
ACEEE Market Transformation Symposium

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*Pacific Gas and
Electric Company™*

Putting Energy Efficiency First

“Energy efficiency is California’s highest-priority resource for meeting its energy needs in a clean, reliable, and low-cost manner.”

California Public Utilities Commission’s 2006 publication,
Energy Efficiency: California’s Highest-Priority Resource

“Energy efficiency is the lowest-cost way to meet customers’ energy needs.”

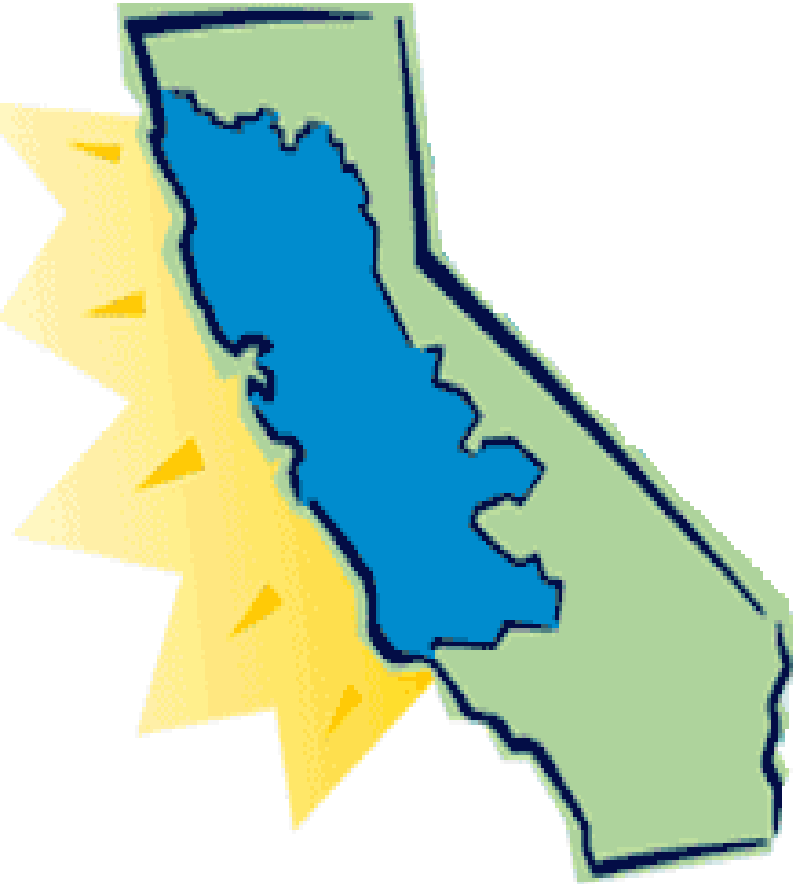
PG&E’s *Global Climate Change* report

PG&E's Climate Leadership Strategies

PG&E is committed to working with its customers to create a greener tomorrow by:

- Putting energy efficiency first
- Providing opportunities for customers to better manage energy use through demand response
- Increasing supplies of renewable energy
- Facilitating clean distributed generation, including rooftop solar
- Using innovative technologies
- Forming partnerships to combat global climate change
- Being transparent

PGE Service Territory



- 70,000 square miles
- 15 million people
 - about 1 in every 20 Americans
- 6 million customers
 - 87% residential
 - 13% non-residential
- 139,000+ circuit miles of electric lines
- 45,800+ miles of natural gas pipeline
- Summer Peak (2006): 20,568 MW
- 2006 Electricity Sales: 84,300 GWH

2006 - 2008 Energy Efficiency Portfolio: Focus on the Customer

- Portfolio includes: financial incentives and rebates, training, education, energy audits, emerging technology projects, energy codes and standards support, marketing and outreach, and evaluation activities
- Multiple delivery channel opportunities: utility programs, partnerships, third party programs
- Mass Market: single family, multifamily and small business customers
- Targeted Markets:
 - Agriculture & Food Processing
 - Hospitality & Lodging
 - Health Care & Biotech
 - High Tech
 - Large Commercial & Institutional
 - Manufacturing & Heavy Industry
 - Residential New Construction
 - Retail
 - Schools, Colleges & Universities

PG&E Annual Goals and Budgets

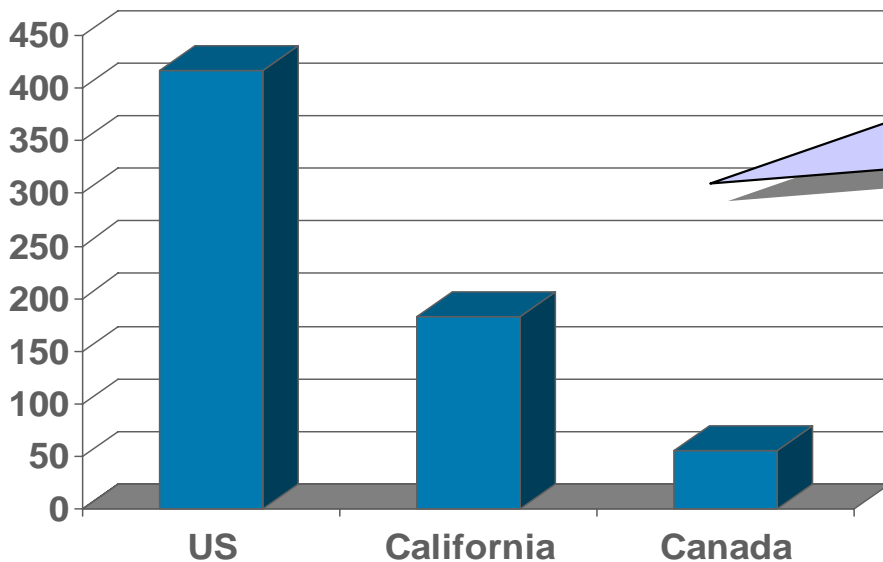
	MW*	GWh*	Million Therms*	Current Budget (\$Millions)**
2006	132	677	10.1	\$353.7
2007	223	1,125	17.9	\$392.8
2008	258	1,261	19.5	\$366.5
TOTAL	613	3,063	47.5	\$1,113

* Reflects savings goals presented in the April 18, 2006 filing which also includes Low Income Energy Efficiency.

** Includes LIEE program budget and excludes EM&V budget.

006-08 Budget: Gas Only

Year	PG&E Budget
2006	\$35,926,985
2007	\$42,486,065
2008	\$52,575,089
PG&E 2006-08 Total	\$130,988,139



• California's share is 44% of the total US Budget for Gas Efficiency programs.

Source: Consortium for Energy Efficiency (CEE), 2007

007 Accomplishments

	2007* Goal	2007** Actual	Percent of Goal
Megawatts	205	292	142%
Gigawatt-Hours	944	1,663	176%
Million Therms	14.9	22.63	152%

*2007 Goal is adopted in CPUC Decision 04-09-060.

**2007 Actual is taken from the 06-08 Monthly Program Data

PGE's Gas Efficiency Programs

- Rebates and incentives for high efficiency gas appliances, equipment, and other measures
- 10/20 Winter Gas Savings Programs
 - Provides a rebate to customers who reduce their natural gas usage in January and February
- Low Income Energy Efficiency (LIEE)
 - Energy efficiency education and direct installation for low income customers

Gas Efficiency: Measures Delivering Major Savings

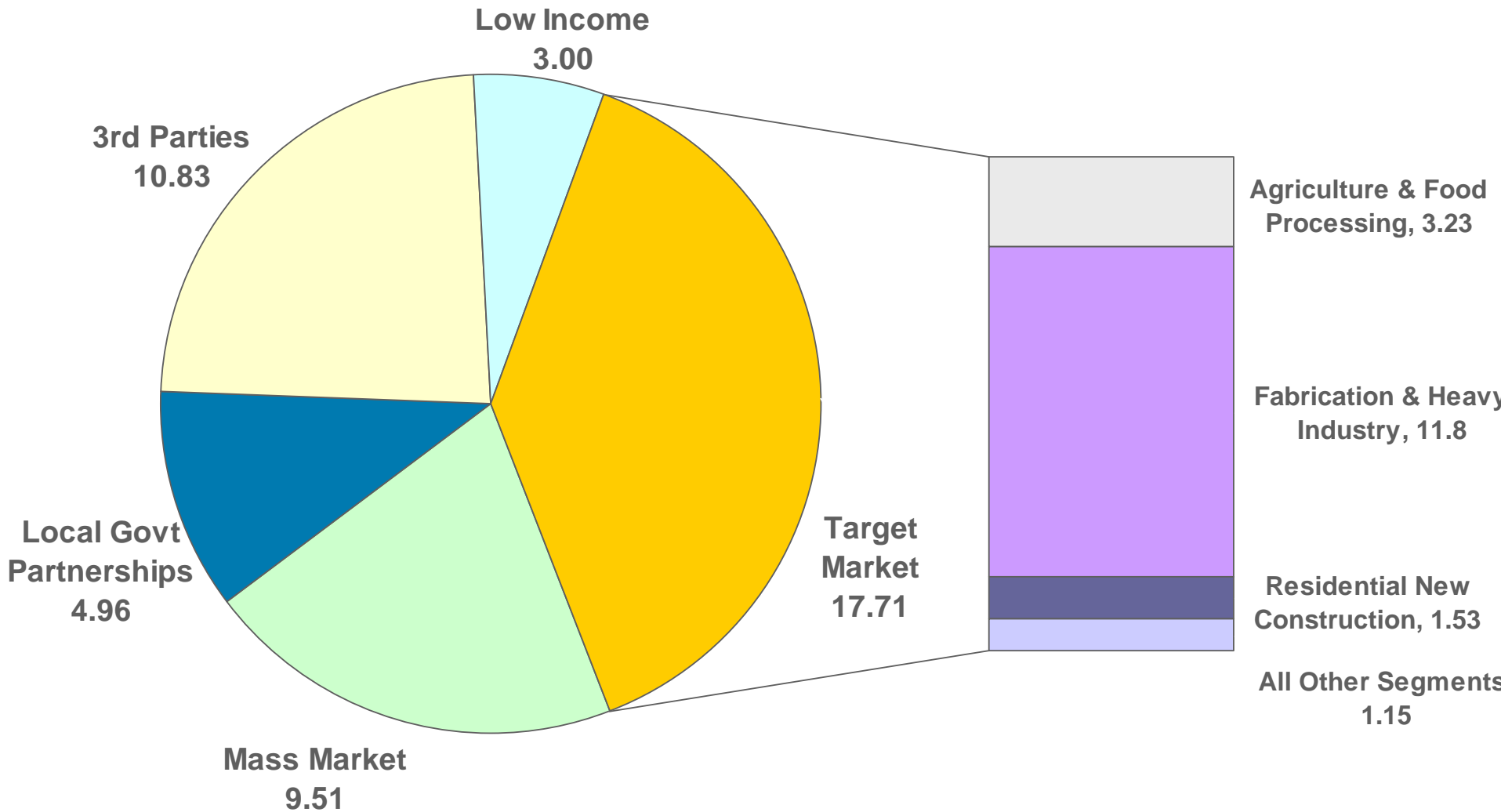
- Mass Market
 - Efficient boilers and hot water heaters
 - Efficient clothes washers
 - Greenhouse curtains
- Target Market
 - Efficient HVAC systems
 - Efficient water heaters
 - Efficient boilers
 - Increased efficiency of industrial process systems
 - Efficient equipment designed for each target market, including food service, wastewater treatment, and agriculture/food processing

Rebates and Incentives

- Mass Market
 - Deemed rebates for specific measures (i.e. \$200 to \$300 for high efficiency central natural gas furnace)
- Target Market
 - Retrofit: \$0.80 per “first year” Therm* or 50% of actual project costs (whichever is less)
 - New construction: incremental measure savings
 - Design assistance for larger customers

* Most measures have average life of 5 to 15 years
incentive covers first full year savings

MM Therm 2006-08 Goals by Segment



Target Market Projects: Large Customers

- Market Segments: Heavy Industrial, Agriculture/Food Processing, Commercial Office Buildings, and Hospitality
- Most common products include:
 - **Steam system improvements** such as efficient boilers, burner upgrades, flue stack recovery (economizer improvements), improvements in steam piping and pipe insulation, and replacement of failed steam traps
 - **Furnace improvements** such as efficient furnaces, burner replacements, and flue stack recovery
- Major customers include Conoco Phillips, Frito Lay, Sierra Pines, Stanislaus Foods, Equity Properties and Hilton

Case Study: Agriculture and Food Processing

- **Stanislaus Food Products**
 - Tomato processing plant uses natural gas in large industrial boilers to produce steam for use in evaporators, which remove moisture from tomatoes
 - Added efficient collection tanks, pumps, piping, and insulation
 - Annual natural gas savings of 530,000 Therms (saving approximately \$138,000 per year)

Energy Partners: Low Income Energy Efficiency

- Provides energy education, home weatherization and installation of energy efficient measures and appliances at no cost to income-qualified customers throughout the 48 counties within our service territory
- Gas measures include:
 - Attic insulation
 - Weather-stripping
 - Pipe insulation
 - Duct testing and sealing
 - Ceiling repair
 - Low flow showerheads
 - Faucet aerators
 - Exterior wall repair
 - Water heater blanket
 - Glass replacement
 - Repair/replacement program for furnaces and water heaters

Gas-Hot Water Technology Evaluation

Hot Water Heater Test Lab Program

- **Residential:** testing the performance and installed efficiency of hot water heaters in simulated “real world” including draws and draw profiles
- **Commercial Food Service:** testing the overall system performance of hot water heaters (condensing, instantaneous, non-condensing, hybrid boiler/tank)

Thank you!



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