

Energy Efficiency & Conservation

Presentation to
SWEEP Workshop
Phoenix, AZ
Nov. 3 & 4, 2006



Energy Efficiency and Customer Strategy—Department Mission

- To be a respected resource of education and information on the efficient use of energy for the benefit of our customers, community, and company.
- To deliver cost effective and approved Demand Side, Load Management and customer focused programs.

Who

- We have 15 full time employees in two working groups---planning and implementation lead by managers, Larry Holmes and Doug Hampton
- We have 6 main implementation contractors employing about 20 people full time working on our projects

What—Last column is 2006 budget

Energy Education	\$ 1,205,000		\$ 1,243,000
Low Income Support	\$ 1,361,000		\$ 1,216,000
Air Conditioning Load Management	\$3,450,000		\$ 3,600,000
High Efficiency Air Conditioning	\$2,600,000	\$4,700,000	\$ 15,625,000
Commercial Incentives	\$2,300,000		\$ 2,800,000
School Support	\$ 850,000		\$ 850,000
Commercial New Construction	\$600,000		\$ 600,000
Energy Star Appliances	\$ 1,200,000		\$ 2,050,000
Refrigerator Collection	\$ 700,000		\$ 1,915,000
Other – Miscellaneous & Technology	\$ 225,000		\$ 725,000
Total Nevada Resource Planning Programs	\$ 15,491,000	\$ 17,991,000	\$ 30,624,000
California Program	\$ 370,000		\$ 563,000
Sierra Natural Gas Programs		\$ 100,000	\$ 820,000
Company Renewable - PV	\$ 1,000,000		\$ 1,750,000
SolarGenerations	\$ 5,025,000		\$ 8,740,000
Total All Programs	\$ 20,866,000	\$ 23,366,000	\$ 42,527,000

Why

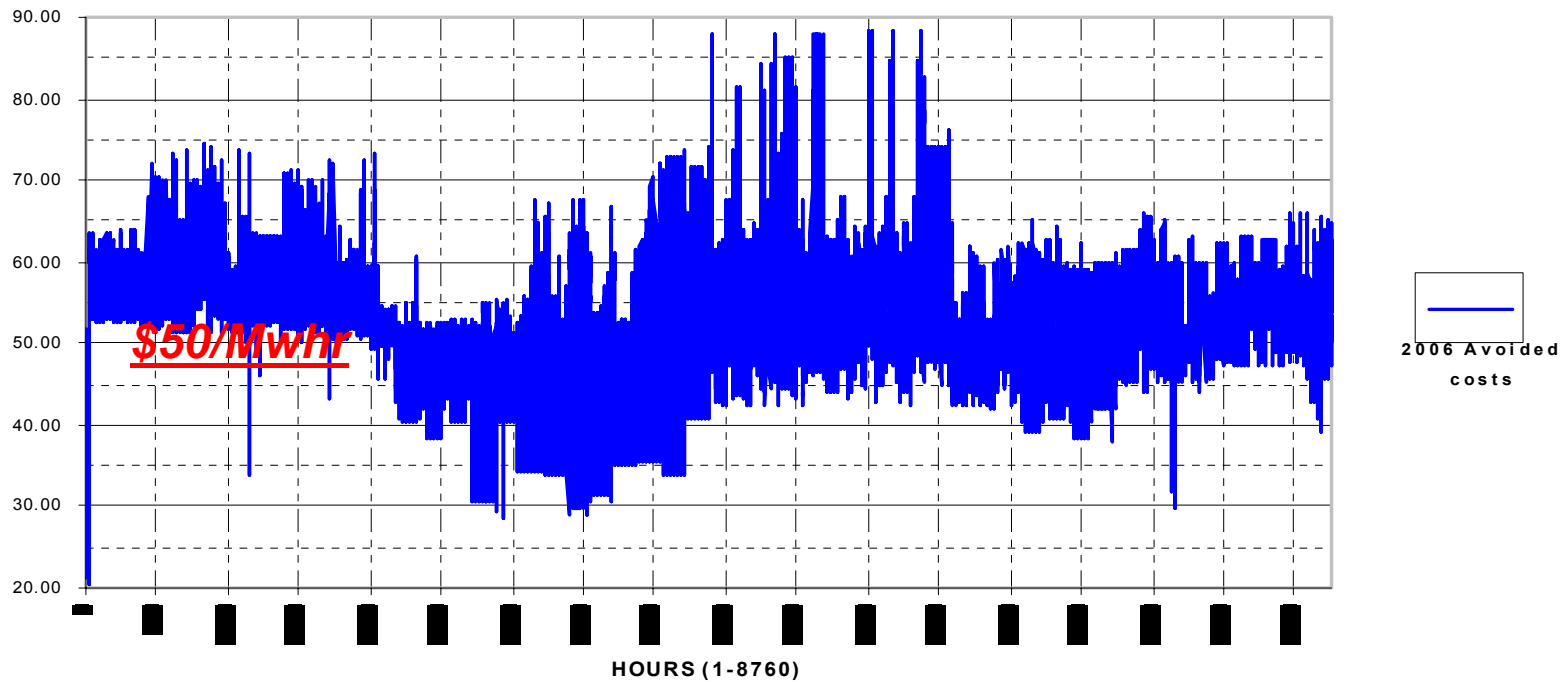
- Energy Efficiency and Conservation Programs are done for several reasons:
 - Cost Effective
 - total benefits exceed costs-avoiding power plant construction and expensive power purchases
 - Investment opportunity—5% above authorized ROE
 - Regulatory and political cover
 - Customer expectations

Regulation for cost recovery

- NAC 704.9503
 - A utility may recover all prudent and reasonable costs incurred in implementing programs for conservation and load management that have been approved by the Commission as part of the action plan of the utility, including, without limitation, the costs for labor, overhead, materials, incentives paid to customers, advertising, marketing and evaluation.
 - To calculate the revenue requirements, the utility must base the rate of return to be applied to the balance in the sub accounts of Account 182.3 for each program that the utility has carried out on the authorized return on equity plus 5 percent.

Avoided Cost of Energy

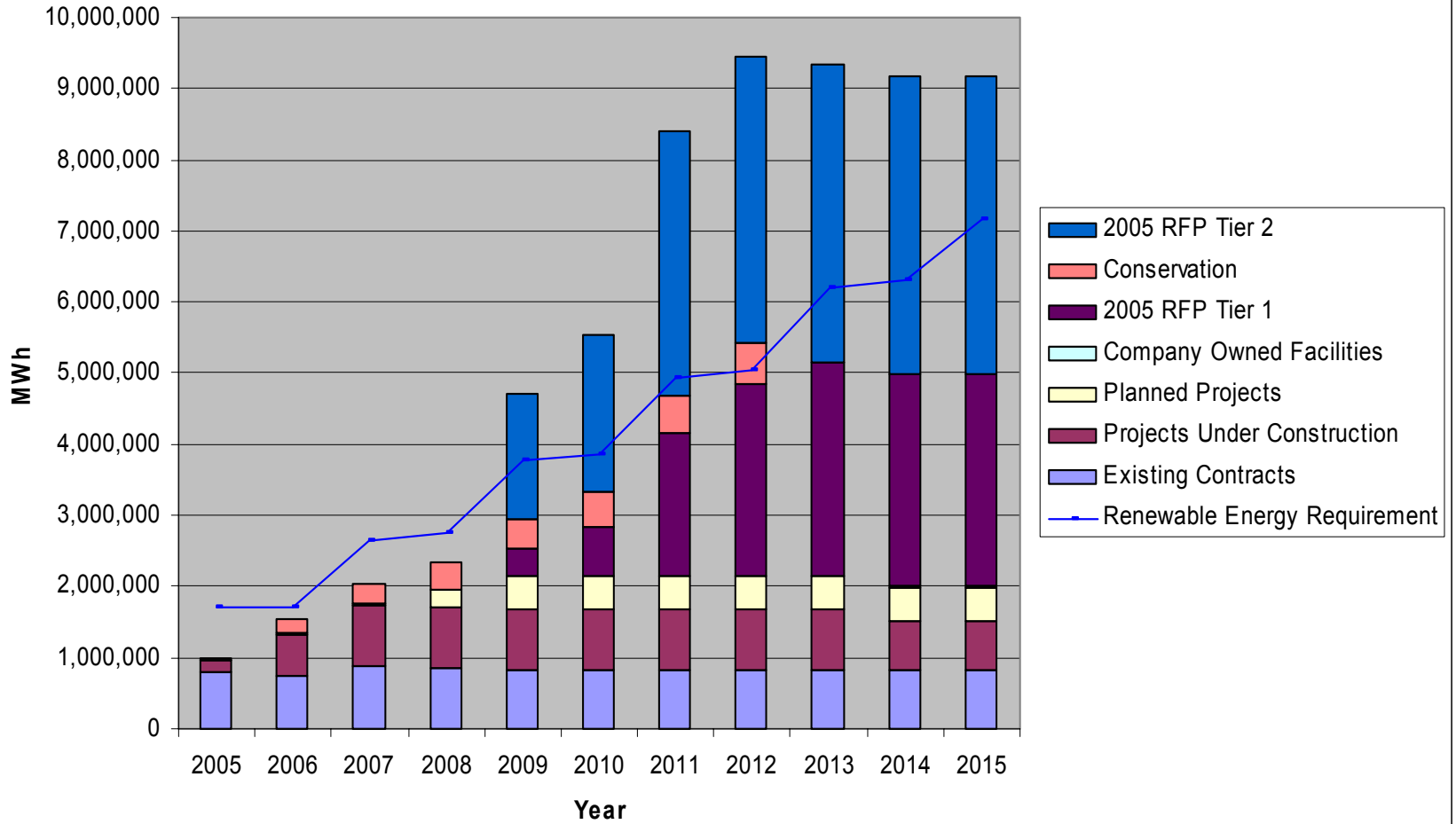
Nevada Power Avoided Costs 2006



What's Next---

- Nevada Special Legislative Session AB3
 - Allows energy efficiency measures to count for 25% of our “portfolio standard” of renewable power and now conservation
 - Portfolio Standard is 6% in 2006, 9% in 2007 and increasing to 20% in 2015
 - 50% must come from residential customers
 - Roughly 1,000,000 Mwhrs in conservation in 2010---we currently capture about 150,000 Mhws
 - Significant property tax relief for commercial buildings that are “green”
 - We need to grow our conservation business accordingly

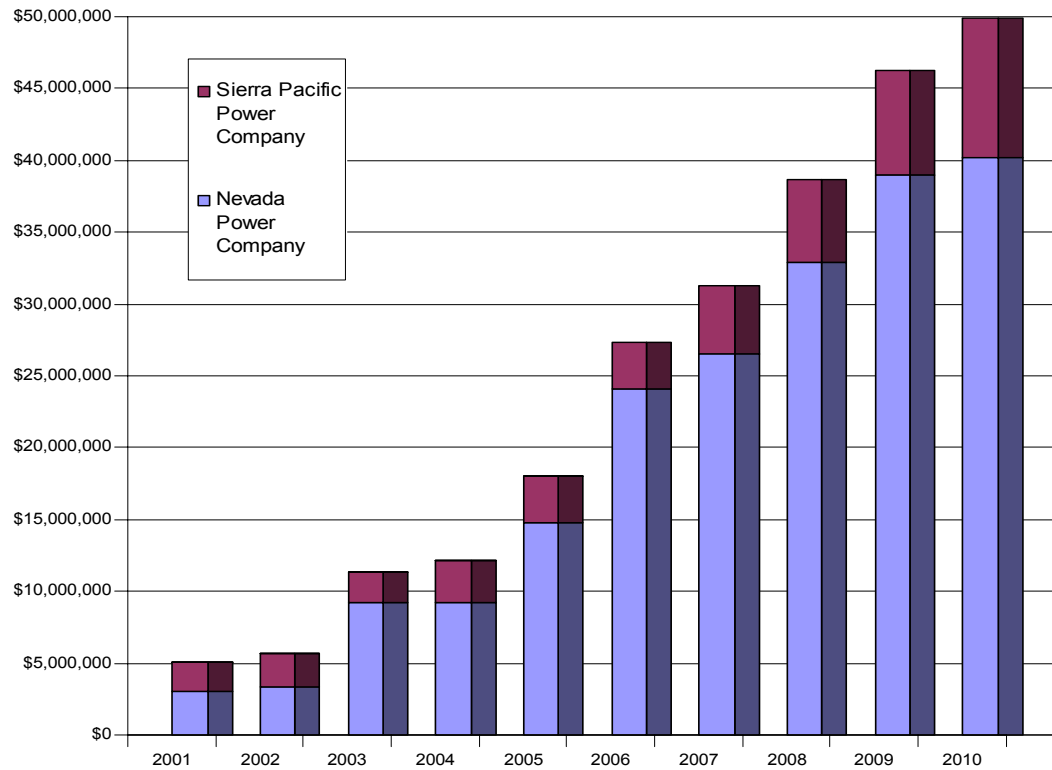
Renewable Energy Sources



What's Next

- Federal Energy Act of 2005
 - \$2000 tax credit for builders of new homes designed to use 50% less energy
 - Up to \$500 for homeowners for energy efficiency upgrades to their homes
 - AC units, appliances, water heaters, window
 - 30% tax credit for solar pv and solar hot water for homeowners
 - \$1.80 per sq. ft for commercial buildings designed to exceed ASHRAE standards 90.1-2001 by 50% or more
 - We are positioning ourselves to be the experts in Nevada

DSM Budgets through 2010



Program Highlights—Energy Star Appliances and CFL

- Program is designed to provide rebates and point of sale incentives on high efficiency
 - Refrigerators
 - Clothes Washers
 - Ceiling Fans
 - Light fixtures
 - Compact Fluorescent Lamps

Dashboard Home

Dashboard Home

All indicators reflect data as of the close of previous month.

[all utilities]

Overall

Lighting Incentive Budget



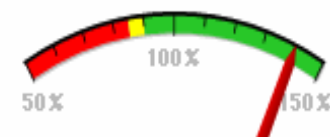
Appliance Incentive Budget



Total Incentive Budget

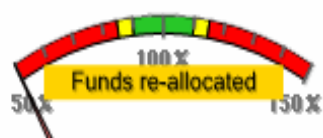


Total KWH



Lighting Program

Fans



CFLs



Fixtures



KWH



Appliance Program

Clothes Washers



Refrigerators



KWH



Program Highlights---Refrigerator Collection Program

- Program is designed to collect second refrigerators
 - Often operating in the garage at very inefficient performance
 - Fully dispose of all refrigerants and CFCs
 - All other useable materials recycled

Program : Nevada Programs

Select Program Group :

- Nevada North Units
- Nevada South Units
- California Total Units

Unit Statistics Monthly BarChart & DataGrid (by Pickup Scheduled Dates)

Checking the checkbox [Apply Reduced Projected Units..] will reduce the Gauges and Bar charts to use reduced Projected Units as described. To see the % of completion for the current month only, select only the current month and click the Requery Report button.

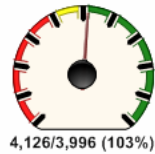
[Current: Pickup Scheduled Date Statistics Report](#)
 Toggle to related reports below with the same current criteria

Display Gauge Readings
 Apply Reduced Projected Units Ratio (14/21 Business Days = 67%) to the current day of [10/20/2005]

Clicking the "Create PDF" pdf button will create a pdf copy of the current report on the server. You can save or view the PDF report by clicking the "Open PDF" button. In order to open the generated pdf files you will require a PDF reader installed in your system. You could always download one from [Adobe\(27Mb\)](#) or [Foxit\(2Mb\)](#)

Reduced Projected Units in use on Gauges and Projected Bar of BarChart.

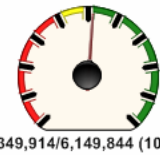
Units(Sch/Proj)



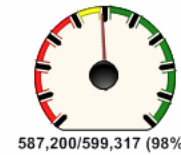
KW Red(Sch/Proj)



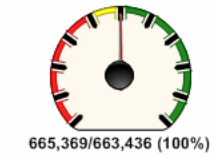
KWH Red(Sch/Proj)



Jaco Charges(Act/Proj)

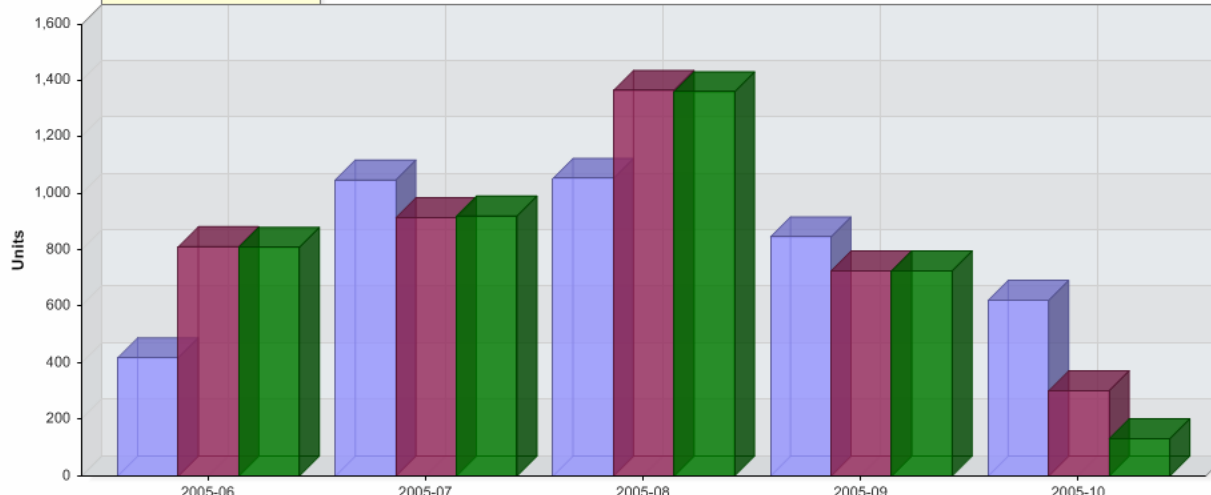


UtilityCoBudget(Act/Proj)



3,996 Units Projected 4,126 Units Scheduled 3,956 Units Actual

Unit Projection Month By Month



Program Highlights—Commercial Rebates--SureBet

- SureBet is our Commercial Incentive program
- Designed to assist commercial customers develop and implement energy savings measures
- Prescriptive and custom rebates



sure bet program



Thursday, October 20, 2005 | [Dash Board](#)

[Home](#) | [Overview & Updates](#) | [Incentives](#) | [Program Process](#) | [ENERGY STAR®](#) | [Documents](#) | [Contact Us](#) | [PM Reports](#)

▸ [PM Reports](#) ▸ [Dashboard Details](#) ▸ [Incentive Program](#) ▸ [Incentive Program Data](#) ▸ [Incentive Program Snapshot](#)

Program Snapshot

Program status to date by utility.

[Hide Data](#) | [Download As EXCEL](#) | [Download As XML](#) | [Download as CSV](#)

Utility	NPC	NPC	NPC	NPC	SPPC	SPPC	SPPC	SPPC
Category (September 26, 2005)	Program Goals	Current Totals	Projected Totals	Projected % vs. Goals	Program Goals	Current Totals	Projected Totals	Projected % vs. Goals
Fund Status	\$914,729	\$821,099	\$938,368	103%	\$400,271	\$386,141	\$414,908	104%
Demand Savings (kW)	6,750	5,913	6,530	97%	2,954	2,988	3,042	103%
Energy Savings (kWh)	40,000,000	39,740,266	43,066,447	108%	17,503,370	15,036,864	15,267,209	87%

Program Totals

Program totals to date.

[Hide Data](#) | [Download As EXCEL](#) | [Download As XML](#) | [Download as CSV](#)

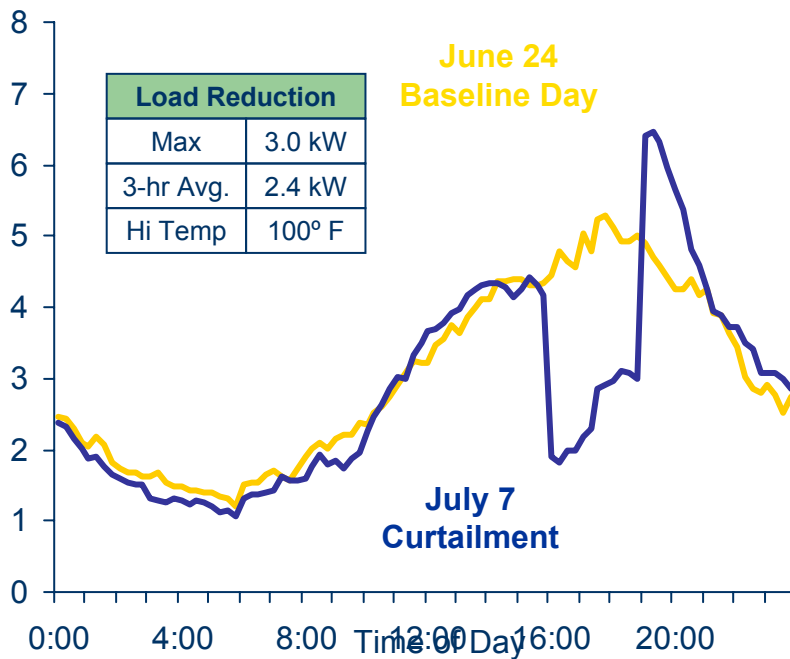
TOTALS				
Summary (September 26, 2005)	Program Goals	Current Totals	Projected Totals	Projected % vs. Goals
Fund Status	\$1,315,000	\$1,207,239	\$1,353,276	103%
Demand Savings (kW)	9,704	8,901	9,572	99%
Energy Savings (kWh)	57,503,370	54,777,130	58,333,656	101%

Program Highlights--ACLM

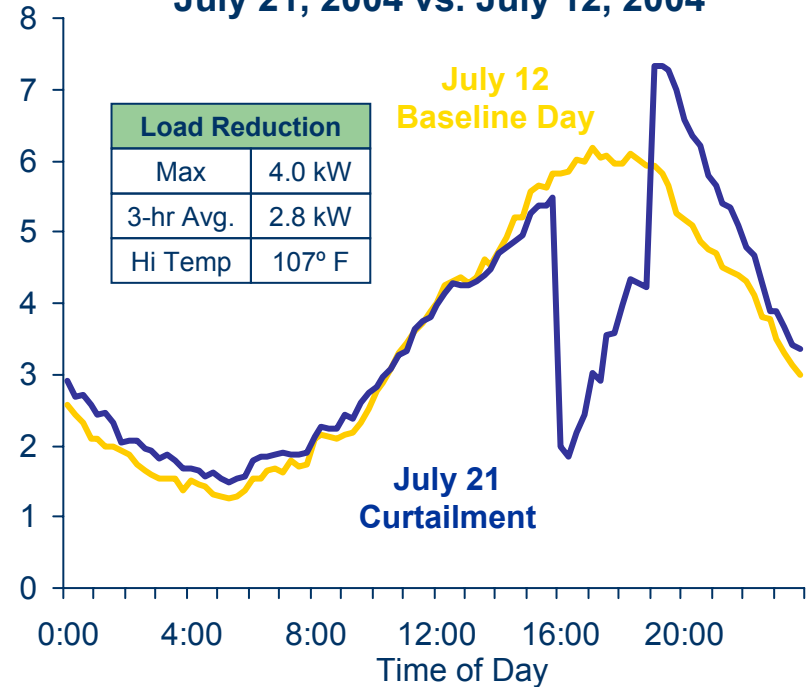
- Residential Air Conditioning Load Management
 - 18,000 residential customers using condenser switches and programmable thermostats
 - Another 6000 in 2006—total 24,000 under control
 - This equates to almost 30 Mw of load control
 - Instantaneous response during peak and power supply problems

ACLM--Continued

**Average Load
July 7, 2004 vs. June 24, 2004**

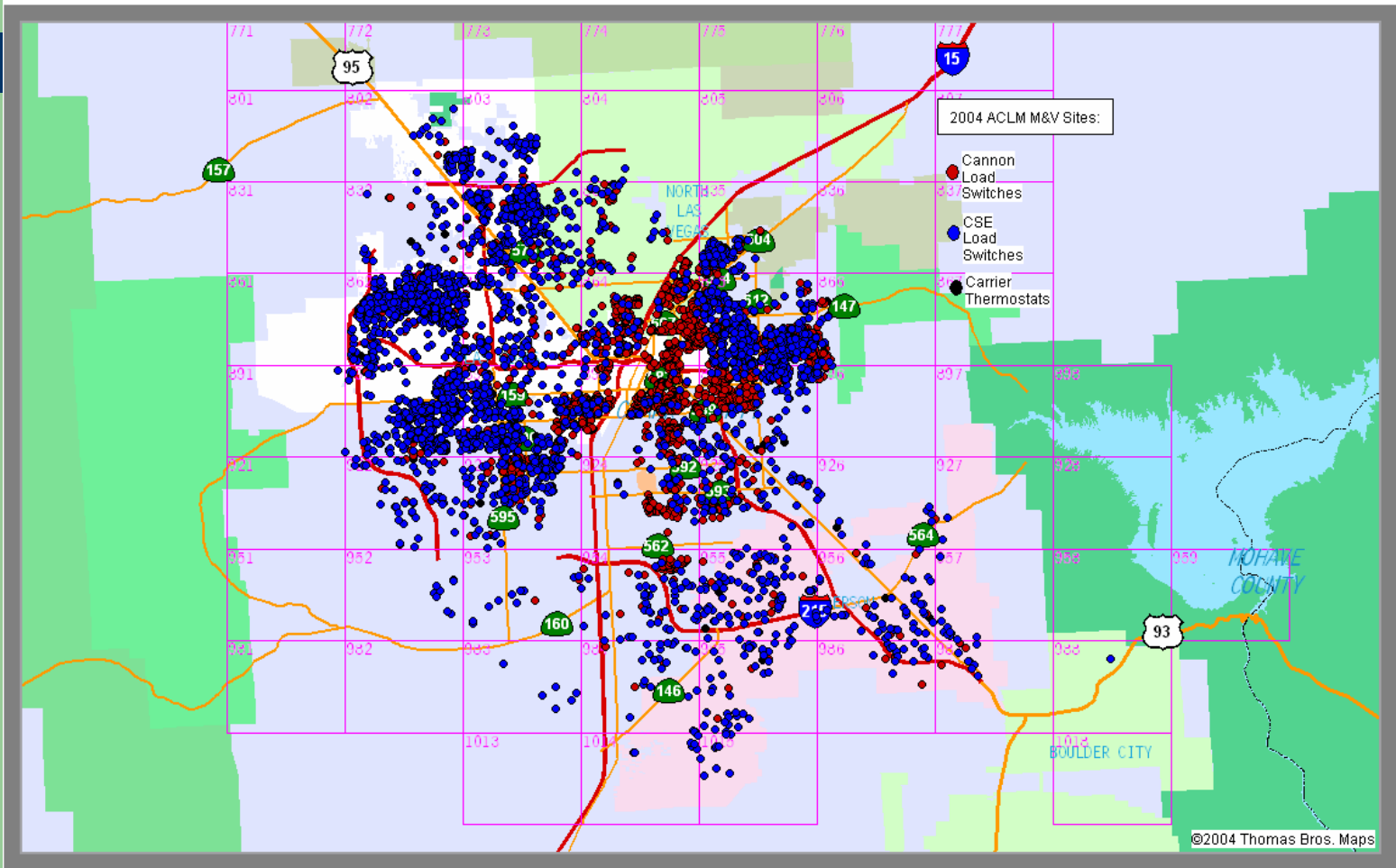


**Average Load ,
July 21, 2004 vs. July 12, 2004**



Electric Load per Home (kW)

ACLM Distribution



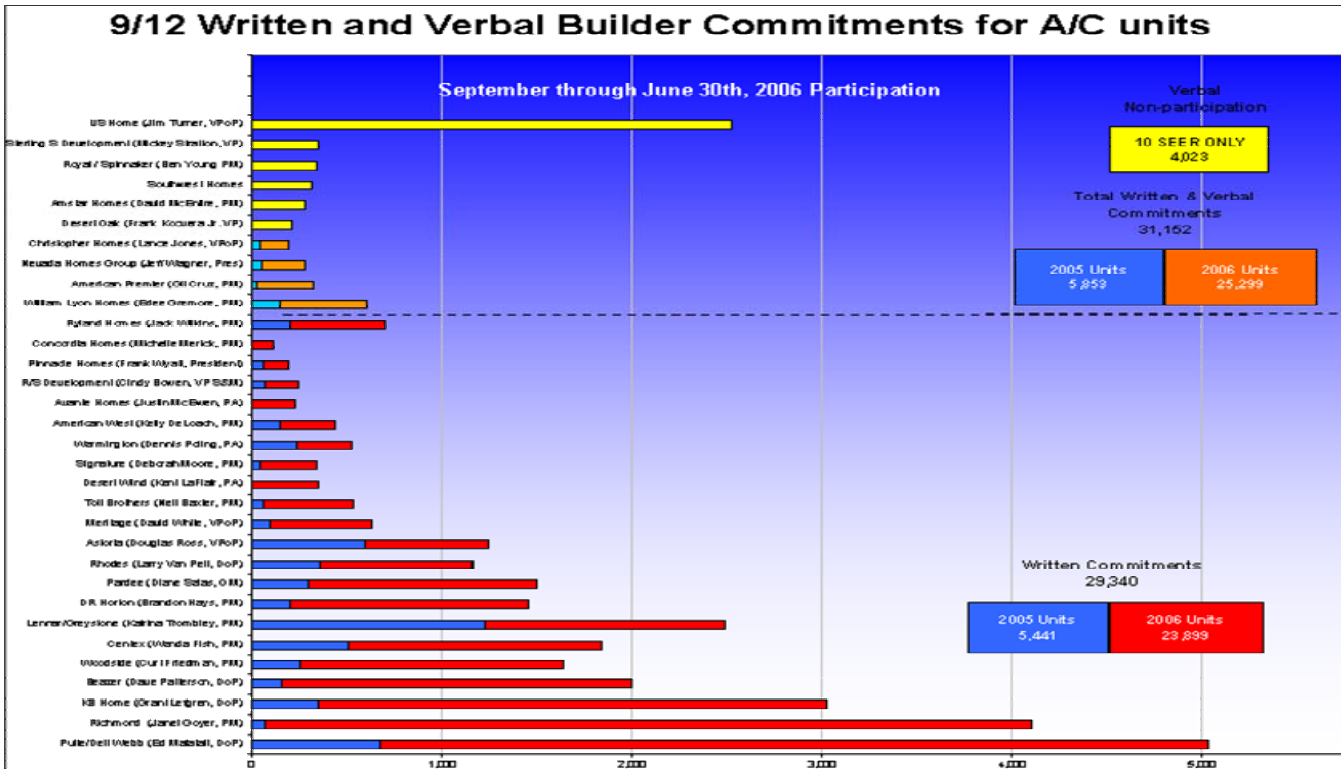
Program Highlights—Residential High Efficiency Air Conditioning Program

- Program is designed to provide incentives for installation of higher efficiency residential air conditioning units above standard 10 SEER
- Rebates paid on confirmed installation
 - \$300 for 13 SEER
 - \$900 for 19+ SEER
- Available to home owners, builders, ac contractors

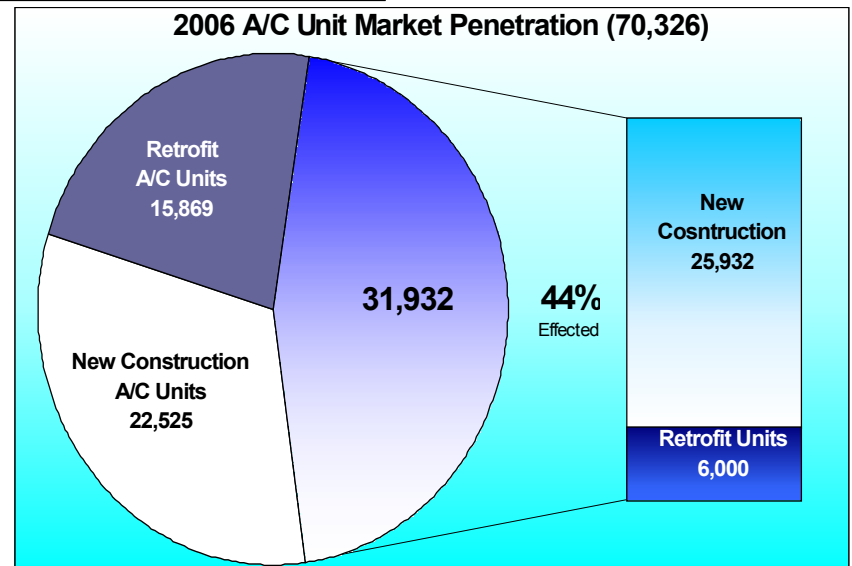
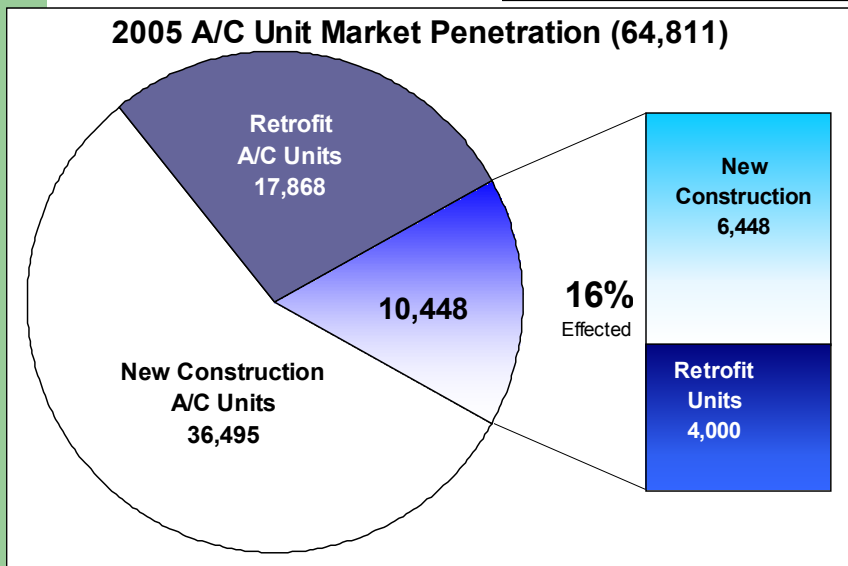
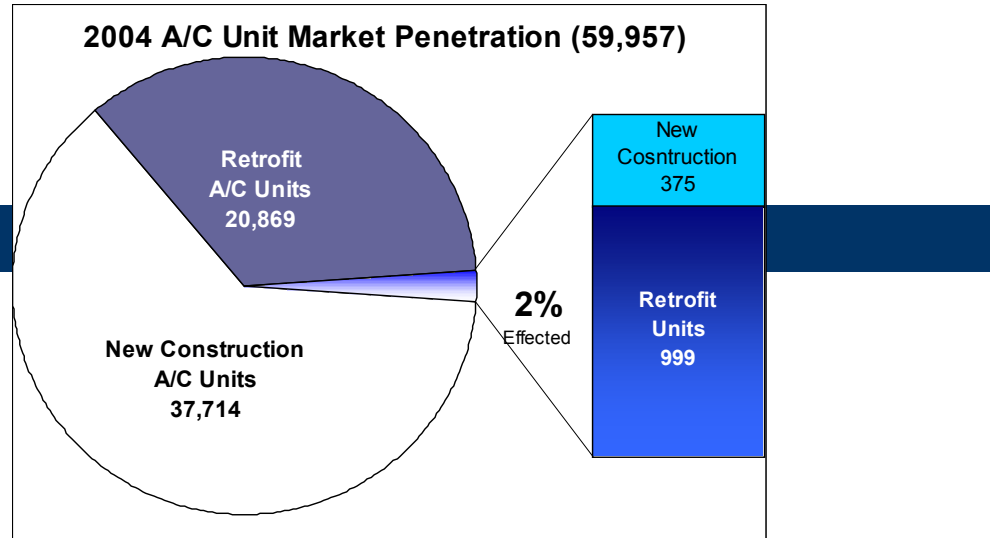
Residential High Eff AC Program-- Changes

- Background
 - Jan 2006 Federal Standards for Residential Air Conditioning Units will increase performance efficiency by 30% from 10 SEER to 13 SEER
 - Manufactures are going to “dump” 10 SEER units
 - Our team worked with 32 of the areas largest home builders to get in front of Federal Standard and affect this dump

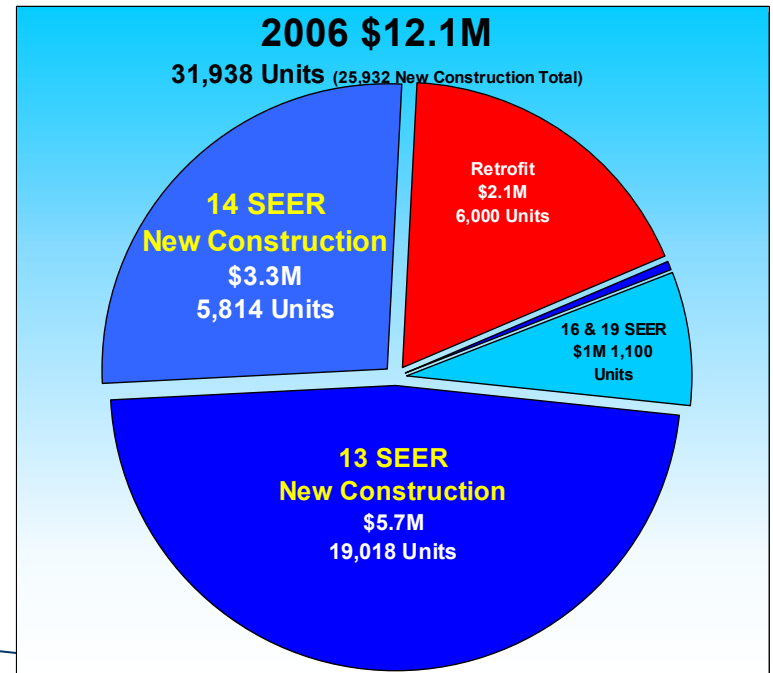
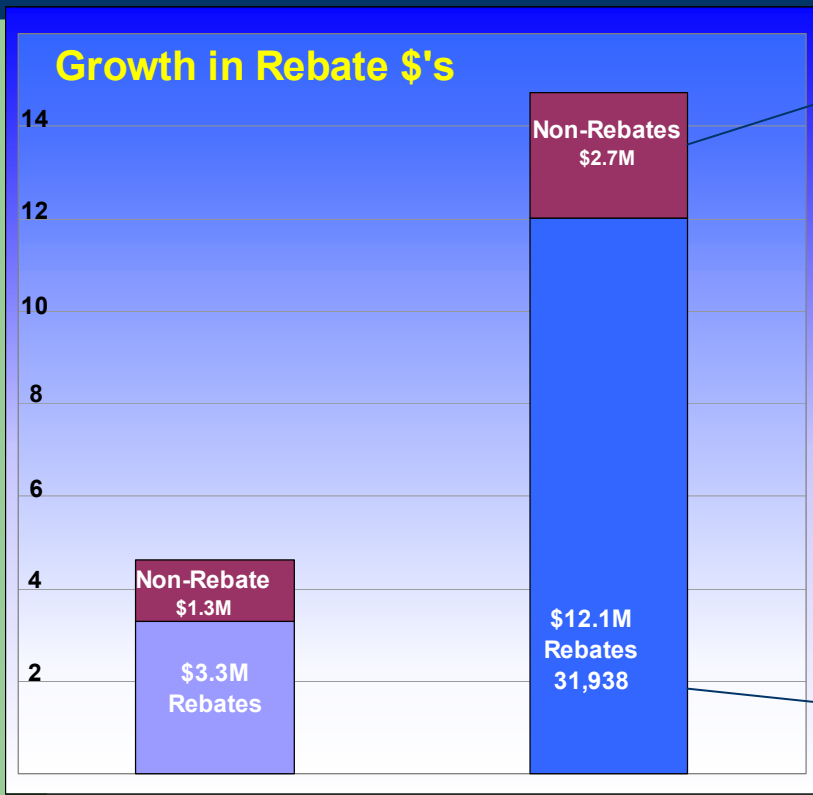
Builder Commitments



Market Size & Transformation



Rebate Table & Product Information



AC Program Budget Summary & Projections

2005 Program

Budget Summary

	2005	2006
Units		
Retrofit	4,000	6,000
New Construction	6,448	25,932
Total	10,448	31,932

	2005	2006
Rebates		
Retrofit	\$1,353,750	\$2,130,000
New Construction	\$1,929,613	\$9,878,200
Total	\$3,283,363	\$12,008,200

Administrative & Other Costs	\$1,329,088	\$2,719,286
Net Total Costs	\$4,612,450	\$14,727,486

	2005	2006
kWh Savings		
Retrofit	12,470,825	13,756,772
New Construction	10,121,502	61,060,497
Total	22,592,328	74,817,269
Total Cost per kWh	\$0.039	\$0.037

	2005	2006
kW Savings		
Retrofit	7,269	8,592
New Construction	8,595	35,972
Total	15,864	44,564
Total Cost per kW	\$290.76	\$330.48

	Base Program	Additional Program	Total
Units Rebated			
Retrofit			
SEER 13	1,750	750	2,500
SEER 14	475	0	475
SEER 16	300	0	300
SEER 19	475	250	725
Total	3,000	1,000	4,000
New Construction			
SEER 13	400	5,853	6,253
SEER 14	0	95	95
SEER 16	0	0	0
SEER 19	100	0	100
Total	500	5,948	6,448
TOTAL UNITS, ALL MKTS	3,500	6,948	10,448

2006 Program

	SEER 10 Baseline	SEER 13 Baseline	Total
Units Rebated			
Retrofit			
SEER 13	2,500	0	2,500
SEER 14	1,000	1,000	2,000
SEER 16	100	100	200
SEER 19	400	900	1,300
Total	4,000	2,000	6,000
New Construction			
SEER 13	19,018		19,018
SEER 14	5,814		5,814
SEER 16	100		100
SEER 19	1,000	0	1,000
Total	25,932	0	25,932
TOTAL UNITS, ALL MKTS	29,932	2,000	31,932

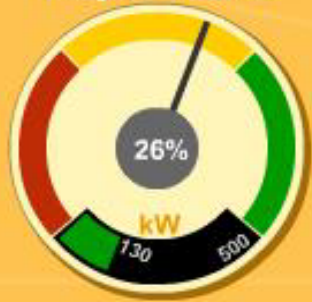
SolarGenerations

- Utility is implementer of the State's Solar Energy Systems Demonstration Program
 - Designed to install small scale photovoltaic systems in
 - Residential and small commercial
 - Public buildings
 - Schools
 - We are starting year 3
 - Paying \$3 per watt rebate



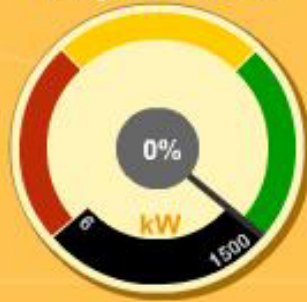
CURRENT PROJECT STATUS

Project Year 1:



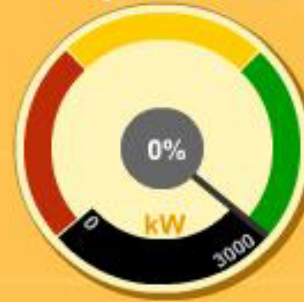
Target Progress

Project Year 2:



Target Progress
Project Year 2 construction begins June 1, 2005

Project Year 3:



Target Progress

Project Dashboard
Dashboard Home
Average Days

Under Construction

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Natural Gas Programs at Sierra Pacific Power Company

- Sierra Pacific Power Company provides natural gas service to 300,000 customers in the Reno Sparks area of Northern Nevada
- Yikes---recently approved 26% rate increase
- New Demand Side program for 2006/2007
 - Weatherization
 - Water Heater blankets
 - Efficient Space Heaters

Natural Gas Programs for 2006

<u>Project</u>	<u>06 Budget</u>	<u># of Units</u>	<u>B/C</u>
Weatherization	\$245,000	200	0.7
Water Htr Wrap	\$120,000	2000	1.24
Efficient Heaters	\$395,000	1300	0.47
Tech Trials	\$50,000	---	---
<u>Customer Outreach</u>	<u>\$10,000</u>	<u>---</u>	<u>---</u>
<u>Total for 2006</u>	<u>\$820,000</u>		