

The Rebirth of Utility DSM Programs in Nevada

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Agenda

- Brief History
- Rebirth Process
- Collaborative Effort
- Project Descriptions
- Budgets
- Results



Who we are



History

- No Programs from about 1998
 - Like most utilities facing deregulation
- Even though Integrated Resource Planning required DSM consideration
- Pre 1998 spending was around \$11M at both utilities



Rebirth

- Born out of Western Regional Crisis of late 2000 and early 2001
 - Nevada expected rolling blackouts in summer of 2001
 - Wholesale energy prices exceed \$200 per Mwhr during some hours
- Deregulation laws in Nevada repealed in spring 2001
 - Utilities back in vertically integrated energy business



Rebirth

- “Take Control” born---our DSM programs that were intended to give customers control of the craziness that was the Energy Crisis
- Initially \$2M for 2001 and \$3M for 2002 for both utilities
- Included in each utility’s Integrated Resource Plan in Summer of 2001.



Collaborative Effort

- Ordered by PUCN in late 2001 as result of IRP filings
- Initial meetings held late 2001/early 2002
- Lead to new set of programs--\$11.2M
 - Revised filings March 2002
 - Approved Oct 2002
 - Implemented April 2003



Collaborative Participants

- Both Utilities
- PUCN Staff & Bureau of Consumer Advocate
- SWEEP & Land and Water Fund of the Rockies
- UNLV & UNR
- Low Income Advocates
- Air Conditioning Contracting Industry



Program Highlights

- Over 25 programs for all customer classes
- \$11.2M for 2004
 - Proposed almost \$13M for 2005
 - Plus new Solar PV program---
 - 3 years over \$20M
- Positive results all programs



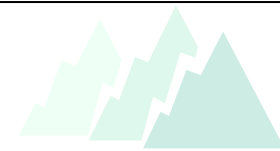
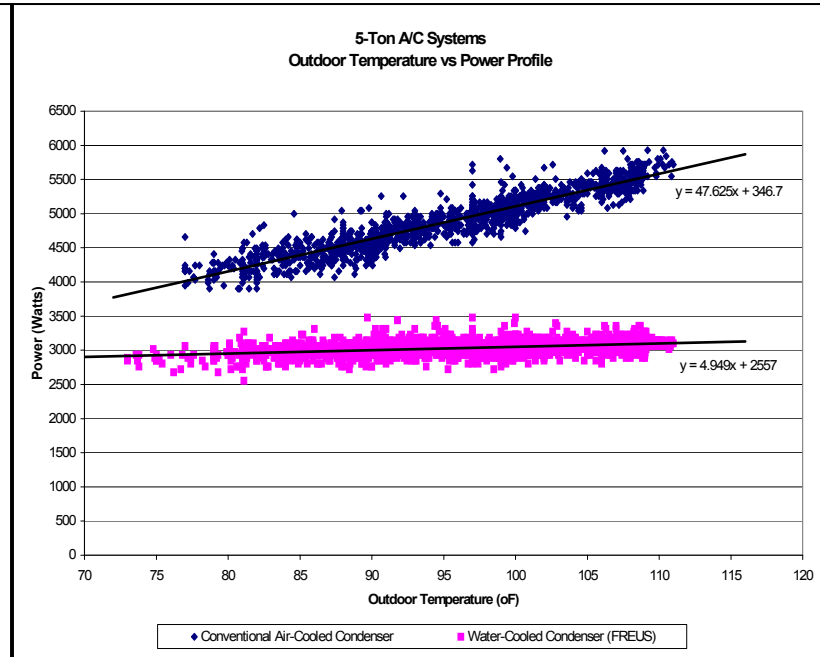
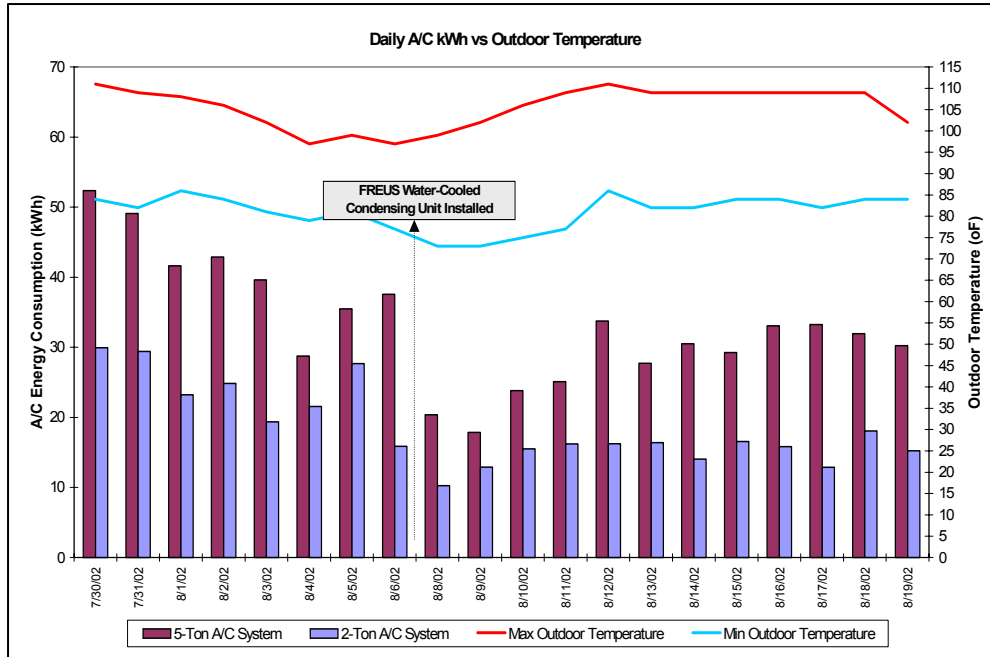
Selected Programs

- AC Rebates with Time of Use requirement
 - Rebates on 13 SEER + units if customer opts for TOU rate—limited success
- Air Conditioning Load Management
 - Reasonable growth 3000 units per year
 - \$60 per year customer incentive
 - Studying new two way technologies



High Efficiency Water Cooled AC Unit

- Testing of Freus Water Cooled Unit—



Selected Programs

- Energy Star Appliance rebates
 - Cash rebates on high efficiency energy star rated units—over 6200 units statewide
- Second Refrigerator Collection
 - \$30 for old refrigerator—almost 5000 recycled
- Energy Star for New Homes
 - Over 6000 Energy Star Homes built in Las Vegas



Slot Machine Efficiency

- Slot Machines
 - 210000 units
 - over 300 million kwhrs direct load another 100 million kwhrs in ac load
 - 1.2% of all energy use in Nevada
 - #1, 2 and 3 manufacturers of these units building product in Nevada
 - Working with Ecos Consulting on efficiency improvements that could yield significant benefits to manufacturing companies and end users



Selected Programs

- Commercial and Industrial Rebates
 - Named “SureBet”
 - Prescriptive and Custom rebates
 - 3900 kw peak demand reduction
 - 20,000,000 kwhr of energy saved
 - Over 240 customers helped



Nevada PV Program SolarGenerations

- \$5 per Watt
 - 5kw residential projects
 - 30kw commercial projects
- Contractor Installed
- Net Metering Contract
- Solargenerations.com



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Next Steps—New Programs

- High Performance Schools
 - Approved \$1M for Clark Co. School District over next three years for retrofits and new construction
 - Proposed \$1.35M next three years for Northern Nevada Schools
- Commercial New Construction
 - Proposed \$900,000 in Northern Nevada over three years
 - Pay for incremental design such as LEED type process
 - Support incremental energy efficiency technologies



Supplemental Slides



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Energy Education and Consultation

All Customers

Programs for All Customers	Nevada Power--2003	Nevada Power--2004	Sierra Pacific--2003	Sierra Pacific--2004
Non-Profit Agency Grants	\$40,000	\$75,000	\$40,000	\$75,000
New Home Construction Builder Support	\$50,000	\$80,000	\$50,000	\$35,000
New Home EnergyStar Program	\$50,000	Included above	\$50,000	\$35,000
Trade and Home Show Support	\$30,000	\$30,000	\$30,000	\$30,000
Web Support	\$30,000	\$30,000	\$30,000	\$30,000
Small Commercial Customer Education	\$80,000	\$100,000	\$80,000	\$150,000
Irrigation Customer Education			\$30,000	\$30,000
Energy Consultants	\$226,000	\$250,000	\$150,000	\$150,000
Total	\$506,000	\$565,000	\$460,000	\$535,000

Energy Education and Consultation Low Income Customers

Programs for Low Income Customers	Nevada Power--2003	Nevada Power---2004	Sierra Pacific--2003	Sierra Pacific--2004
Partnering with Nevada State Housing Division Direct Weatherization	\$384,000	\$384,000	\$256,000	\$256,000
Integrating Education with Weatherization Services	\$60,000	\$60,000	\$40,000	\$40,000
Ductwork Inspection and Improvements	\$108,000	\$108,000	\$72,000	\$72,000
Multi-Family Income Limit Support	\$320,000	\$320,000	\$80,000	\$80,000
Low Income Market and Customer Study		\$75,000		
Total	\$872,000	\$947,000	\$448,000	\$448,000



Conservation Programs

Nevada Power Company

Programs	2003 Budget	2003 Market Penetration	2004 Budget	2004 Market Penetration
Second Refrigerator Collection	\$506,000	3,450	\$500,000	3660
Compact Fluorescent Lamps	\$200,000	10,000	Incl. in Energy Eff. Appliances	--
Pump and Motor Rebates		-	-	-
Energy Efficient Appliances	\$445,000	2000	\$600,000	2000 plus new CFL Fix and CF
Vending Machines	\$115,000	700	Incl in Small Comm Incentive	-
Small Commercial Custom Incentives	\$800,000	110	\$1,200,000	180
Residential Photo-voltaic	\$300,000	50	\$300,000	50
Collaborative Identified Project			\$150,000	
Total	\$2,366,000		\$2,750,000	

Conservation Programs

Nevada Power – AC Rebates with TOU

Air Conditioning Rebate with Time-of-Use Rate Req't	2003 Budget	2003 Market Penetration	2004 Budget	2004 Market Penetration
High Efficiency Air Conditioning Replacement	\$1,800,000	4,000	\$1,966,000	3400
Duct Sealing	\$475,000	500	\$277,000	350
Air Conditioning Tune-Up	\$625,000	1,500	\$357,000	1000
Total	\$2,900,000		\$2,600,000	

Notes:

- 1) Market Penetration is really a customer allowance
- 2) As result of stipulation in NPC resource plan settlement duct sealing and tune-ups no longer require customer sign up on TOU



Conservation Programs

Sierra Pacific Power

Programs	2003 Budget	2003 Market Penetration	2004 Budget	2004 Market Penetration
Second Refrigerator Collection	\$217,000 (\$188,000)	1,475	\$200,000	1500
Compact Fluorescent Lamps	\$14,000 (\$30,000)	10000	Incl in Energy Eff. Appliances	--
Pump and Motor Rebates	\$133,000	40	\$133,000	40
Energy Efficient Appliances	\$191,000 (\$315,000)	805	\$350,000	850
Vending Machines	\$49,000 (\$36,000)	300	Incl in Small Custom Incentive	--
Small Commercial Custom Incentives	\$388,000 (\$330,000)	50	\$400,000	50
Residential Photo-voltaic		-	-	-
Total	\$992,000 (\$1,032,000)		\$1,083,000	

Note—figures in parenthesis for 2003 are revised budget based on June 6 filed amendment



Conservation Programs

Sierra Pacific Power - California

California Programs	2004 Budget	Market Penetration	Annual MWH Reduction	Annual MW Reduction
Appliance Rebates/Lighting--SBX	\$300,000	5000+	2.0	.8
Low Income Weatherization Rebates--SBX	\$300,000	1075	2.387	
Geo-Exchange Heat Pump Rebates--SBX	\$240,000	50	.7	-
Subtotal—SBX to be reimbursed	\$840,000			
Project Go—Low Income Weatherization—In current rates	\$100,000			
Energy Education---All Customers In new rates	\$258,000			
Total	\$1,198,000			



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Load Management

“Air Conditioning” Load Management Programs	2003 Budget	2003 Market Penetration	2004 Budget	2004 Market Penetration
Low Income ACLM	\$1,100,000 (Installed in 2002)	3,000	--	--
Residential Average Use ACLM	\$1,350,000 (\$1,400,000)	3000 (3300 actual)	\$1,620,000 (incl rebates from all previous programs)	3000 (total will be 10,800 by June 2004)
Two Way ACLM Pilot	Incl in Res. ACLM (\$100,000)	40	\$570,000	160
Comm & Indus Load Mgmt with RTP Study			\$50,000	
Turn Key ACLM Nega-Watt Project Study			\$50,000	
Total	\$2,450,000	6,000 (7500 customers 9Mw)	\$2,290,000	11,000 customers— (13Mw)

Nevada Power Cost/Ben Result for 2004 Programs

Cost / Benefit Results											
2004 NPC Conservation Programs											
		Gross Avoided kWh/Unit	Est. Demand kW/Unit	Market Pen.	Rebate	Part. Exp.	5 Year TRC	10 Year TRC	Life TRC	Total Avoided Capacity (MW)	Total Avoided Energy (MWh)
ACLM Residential											
	NPC	120	1.3	3,000	60	0	0.64	0.89	1.01	3.90	505.04
ACLM Two Way Pilot											
	NPC	240	2.6	160	60	0	0.69	1.33	1.79	0.42	107.74
Time Of Use											
	Cypress - Combined - NPC	10,832,600.00	4,896.00	1	n/a	2,662,750	0.65	1.11	1.11	4.90	11,699.21
Photovoltaic											
	NPC	3,000.00	1.50	50	3,000	7,000	0.06	0.10	0.10	0.08	162.00
Refrigerator Pickup											
	JACO - NPC	1,539.00	0.26	3,666	30	0	0.93	1.18	1.18	0.95	6,093.33
Energy Star Appliance											
	Ecos - Combined - NPC	2,091,200.00	1,795.62	1	n/a	222,354.86	0.93	1.61	1.61	1.80	2,258.50
Small Commercial Custom											
	Xenergy - NPC	63,444.97	21.15	180	4,018	16,073.00	0.51	0.81	1.00	3.81	12,333.70
Pearson Bldg. Energy Mgmt Sys											
	NPC	607,329.00	0.00	1	n/a	0.00	n/a	n/a	0.19	0.00	655.92
All Programs Combined											
	NPC	30,534,268.60	15,842.78	1	n/a	6,128,244.86	0.57	0.99	0.99	15.84	32,977.01
Marginal Capacity Cost		\$73.60 kW yr									
Marginal Energy Cost											
	peak	\$35.69 MWh									
	off - peak	\$15.83 MWh									
	all hours	\$17.49 MWh									
T&D Losses		8%									
Discount Rate		8.37%									