing
 - ☑ Can provide up to 100% of your project costs
 - ☑ Energy savings are used to repay back the loan



Energy Partnership Program

Do you need help
identifying energy
projects?



- We can provide:

- ☑ Comprehensive energy audits for both gas and electric systems
- ☑ Project specific feasibility studies such as street lighting
- ☑ New construction and retrofit project review assistance
- ☑ Contractor selection and bid specification assistance
- ☑ DOE qualified specialist to assess your steam and heating systems and provide training to maximize energy savings

Energy Commission pays up to \$20,000 of our consultant's cost



Energy Partnership Program

Partial List of Participants

- City of Los Angeles
- City of Sacramento
- University of Santa Barbara
- Sonoma Valley Hospital
- Town of Hillsborough
- Town of Los Gatos
- City of Claremont
- San Bernardino CCD
- City of Eureka
- College of Marine
- City of Sierra Madre
- Public Hospitals
- City of Pinole
- City of Dixon
- City of Solana Beach
- City of Lynwood
- City of West Covina
- City of Elk Grove
- City of Garden Grove
- Town of Los Altos Hills
- City of Pasadena
- Ohlone College
- San Bernardino College
- San Francisco City College
- Lake Tahoe Comm. College



Energy Efficiency Funding Available Now: \$5 Million

- Funding for energy efficiency and self generation projects
- Interest rate is 3.0%
- Can provide up to 100% funding for projects
- Up to \$3 million per application — no minimum

EASY LOANS
No application fees, points, or hidden costs

Interest Rate
3%

FINANCING FOR ENERGY EFFICIENCY
& ENERGY GENERATION PROJECTS


APPLICATION

- Public Schools & Colleges
- Local Governments
- Special Districts
- Public Hospitals
- Public Care Institutions

ARNOLD SCHWARZENEGGER
Governor

California Energy Commission

<http://www.energy.ca.gov/efficiency/financing/index.html>
Phone: (916) 654-4104


CEC-400-2007-010

First come, first served



Unique Financing Features

- Simple application, no points or fees
- Technical review of each application
- Pay us back with the estimated savings from your projects
- First payment due min. 6 months after project completion and after energy cost savings are accrued
- Up to 15 years to pay us back, no penalty for paying us back early
- Funds can supplement incentives/rebates
- Loans are not collateralized or secured
- Complementary technical support available during and after project installation
- **Max. Loan = Annual cost savings x 11 years**



Typical Funded Projects

- Interior and Exterior Lighting and Controls
- Street and Roadway Lighting and Controls
- HVAC Replacement and Controls
- Motors and Pumps replacements and Controls
- Ground or Roof Mounted Photovoltaic (PV) Systems
- Energy Management Systems (EMS)
- Chiller Replacement, Cooling Towers
- Co-Generation (Fuel cell, Micro turbines, etc..)
- Load Shifting systems (TES, Ice Storage, etc..)
- LED traffic signals retrofits
- Any Energy Cost Saving Project



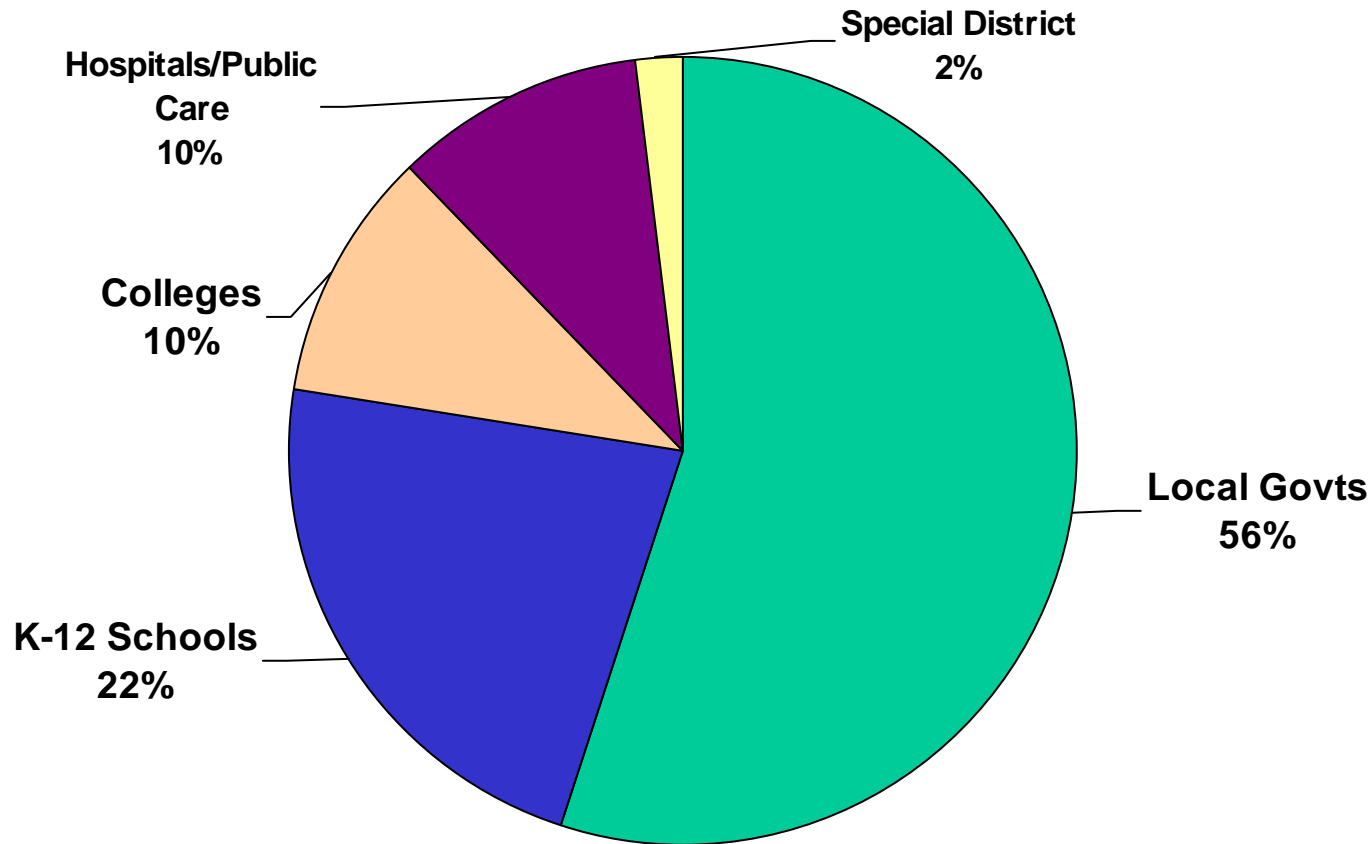
Energy Efficiency Financing

Partial List of Loan Recipients

- County of San Diego
- County of Alameda
- County of San Mateo
- Contra Costa County
- County of Napa
- County of Sonoma
- County of Solano
- Riverside County
- Ventura County
- County of Santa Clara
- San Mateo Co Harbor Dist
- City of San Diego
- City of Los Angeles
- City & County of SF
- City of Bellflower
- City of West Covina
- City of Palm Springs
- City of Garden Grove
- Town of Los Altos Hills
- City of Pasadena
- Shasta College
- San Joaquin Delta College
- Irvine Valley College
- Grossmont-Cayamaca CCD

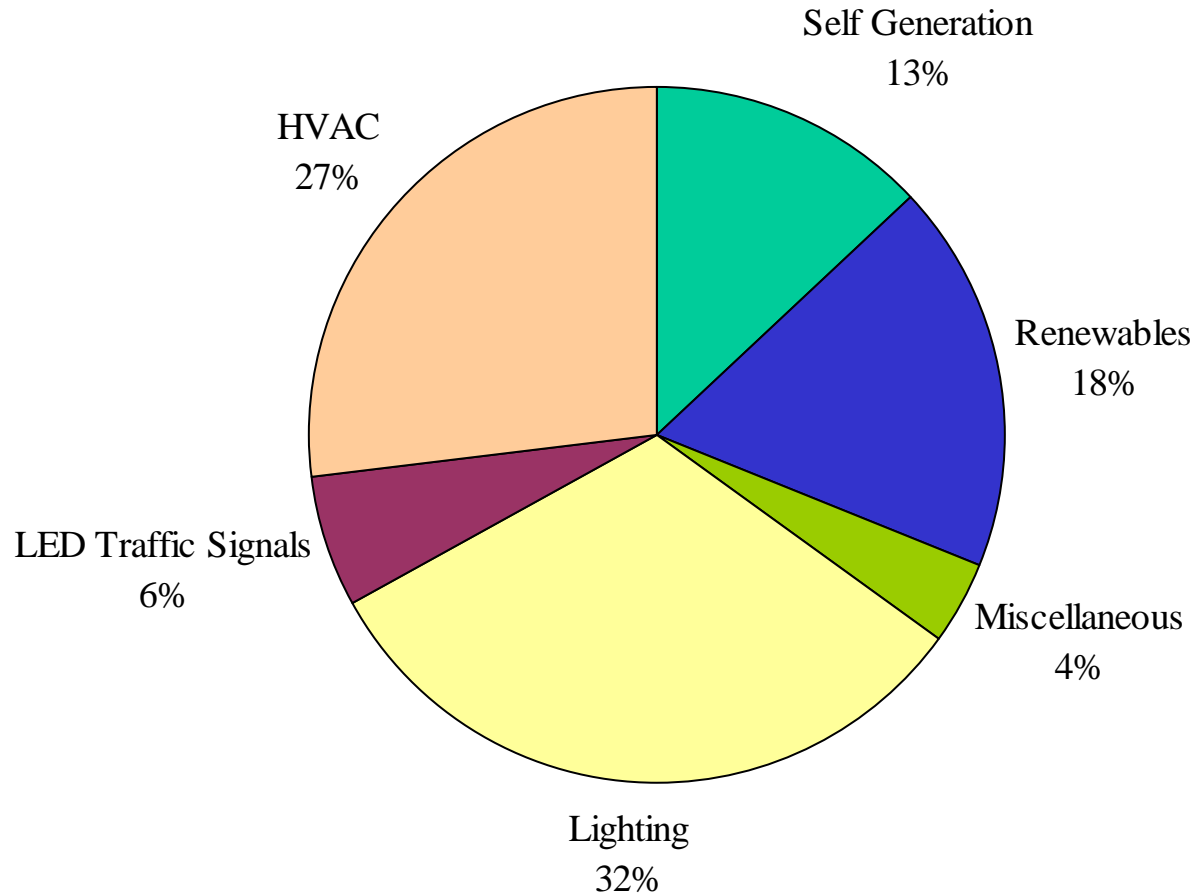


762 Recipients Have Received Loans Totaling \$262 Million



What Has Been Funded with Loans?

\$196 million in loans since 2000



City of Los Angeles Street Light Conversion Loan

■ **Baseline conditions**

- ☑ 160 watt incandescent
(2,560 Lumens)
- ☑ Series wiring
- ☑ Electric rate includes
maintenance + electricity

■ **Upgrade**

- ☑ 55 watt induction lamps
(2,800 mean lumens)
- ☑ Parallel wiring
- ☑ Electric rate for electricity
only



10,000 street lights converted



San Francisco Installs **LED** Traffic Signals

“Our annual electricity for traffic signals has been reduced from approximately \$1.4 million a year to approximately \$400,000 a year.”

- LED traffic modules consume 80 to 90 percent less electricity.
- The old incandescent lamps were replaced annually, while most LED modules last from four to seven years. The yellow LED modules last even longer.

CEC Loans: \$3,392,216

Annual Cost Savings: \$1,000,000

Simple Payback: 3.4 years



California Streetlight Conversion Partial List

LED

- City of Los Angeles
- City of San Francisco
- City of Indian Wells
- City of Watsonville
- City of Albany
- City of Morgan Hill
- City of Pasadena
- City of Chula Vista
- County of Monterey
- City of Santa Monica
- County of Alameda

&

INDUCTION

- City of Los Angeles
- City of San Diego
- City of Carlsbad
- City of Fairfield
- City of Scotts Valley
- City of Capitola
- City of Placerville
- City of Soledad
- City of Sacramento
- City of Laguna Niguel
- City of Merced
- City of San Juan Batista
- County of San Benito



Streetlight Conversion in PG&E

PG&E Turn-Key program

- City of Brisbane
- City of Burlingame
- City of Chico
- City of Danville
- City of Davis
- City of Menlo Park
- City of Pittsburg
- City of Santa Cruz
- City of Walnut Creek
- City of Foster City
- Contra Costa County
- City of Watsonville
- City of Napa
- City of Dinuba
- City of Lincoln
- City of Millbrae
- City of Oakley
- City of Morgan Hill
- City of Clayton
- City of Colma
- City of Dixon
- City of Lemoore
- City of Albany



Streetlight Conversion Projects

EECBG

- City of Sebastopol
- City of Belmont
- City of Oroville
- City of San Anselmo
- City of Tehachapi
- City of Menlo Park
- City of Larkspur
- City of Los Gatos
- City of Clearlake
- City of Dinuba
- City of Soledad
- City of Saratoga
- City of Hercules
- City of Lafayette
- City of Loomis
- City of Marina
- City of Scotts Valley
- City of Moraga
- City of Pacific Grove
- City of Gonzales
- City of Capitola
- City of Colma
- City of Dixon
- City of Lemoore
- City of Marysville
- City of Orinda
- City of Los Altos
- City of Half Moon Bay



Streetlight Conversion Projects

EECBG

- City of San Juan Bautista
- City of San Carlos
- City of King City
- City of Galt
- NCPA
- City of Cloverdale
- City of American Canyon
- City of Benicia
- City of Clayton
- City of Loma Linda
- City of Malibu
- City of Artesia
- City of Carpinteria
- City of Lemon Grove
- City of Coronado
- City of Indian Wells
- City of Rancho Mirage
- City of Laguna Hills
- City of Laguna Woods
- City of Goleta
- City of Irwindale
- City of Jackson
- City of La Habra Heights
- City of West Lake Village
- City of Red Bluff
- City of Briggs
- City Hollister



CEC Funds Versus Your Own Funds

Project Assumptions:

Project Cost = \$400,000

Annual Cost Savings = \$50,000

CEC funds = \$400,000 at 3.0 % interest rate

With CEC Funding:

Savings = \$50,000/yr

Interest payment (avg) = \$12,000/yr

Net savings = \$38,000/yr

Net savings in 5 yrs = \$190,000

With Own Funding Budgeted 2 years later

Years 1-2 = -\$100,000

Years 3-5 savings = \$150,000

Net savings in 5 yrs = \$50,000



Questions?

Energy Efficiency Financing
energy.ca.gov/efficiency/financing

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