

SILICON VALLEY
energy
watch



*Pacific Gas and
Electric Company®*



Partnership for Energy Efficiency

Non-Profit and Affordable

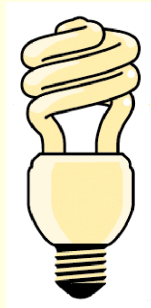
Housing Energy Summit

Energy Efficiency Retrofits for Non-Profits

May 6, 2009

Program Overview

- Ratepayer-funded energy-efficiency collaboration between the City of San José and PG&E.
- Direct Install services for non-profits, municipalities, special districts, and commercial PG&E electricity customers in Santa Clara County.
- Retrocommissioning (RCx) and Non-Residential Retrofit (NRR) services anticipated to begin in mid-2009.



Funding and Implementation

- Funded by California utility ratepayers from the Public Goods Charge under the auspices of the California Public Utilities Commission
- Currently in 2009 bridge funding cycle
- Direct-Install services implemented by Ecology Action



Direct Install Process

- **Free customized survey of lighting, refrigeration, and vending**
 - Recommended energy-efficiency upgrades
 - Anticipated energy savings
 - Cost of retrofit
 - Amount of instant rebate
 - Selected measures available at 100% rebate
- **Installation available by pre-screened contractor using approved equipment**
- **Minimized disruption to business activity**
- **Post-Installation Quality Assurance inspection**
- **Rebate paid to contractor, customer responsible for balance**

Lighting Direct Install Rebates

- **Customers on A1 & A6 Rate, < 100 kW Peak Demand**
 - \$0.12 per kWh saved
 - Up to 100% of retrofit costs covered (100% cap)

- **Customers on A10, E19-voluntary Rate, < 100 kW Peak Demand**
 - \$0.12 per kWh saved
 - Up to 85% of retrofit costs covered (85% cap)

- **Any Rate Schedules, > 100 kW Peak Demand**
 - \$0.08 per kWh
 - Up to 80% of retrofit costs covered (80% cap)



Non-Lighting Direct Install Rebates*

Measures	Description	Rebate
Vending Machine Controls	Reduces non-essential lighting and cooling consumption	100%
Walk-in Cooler Strip Curtains	Reduces cold air losses	100%
Refrigerator Door Gaskets	Reduces cold air lost through deficient door seals	100%
Auto Door Closers for Coolers and Freezers	Reduces cold air lost through deficient door closers	100%
Refrigeration Drop-In Fan Motors	Uses less electricity, introduces less heat.	\$0.17 per kWh saved, 80% cap
Refrigeration Door Heater Controls	Senses humidity to optimize anti-sweat door heaters	\$0.17 per kWh saved, 80% cap
Comprehensive Refrigeration System Controls (Cooltrol)	Optimizes system energy use and maximizes cooler efficiency	\$0.45 per kWh saved, 80% cap

**rebates subject to change*

Free Measures List

■ Lighting

- Replace Screw-in incandescent lamps with CFL lamps
- De-lamp 4' T12 4L fixtures to 2L and retrofit with 4' T8 lamps, reflectors, and ultra-efficient ballasts
- Install wall switch occupancy sensor controls
- Retrofit Incandescent Exit Signs with red LED lamps

■ Refrigeration

- Install refrigeration strip curtains

■ Vending

- Install cold drink vending machine sensors

Example of Savings

The RightLights Program is implemented by Ecology Action and funded by California ratepayers under the auspices of the California Public Utilities Commission.

RightLights
Energy Efficiency Program



Summary of Energy Efficiency Recommendations

XYZ Food Bank
123 Murphy St
San Jose CA, 95113

Audited by: Jack Lu
Audited on: 4/1/09

PG&E Account Number:
123456789

		<u>Estimated Costs</u>	<u>Estimated Annual Savings</u>	<u>Payback</u>
Total installed cost	<i>Before rebate</i>	\$39,207.71	\$25,071.25	1.6 years
RightLights rebate		\$27,852.37		
Your final cost	<i>After rebate</i>	\$11,355.34	\$25,071.25	0.5 years

→ Rebate equals 71% of installed cost.

Proposed Equipment Detail

<u>Measure</u>	<u>Installed Cost</u>	<u>Estimated Annual Savings</u>
Lighting Retrofit	\$2,650.00	\$1,880.00
Vending Controls	\$377.50	\$451.36
Refrigeration Measures	\$36,180.21	\$22,739.89

This proposal is valid for 14 days from the date of presentation

This project is anticipated to reduce energy demand and consumption by approximately 21.21 kW and 200,233 kWh, eliminating 220,256 pounds of carbon dioxide emissions.

* Note - Savings are estimated using standard engineering calculations and are based on hours of operation as described to the specialist during your survey. Depending on actual hours operated as well as changes in your electric utility rate, your savings may be higher or lower. The savings indicated above are NOT guaranteed. Construction costs may vary slightly depending on the fixture quantities and unforeseen conditions.

Electric Utility Rates = \$0.14/kwh, and \$7.88/kw.

Saved 110 tons of CO₂;
equivalent to removing
19 cars or planting 30
trees

Saved enough electricity
to power 34 single family
homes

Sample Proposal

Bid Specs and Pricing

- **Pricing for retrofits is driven by:**
 - Pre-negotiated hourly rate for contractor labor
 - Pre-negotiated pricing on materials, based on Silicon Valley Energy Watch negotiated volume discounts
 - Fixed contractor markup on materials
 - Fixed labor factors for each retrofit task

Quality Assurance

- Every Silicon Valley Energy Watch job is inspected before rebate is issued.

- Historically;
 - 97% of reported energy savings confirmed

 - 93% customer satisfaction “due to ease of participation, professional manner of installers, and significant realized energy savings”

Before & After

Before & AFTER an energy audit

- Incandescent to LED's: 30watts vs. 4watts
- T12 Troffers to Super T8: 160w vs. 55w, improves Color rendering from 70 to 86 CRI
- HID to CFL: 400w metal halide vs. 150w spiral



- **Nonprofit environmental consultancy founded on first Earth Day, 1970**
- **50+ staff headquartered in Santa Cruz with satellite office in Mountain View**
- **Clients include:**
 - Environmental Protection Agency
 - California Integrated Waste Management Board
 - California State Water Resources Control Board
 - California State Department of Toxic Substances Control
 - California Public Utilities Commission
 - Pacific Gas & Electric
 - City of Palo Alto Utilities

■ **Continually seeking innovative ways to:**

- Instill environmental awareness and promote pragmatic change.
- Create opportunities for individuals, businesses, and community agencies to save money, create jobs, and contribute to a sustainable local economy.



Energy Programs



Sustainable Transportation



Water Quality & Pollution Prevention



Materials Exchange Network



Annual Coastal Cleanup



Green Building & Green Business



Zero Waste Programs



Integrated Pest Management



Schools & Education Programs

■ Other Ecology Action Energy Programs

- **RightLights** – 3rd-Party commercial Direct Install program serving PG&E customers in San Mateo, Santa Clara, Santa Cruz, Monterey, and San Benito Counties.
- **San Mateo County Energy Watch** – Government partnership program delivering Direct Install, RCx, and NRR assistance to municipal, special district, non-profit, and commercial customers in San Mateo County.
- **AMBAG Energy Watch** - Government partnership program delivering Direct Install assistance to municipal, special district, non-profit, and commercial customers in Santa Cruz, Monterey, and San Benito Counties.
- **RightLights Plus** - 3rd-Party commercial Direct Install program serving City of Palo Alto Utilities customers.
- **LodgingSavers** – 3rd-Party commercial program serving hospitality businesses throughout PG&E territory with Direct Install and RCx.

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