SMUD

SMUD's Compact with the Customer

Vikki Wood & Amy Furlong

CEC Load Management Standards
Customer Education & Needs Workshop

July 10, 2008

SMUD Vision Statement

- **SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region**

- **In implementing this vision, the District will adhere to these principles:**
  - **Preserve our customers' quality of life by offering flexibility and options**
  - **Enable customers to use both active and passive means to achieve these goals**
  - **Enable all customers to participate**
  - **Collaborate, as appropriate, with partners who share SMUD's goals**
  - **Focus on investing in energy efficient infrastructure for both SMUD and customer facilities**
  - **Use a comprehensive communication strategy**
  - **Leverage SMUD's leadership role to achieve these goals**

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Elements of the Compact

- **Full AMI deployment by 2012**
- **Time-differentiated rates which represent true cost of service**
- **Demand response, energy efficiency and renewables/storage program options**
- **Umbrella marketing, education, outreach and engagement campaign – Over-arching, consistent, multi-channeled customer communications and interactions**

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Compact Defined

- **Redefine SMUD's relationship with our customer-owners**
  - **Engage the District's customer-owners in our strategic plans and vision for the future**
  - **Give customers a voice in the ways the District interacts with them and provides them service**
- **It is the responsibility of the District to:**
  - **Listen to our customers to identify their needs and desires**
  - **Provide them with critical information about the utility operating environment, issues and challenges**
  - **Provide them with options and means to work with the District to meet these challenges**
- **It is the responsibility of customers to actively participate and choose how they respond to the challenge of obtaining and using energy in today's world**

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Compact Principles

- **Engage customers and the community to change energy behavior**
  - Give customers choices, empowering them to make decisions
  - Enlist the community in marketing, options and benefits
- **Link rates and programs to greater awareness of global climate change and other environmental impacts**
- **Reduce costs in peak periods by**
  - Consumer behavior changes (rate-based incentives)
  - Automatic response through direct load control
- **Create programs that support local projects aimed at reducing carbon and improving environmental quality**
- **Provide education and technologies that give customers the tools to exercise choice**
- **Convey consistent message through all communication channels (touch points)**

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Historical SMUD DR Research

- 1993 Peak Corps (ACLM) Load Impact Study (residential AC load control program using controllers)
- 1994 Peak Corps Market Study
- 1995 RASS/Peak Corps Survey
- 1997 Customer Segmentation Study
- 2000 Peak Corps Market Study (conjoint analyis)
- 2001 RASS/Peak Corps Survey
- 2003 CEC/SMUD PowerStat Pilot (residential AC load control using thermostats)
- 2004 CEC/SMUD Power Choice Pilot (residential TOU/CPP using thermostats)
- 2006 Statewide CEUS Itron Study
- 2007 Compact with the Customer focus groups (30+)

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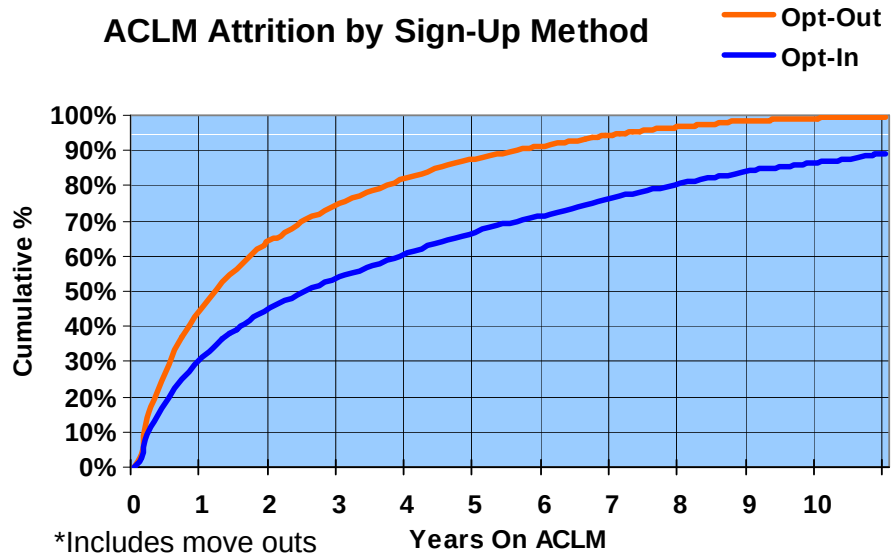
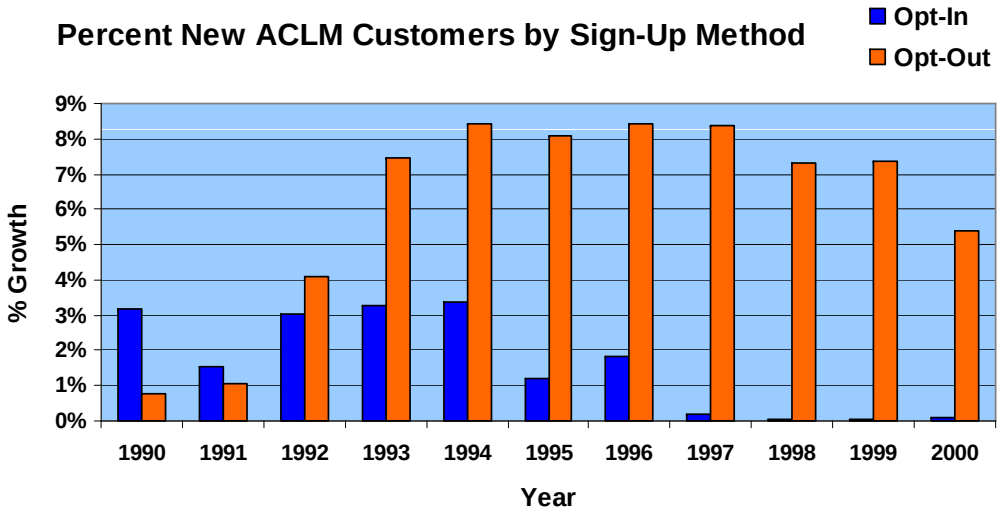
Peak Corps Attrition & Growth

- Opt-In = Respondents to media solicitations
- Opt-Out =
  - Low-income & AC rebate program participants
  - New construction dwellers
  - New occupants in homes with existing cyclers

- Attrition greater by 15%-25% for opt-outs than opt-ins, regardless of how long customers participate
- However, over time opt-out customers comprise the larger portion of new participant growth





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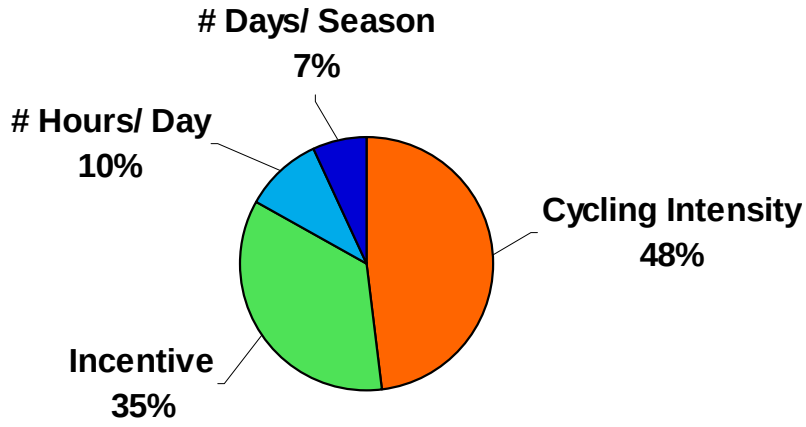
Peak Corps Research Highlights

- From 1990-1998 Peak Corps used to actively manage loads an average of 8 times per summer
- Peak Corps participants and non-participants equally satisfied with SMUD; Peak Corps participants very satisfied with Peak Corps program
- Level of satisfaction directly related to cycling intensity
- 25% of non-participants will never join; 67% of participants remain on original cycling option
  - 18% increase cycling option
  - 4% decrease cycling option
  - 11% drop from program

Importance of Peak Corps Attributes



- When questioned directly, participants say the incentive is the most important attribute
- When forced to make trade-offs among attributes, cycling intensity (comfort level) is actually most important

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PowerStat Findings (Peak Corps with T-Stat)

Average kW Savings per Customer

Outdoor Temperature	Peak Corps Savings			PowerStat Savings		
	50%	67%	100%	50%	67%	100%
<=90ºF				0.9	1.2	1.8
91ºF -95ºF	0.5	0.7	1.0	1.0	1.3	2.0
96ºF -100ºF	0.6	0.8	1.2	1.1	1.4	2.2
101ºF -105ºF	0.7	0.8	1.4	1.2	1.6	2.4
106ºF -110ºF	0.8	1.0	1.7			

- **Unit kW savings almost double for PowerStat**
  - Difference in technologies – Two way communication allows for identification of non-operational controllers and AC units
  - Difference in populations – PowerStat more engaged in program
  - Difference in estimating methodologies

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Power Choice Findings (TOU/CPP with T-Stat)

- **Energy use:**
  - in the low price period *increased* by 1%
  - in the medium price period *declined* by 8%
  - in the high price period *declined* by 11%
  - during critical price period *declined* by 16%
  - across the summer season *declined* by 4%

Appliances Used

Behavior	Time-of-Use Period			
	Low	Medium	High	Critical
Ran AC	51%	58%	48%	17%
Washed and dried clothes	83%	15%	6%	0%
Used dishwasher	81%	14%	6%	2%
Used computer/printer	72%	69%	57%	**45%**
Watched TV	66%	84%	79%	**56%**
Showered or bathed	81%	27%	14%	12%
Cooked or baked	36%	43%	32%	12%
Barbequed outdoors	23%	38%	55%	**49%**

Energy Use Behaviors

Behavior	Percent
Checked thermostat display for critical period	**83%**
Routinely adjusted AC with override buttons	57%
Shifting became a habit in both summer and winter	55%
Had disagreements about using energy at particular times	47%
Changed the default setting of 78ºF for cooling	42%
Shifting became a habit in summer only	40%
Reprogrammed critical peak offsets	10%

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More Power Choice Findings

- **During non-critical periods only 21% of participants were more uncomfortable than before the program**
- **During critical peak periods, 53% were somewhat to very uncomfortable**
- **Customers who saved the most were most aware of their behavior and vice-versa**
- **Positive relationship between savings and:**
  - Satisfaction and willingness to continue program
  - Checking for a critical event or usage data
  - Investment in energy efficiency
  - Education level
  - Presence of children and seniors
- **Negative relationship between savings and:**
  - Being home during peak
  - Adjusting AC temperature during critical period
  - Changing critical period setback temperatures
  - Dollar benefit due purely to rate change
- **No relationship between savings and:**
  - Knowledge of price schedules or times of use
  - Participation in billing programs
  - Dwelling characteristics
  - Water heat and pool pump control

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Current SMUD DR Behavioral Research

- **Power Choice Home Energy Display Pilot**
  - Measures effects of concerns, capacity and conditions on response to TOU rate
  - Offers education plus usage feedback devices to existing residential TOU customers
  - Collaboration with Research Into Action, Dethman Associates, Washington State University, Mithra Moezzi and Blue Line Innovations, funded by PIER
- **Small Business Summer Solutions Pilot**
  - Measures effects of pricing and control incentives on load response
  - Offers education plus PCTs with new critical peak rate or direct load control program to small commercial customers
  - Collaboration with Heshong Mahone Group, Roger Levy Associates, Mithra Moezzi, Residential Control Systems and E-Radio, funded by PIER and SMUD
- **Near Zero Energy Home Display Pilot**
  - Measures effects of consumption/production feedback on load and consumption
  - Offers education plus usage/production feedback devices to existing energy efficient/solar homeowners
  - Collaboration with ConSol, General Electric, Florida Solar Energy Center, California State University Chico, and NREL, funded by the Building Industry Research Alliance (BIRA) and Building America

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Current Customer Research

- **New 2008 RASS, including Peak Corps RASS sample**
- **New 2008 Segmentation Study**
  - Segmentation will be used to create customer groups to improve the efficiency and effectiveness of education, marketing and product/program development
  - Segmentation study will allow SMUD to:
    - **Develop products/services that are most appropriate for different segments**
    - **Understand how best to reach customers in each segment**
    - **Tailor appropriate messaging to customers**
  - Residential and commercial segments are based on attitudinal factors and behavioral indices, energy usage, geographics, demographics/firmographics, social values and needs (benefits)

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Customer EE, DR and DG Programs

- **Greenergy –** Residential customers purchase green energy at the 50% or 100% levels for $3/month and $6 respectively. Commercial customers can buy blocks of green energy.
- **Mow Down Air Pollution –** Provides electric lawnmowers at a reduced price in exchange for a functioning gas mower. Gas mowers are dismantled and recycled.
- **Solar Shares –** Allows the purchase of solar energy from a 1 MW PV plant in Wilton. For those with poor solar access, or cannot afford a large system, this allows them to make a 20-year commitment to PV. They are credited with their percentage of solar production.
- **Solar Smart Homes –** Promoting homes that use 60% less grid electricity through energy efficiency and PV. Rebates are provided for energy efficiency and PV.
- **Energy Efficiency and Demand Response Programs –** A portfolio of energy efficiency and demand response programs that provide rebates and incentives to install efficient technologies and/or participate in programs.

Customer Engagement Offerings

- **OurGreenCommunity.org –** Provides customers with tips for reducing their environmental impact. The carbon calculator allows individuals to calculate their carbon emissions and to take actions to offset their carbon footprint.
- **Energy and Technology Center –** A series of classes and educational forums are available to help increase awareness of specfic technologies, energy saving techniques, efficient home improvements, commercial energy efficiency, efficient home and commercial building design, etc.
- **Community College and University Partnerships –** Working in concert with colleges to promote energy efficiency and environmental curriculum.
- **Neighborhood Energy All-Stars –** Neighborhood associations advertise the All-Star program in newsletters and blogs. Those who sign up commit to reducing their energy use through conservation and energy efficiency.
- **Chamber Energy All-Stars –** Chambers of Commerce sign up to promote energy efficiency through various avenues.
- **SMUD.org –** Great information is available to help our customers save energy and money.

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Integrated Marketing

- Umbrella Marketing Strategy
- Research Strategy
- Creative Development
- Implementation

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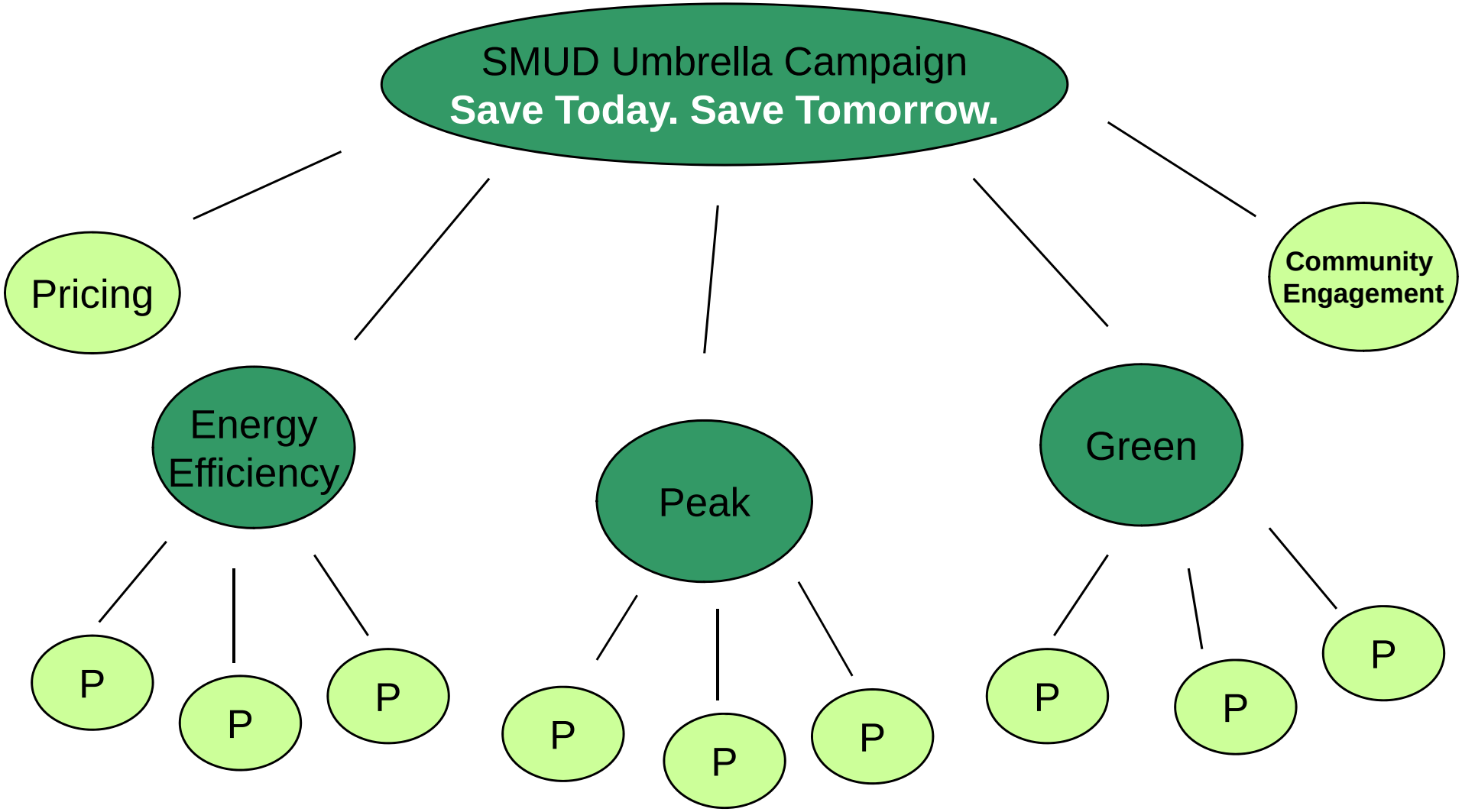
Umbrella Marketing Strategy



P = programs

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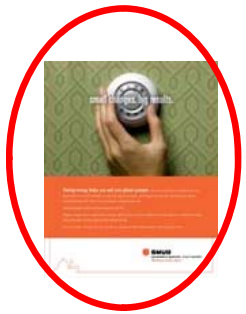
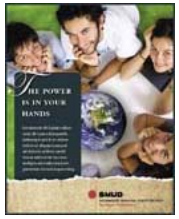
Creative Development

Research Strategy:

- Integrate the “voice of the customer” into SMUD’s creative strategy
- Online surveys – Tested nine concepts. 670 residential customers identified top three concepts (rated overall appeal, imagery, attention, motivation to change energy behavior, emotional appeal, message/execution recall, and SMUD brand identity)
- Focus groups – Refined top three concepts down to one (6 residential and 4 commercial focus groups)

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Perception Tracker

- **Phone surveys - measure campaign impact:**
  - SMUD brand – customer perceptions
  - Program awareness, familiarity, consideration, participation, and satisfaction

- **Timeline:**
  - Baseline – mid-June
  - Peak Campaign – September
  - Energy Efficiency Campaign - December

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Print Ads (Peak Message-July/August)

Residential

Commercial

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Print Ads (Diversity)

Save Today. Save Tomorrow.

Community
Run appliances before 4 p.m. or after 7 p.m. The more we reduce our energy use during the peak hours, the fewer power plants we'll need to build. And that's good for everyone.

Savings
Set your thermostat to 78° or higher — save up to 10% of cooling costs for every two degrees you raise it.

Environment
Reduce your environmental impact by making your home more energy efficient. Use SMUD rebates on ENERGY STAR® appliances.

You have choices for how you use electricity. As your customer-owned electric utility, we can help you save money on your bill, protect the environment, and help the community.

This summer, we can all start by reducing our energy use during the peak hours of 4:00 p.m. to 7:00 p.m. Saving today will keep costs low, maintain reliable electric service, and help build a cleaner, healthier environment for tomorrow.

How will you save today?

smud.org/savetoday

ENERGY STAR

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
The Power To Do More.®

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ENERGY STAR

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Billboard (Peak Message-July/August)

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Web Advertising

SMUD

Bill Envelope (Peak Message July/August)

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SACRAMENTO MUNICIPAL UTILITY DISTRICT
6201 S Street, P.O. Box 15830, Sacramento CA 95852-1830
The Power To Do More.®
SMUD E-081 11/07

BILL ENCLOSED

PRESORTED
FIRST-CLASS MAIL
U.S. POSTAGE PAID
SMUD

Save Today.
Save Tomorrow.

Use less energy
between 4 p.m.-7 p.m.,
summer weekdays

Visit smud.org/
savetoday

Window shown
for placement only.

SMUD

Program Ad – Energy Efficiency Rebates (Bill Insert)

Save Today. Save Tomorrow.

Saving today starts at home. As your customer-owned electric utility, we can help you save money on your bill while improving your home's comfort, and protecting the environment.

Before you purchase or replace equipment, appliances or electronics for your home, check with SMUD first for information and rebates on qualified ENERGY STAR® products.

Ask for ENERGY STAR to keep energy costs low and help build a cleaner, healthier environment for tomorrow.

How will you save today?

smud.org/savetoday

Savings
Get $35 from SMUD when you recycle your old, operating inefficient refrigerator or freezer. Call 1-800-299-7573.

Community
Run appliances before 4 p.m. or after 7 p.m. The more we reduce our energy use during the peak hours, the fewer power plants we'll need to build.

Environment
Products with the ENERGY STAR label meet strict energy efficiency guidelines set by the US Department of Energy and EPA.

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Program Ad – Shade Tree (Pepsi Promotion)

Plant Today. Save Tomorrow.

Environment • Πλαντ α τρεε, ρεπλαχε α βυλβΝσαΩε σομε ενεργψΝεΩεν τηε λιττλε τηινγσ μακε α βιγ διφφερενχε το τηε ενΩιρονμεντ.

Savings • Τυρν οφφ ψουρ λιγητσ ανδ υνπλυγ αππλιανχεσ ωηεν νοτ ιν υσε. Ψουρ ωαλλετ ωιλλ τηανκ ψου φορ ιτ.

Community • Μορε παρκσ, λεσσ πωερ πλαντσ. Υσινγ ψουρ πωερ ωισελψ ηασ α ηυγε ιμπαχτ ον τηε ωηολε χομμυνιτψ.

Enjoy a Pepsi Now

There has never been a better time to take advantage of SMUD's FREE shade tree program. Now for every tree you plant you will receive a FREE 2-liter bottle of Pepsi and be entered into a contest to win a backyard BBQ – courtesy of SMUD, Pepsi and Raley's.

smud.org/save today
1-888-742-SMUD(7683)

SACRAMENTO TREE FOUNDATION

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The Power To Do More.®

PEPSI

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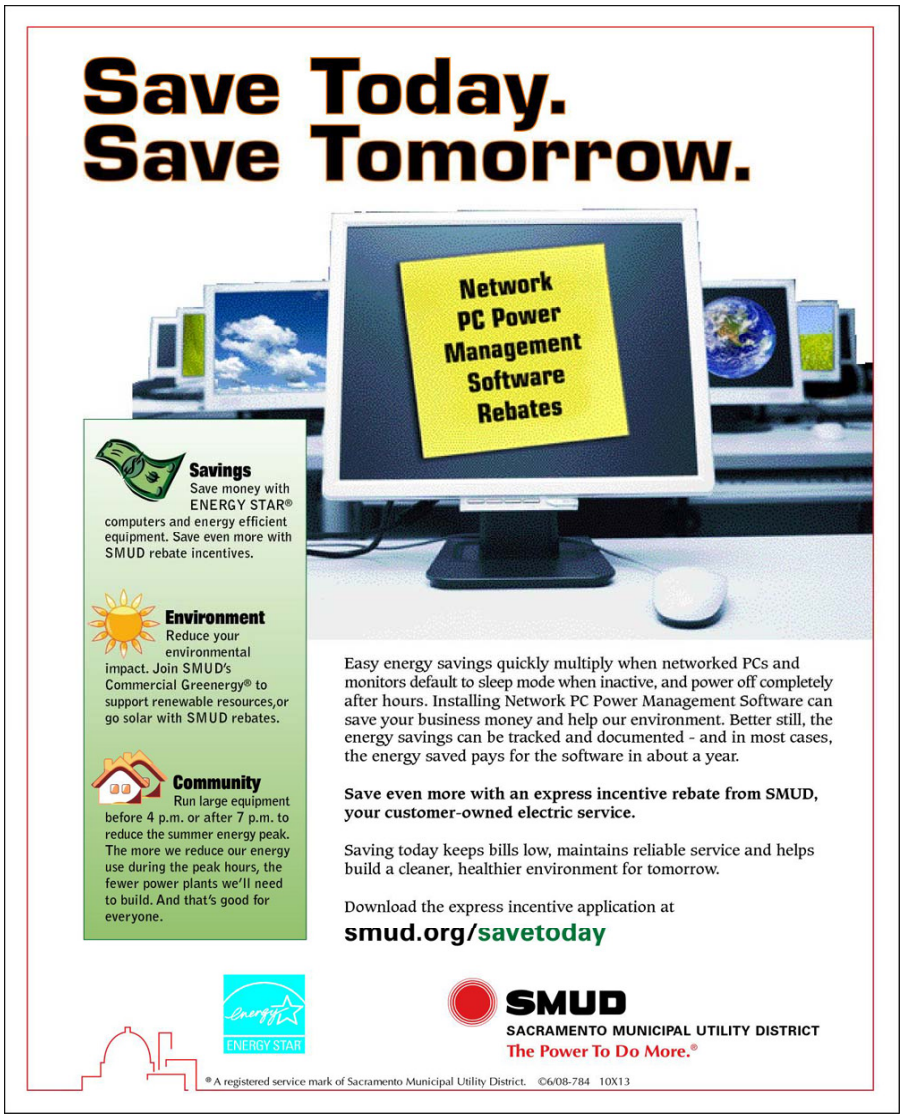
Program Ad – Network PC Software Rebate



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smud.org/savetoday

(Peak Message July/August and currently advertised programs)

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The Power To Do More.®

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Home | Residential Customers | Business Customers | Rebates | Careers | Outages | Pay Your Bill | Start/Stop Service

Home > Save Today, Save Tomorrow. > Residential

Residential | Business | Community

Environment
Plant a tree
Go green
Reduce your carbon footprint
Solar
SolarSmart Homes
Our Green Community org

Savings
Rebates
Replace a bulb
Take a class
Energy saving tips
Online home energy analysis
Pools & spas
Power protection

Community
Electric vehicles
Wind
Solar
Hydroelectric
Renewable energy
Peak Corps

Save Today. Save Tomorrow.

Use less energy between 4:00- 7:00p.m. Save today for a cleaner, healthier environment tomorrow.

Peak Saving Tips

◄◄ For more information on ways you can help, click on the links in the left-hand column.

Pepsi "Free Shade Tree" Program
June 15 - September 15, 2008
Plant a tree, get a FREE bottle of Pepsi and you may win a backyard BBQ for you and 20 guests! To sign up for your FREE trees, call the Sacramento Tree Foundation at 916-924-8733. Click here for official contest rules.

Greenergy®
SMUD makes it easy for you to support a cleaner environment. Join Greenergy® for just pennies a day and get power from renewable fuel sources like wind and sun. Join today!

SolarSmart Homes
Save up to 60% on your electric bill in a new SMUD SolarSmart Home. Find out why you should make your next home a SolarSmart home.

Peak Saving Tips: Ways we can all use less energy between 4-7pm.

Air conditioning
- Pre-cool your home a few degrees cooler than normal during the early afternoon and let the home "ride-through" the 4-7pm period as much as possible. If you have a programmable thermostat, you can set it to adjust the temperature automatically.
- Raise the thermostat 2 to 4 degrees between 4-7pm. Reset the temperature back down after 7pm. If you have a programmable thermostat, you can set it to adjust the temperature automatically.
- Keep windows closed during the heat of the day. Open them in the evening to take advantage of the Delta breezes.
- Use window coverings to block the sun?s rays during the day.

Appliances
- Avoid using your washing machine, electric dryer and dishwasher or any major appliance between 4-7pm.
- Turn off smaller appliances (i.e. computers, printers, TV?s) at the wall when not in use.

Electric water heater
- Have a timer installed on your electric water heater. Try limiting the amount of time it runs between 4-7pm, while still providing you with enough hot water.

Outdoor lighting
- Wait until later in the evening to turn on outdoor lighting. Use a timer to make this job easier.

Pool pump
- Avoid running your pool filter/cleaner pump motor between 4-7pm.

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TV Commercial - Peak Message

This is simple.

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TV Commercial - Peak Message

SMUD wants to use
more sun

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TV Commercial - Peak Message

…water...

TV Commercial - Peak Message

…and wind….to generate clean, reliable electricity…

SMUD

TV Commercial - Peak Message

and less power from fossil fuels

SMUD

TV Commercial - Peak Message

This summer we can all help by
using less energy during the peak hours…4 to 7pm….

SMUD

TV Commercial - Peak Message

…and turning our thermostats to 78 degrees.

SMUD

TV Commercial - Peak Message

See? We'll save today…like money and energy.

SMUD

TV Commercial - Peak Message

And save tomorrow. Like the environment.

SMUD

TV Commercial - Peak Message

It’s simple.

SMUD

TV Commercial - Peak Message

visit smud.org/save today

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Implementation Channels

Schedule: **(Peak: 7/1-8/31)** **(Energy Efficiency/Green: 9/2-12/15)**
Television **– Broadcast News – morning, noon and evening; Cable – 7-9PM (12 weeks)**
Radio **– full mix of stations (13 weeks)**
Banner Ads on other Sites **- full mix of websites (8 weeks)**
Billboards **(12 weeks) 18 billboards, 15 transit shelters**
Print **– (20 weeks) – full mix of publications**
Community **– (State Fair)**
Bill Package **– (5 months) – bill envelope, bill message, inserts, Connection**

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