

Budget, Rates and Efficiency Division



LADWP Energy Efficiency Programs

A Presentation to the California Energy Commission

June 9, 2009



Los Angeles  Department of Water and Power



FY 08-09

Energy Efficiency Program

Mission Statement

Implement cost effective energy efficiency and demand side management programs that provide the maximum environmental and financial benefits to our ratepayers and to the residents of Los Angeles.



Energy Efficiency Program

OVERALL SUMMARY:

Program	FY08-09 Budget (\$1,000s)	Full Time Equivalent Staff	Peak Demand Reduction (MW)	Annual Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Total Resource Cost (TRC)	Program Adminstrator Cost (PAC)	LADWP \$/kWh	LADWP \$/kW
Residential Programs									
Refrigerator Recycling Program	\$ 892.70	0.50	1.24	7.6	48.2	5.22	5.22	\$ 0.019	\$ 717
Refrigerator Exchange Program	\$ 18,119.70	2.50	4.35	27.5	467.7	2.64	2.64	\$ 0.039	\$ 4,158
CFL Distribution Program	\$ 3,237.40	1.00	6.03	31.5	283.3	7.90	7.90	\$ 0.011	\$ 537
CFL Buydown Program	\$ 2,342.20	2.00	5.60	31.2	280.8	9.97	10.82	\$ 0.008	\$ 418
Consumer Rebate Program	\$ 2,166.80	7.00	0.49	1.2	58.6	0.88	1.11	\$ 0.111	\$ 4,451
Point of Sale (CRP)	\$ 2,958.90	1.00	1.17	3.5	58.6	1.21	2.13	\$ 0.051	\$ 2,535
Residential Audit (On-Line)	\$ 102.50	0.00	-	0.8	2.4	2.51	2.51	\$ 0.043	\$ -
Subtotal Residential Programs	\$ 29,820.20	14.00	18.87	103.3	1,199.5			\$ 0.025	\$ 1,580
Non-Residential Programs									
Commercial Lighting Efficiency Offer	\$ 6,913.70	5.50	10.54	63.2	670.9	3.31	10.34	\$ 0.010	\$ 656
Chiller Efficiency Program	\$ 1,752.60	1.50	0.95	2.3	45.6	3.32	3.33	\$ 0.038	\$ 1,845
Thermal Energy Storage Program	\$ 678.80	1.50	0.71	-	-	0.12	0.21	N/A	\$ 951
Refrigeration Program	\$ 915.00	2.50	0.58	4.9	57.8	5.50	6.14	\$ 0.016	\$ 1,532
Custom Performance-Based Efficiency	\$ 7,426.30	4.50	5.28	30.2	396.7	3.35	5.70	\$ 0.019	\$ 1,406
Small Business Direct Install	\$ 20,632.40	3.50	9.90	60.5	556.2	2.88	2.88	\$ 0.037	\$ 2,035
New Construction/LEED Incentive	\$ 1,349.30	2.00	2.06	9.3	139.7	3.75	10.02	\$ 0.010	\$ 654
Collaborative	\$ 1,502.50	0.00	-	-	-	-	-	N/A	N/A
Subtotal Non-Residential Programs	\$ 41,170.60	21.00	30.03	170.4	1,866.9			\$ 0.022	\$ 1,371
General Program Support									
Program Administration	\$ 2,332.90	10.00							
Residential Workshops/Low Income-Senior	\$ 139.00	0.00							
Commercial Audits	\$ 812.00	5.00							
Commercial Workshops/State Survey	\$ 95.00	0.00							
Subtotal General Program Support	\$ 3,378.90	15.00							
TOTAL ENERGY EFFICIENCY PROGRAM	\$ 74,369.70	50	49	274	3,066	3.28	4.52	\$ 0.024	\$ 1,521

Program Administrator Cost Test compares NPV of all avoided cost benefits relative to LADWP program costs.

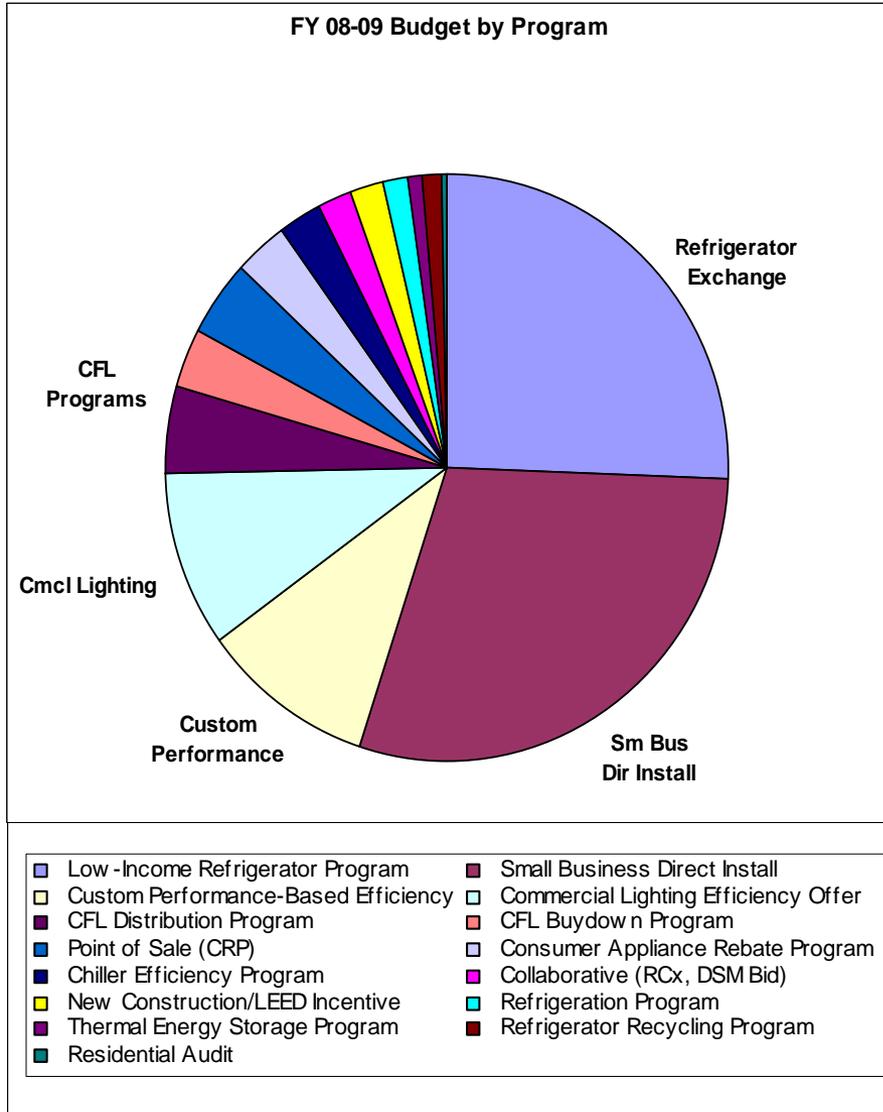
Total Resource Cost Test compares NPV of all avoided cost benefits relative to LADWP and customer costs





FY 08-09 Energy Efficiency Program

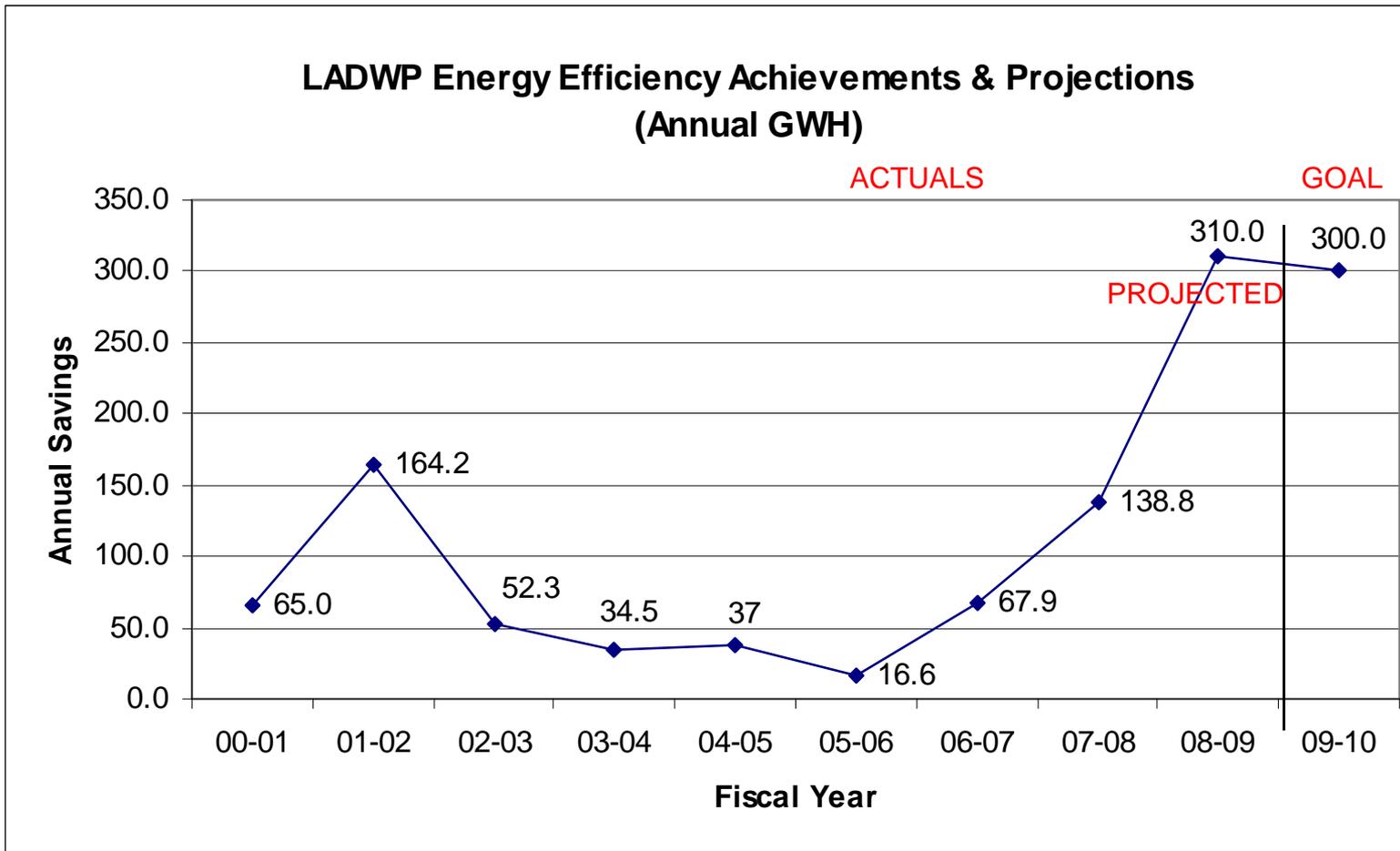
- FY08-09 Budget & Goals:
 - Anticipate 49 MW of peak reduction and 274 GWh of annual energy savings.
 - Overall cost effectiveness is \$0.024/kWh.
 - Eliminates the emission of 154,000 tons of greenhouse gas annually and 1.7 million tons over the life of the measures.
 - Core programs are: Refrigerators, Small Business Direct Install, Commercial Lighting
 - Other significant programs include CFL Buy-down, Custom Performance, Point of Sale Rebates, New Construction, Refrigeration.



Energy Efficiency Program



Historic and Projected Energy Savings:





Energy Efficiency in Los Angeles

What is working?

- **FREE REFRIGERATORS** – Low Income Refrigerator Exchange Program
 - New, Energy Star® rated refrigerators available to all rate-qualified low-income and lifeline customers; old, inefficient units removed and recycled
 - Includes owner-provided refrigerators in rental units
 - Existing refrigerator must be 10 years old plugged into a grounded outlet
 - Program launched in 2007; 42,500 units replaced
- **FREE CFLs** – CFL Direct-to-Door Program
 - 2 CFLs distributed to every residence (1.2 million)
 - CFLs delivered with conservation literature in a reusable, recycled bag
- **FREE LIGHTING UPGRADE** – Small Business Direct Install Program
 - \$2,500 in lighting upgrades available to small business customers
 - Fluorescent fixture upgrades, CFLs, exit signs, occupancy sensors, timers
 - Program launched in 2008; 40,000 businesses retrofitted





Energy Efficiency in Los Angeles

What is working?

- COMMERCIAL LIGHTING REBATE PROGRAM
 - Rebates cover at least the incremental fixture cost; 2-year payback
 - 130 menu measures
 - T5/T8, induction, HID, LED exit signs, occupancy sensors, timers, photocells
- CUSTOM PERFORMANCE PROGRAM
 - Savings-based incentives (per annual KWh):
 - Lighting - \$0.05; HVAC - \$0.14; Other - \$0.08 (motors, controls)
 - CustomPlus
 - Large projects - 1.0 GWh minimum
 - Commissioning required
 - Up to \$0.24 per KWh (\$0.03 per KWh x measure life)





Energy Efficiency in Los Angeles

What is next?

- POINT OF SALE REBATES
 - Energy Star® consumer appliances
- CFL BUYDOWN PROGRAM
- UPSTREAM INCENTIVE PROGRAM
 - Business computers, servers, monitors
 - Package AC units, chillers
- MIDSTREAM INCENTIVE PROGRAM
 - Personal computers, monitors, consumer electronics
- AC TUNE-UP and EARLY REPLACEMENT PROGRAM
 - Residential and commercial





Energy Efficiency in Los Angeles

Challenges

- SUSTAINED EFFORT ONLY SINCE 2006
 - Program momentum takes time to build
- PROGRAM STAFFING
 - Significant hiring in 2008
 - Mature workforce
- INTERNAL PROCESSES
 - Procurement
 - Collaborations
- “STRETCH GOALS”
- THE ECONOMY





Energy Efficiency in Los Angeles

Measurement and Verification

- EXPEDIENT ENERGY
 - Hired in April 2008
 - 3-year contract
- M & V COMPLETED FOR 2006-07 PROJECTS
 - Sample of projects verified on site
 - All equipment verified installed
 - HVAC projects demand reduction 125% of DWP calculations
 - Refrigeration projects energy savings 97% of DWP calculations
 - Chiller projects demand reduction 97% of DWP calculations
 - Lighting projects energy savings 90% of DWP calculations
- M & V UNDERWAY FOR 2007-08 PROJECTS
- M & V PLANNED FOR 2008-09 AND 2009-10

