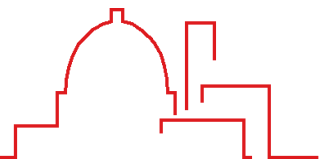


Understanding the Energy Efficiency Ecosystem The Municipal Utility Perspective

Bruce Cenicerros
Sacramento Municipal Utility District



What are Publicly-Owned Utilities (POUs)?

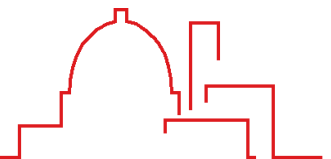
- Authorized by state law
- Government entity (city, county, town, state dept. or special district).
- Customer-owned
- Usually not regulated by state utilities commissions
- Usually have autonomous budgeting and rate-setting authority
- Own and operate generation, transmission and distribution systems for electricity/gas/water



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Who are POUs?

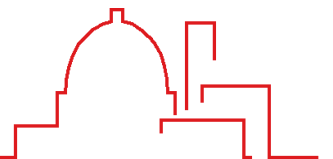
- Over 2,000 public electric utilities in US
- Serve 43 million customers
- Wide range in size:
 - LADWP serves 1.4 million customers
 - Whalen, MN serves 64 customers
 - 1,400 serve less than 10,000 customers
- Some very active and innovative in energy efficiency, but large number have no EE programs.



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POUs are Subject to State and Federal Regulation

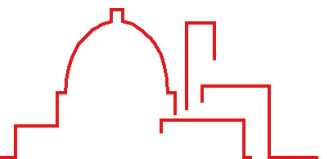
- California laws effecting energy efficiency:
 - POU's must treat EE as a resource and include in integrated resource planning process
 - Must capture all cost-effective EE before considering new supply
 - Must set 10-year EE goals every three years and report progress toward goals annually
- These laws don't necessarily constrain POU's' ability to pursue behavior-change programs



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Municipal Utilities Must Meet Self-Imposed Requirements

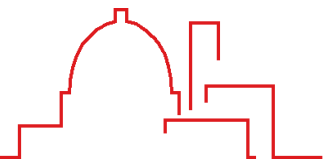
- Oversight of elected boards or appointees
 - Set strategic goals and directives
 - Subject to political forces, conflict-averse
 - Pressure to keep rates low
- Scrutiny of resource planners
 - Want EE to look like a power plant
 - Skeptical of impacts from behavior change
 - More comfortable with “concrete and steel” solutions



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New Behavior Programs at SMUD: Branded Awareness Campaign

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



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* A registered service mark of Sacramento Municipal Utility District.

**Save Today.
Save Tomorrow.**

Energy efficiency rebates for your home.



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CLICK TO
LEARN
MORE.

**Save Today.
Save Tomorrow.**
Energy Efficiency Rebates
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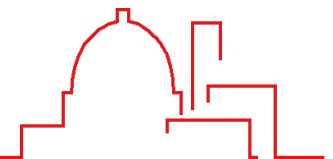
New Behavior Programs at SMUD: Power Cost Monitors



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New Behavior Programs at SMUD: Home Electricity Reports



Contract number: 594860
Home electricity report
 bill period: 07/14/07 - 08/13/07

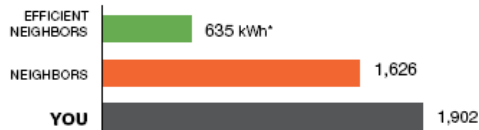
Adam Smith
 1400 45th St.
 Sacramento, CA 95819

This home energy report is intended to help you understand and make choices about your electricity usage and costs. Each month you will see:

- A comparison of your use to your neighbors
- A comparison to your own use last year
- Personalized tips for reducing your cost

We hope this helps you manage your home electricity use!

Last Month Neighborhood Comparison | Last month you used **14% MORE** electricity than your neighbors



*A 100-Watt bulb left on for 10 hours uses 1 kilowatt-hour (kWh).

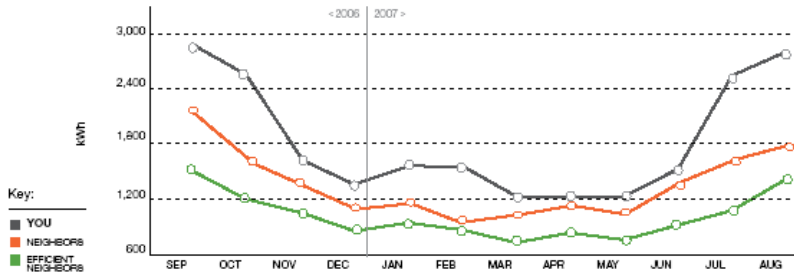
HOW YOU'RE DOING:

GREAT (👍👍)

GOOD (👍)

ROOM TO IMPROVE (👎)

12 Month Neighborhood Comparison | In the last 12 months you used **9% MORE** electricity than your neighbors. **THIS COST YOU \$435.**



WHO ARE YOUR "NEIGHBORS"? We're comparing your usage to 100 homes nearby and similar in size to yours (average 2340 square feet). Your most efficient neighbors are the top 20 in terms of energy efficiency.

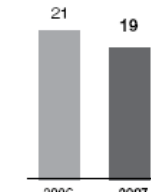
Personalized Action Steps

- Unplug appliances to reduce Phantom loads
- Switch to Compact fluorescent lights
- Invest in an efficient refrigerator

TURN OVER TO LEARN MORE →

Personal Comparison | How your energy use compares to last year

July Average kWh/day



Average Temperature
 July 2006: 67° | July 2007: 72°

You used **10% LESS** this July. You earned a star!



STARS EARNED THIS YEAR:

		★				★	?	?	?	?	?
J	F	M	A	M	J	J	A	S	O	N	D

* You earn a star when you use less than last year.

So far this year, you're using **5% LESS** than last year.

ACTION STEPS | Personalized tips to reduce your electricity bill and environmental impact

Quick Fixes

Things you can do right now

- Reduce phantom loads

In the average home, 75% of electricity used to power home electronics is consumed while the products are turned off. That's a lot of wasted energy and cost!

Cell phone chargers, computers, and televisions are examples of devices which consume electricity when turned off. Eliminate this waste by unplugging the devices or using a powerstrip which can be turned off.

\$100 SAVED OVER 1 YEAR

Smart Purchases

Save a lot by spending a little.

- Switch to Compact Fluorescent Bulbs (CFLs)

CFLs use 75% less energy and last up to 10 times longer than standard incandescent light-bulbs.

They greatly reduce energy usage and saves you money on electricity bills and replacement costs. Today's CFLs provide high-quality light output and are available in many sizes and shapes to fit most lighting fixtures.

Replace 5 bulbs and save up to:

\$65 EACH YEAR

Reduce your Impact

Offset your emissions

- Enroll in SMUD's carbon offset program

Your electricity use for 2007 created **11.2 TONS** of carbon emissions. Your carbon output can be offset by funding carbon reduction programs.

You can offset the emissions from your electric use for: **\$4.51 a month!**

Order online at livegreen.smud.org

Don't forget your account number: 594860

11 TONS OF CO2 SAVED




1-888-742-SMUD (7683)
www.smud.org | info@smud.org



www.positiveenergyusa.com

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New Behavior Programs at SMUD: Green Social Networking Site




OURgreen COMMUNITY
learn, share, live green

powered by
SMUD

HOME STORIES EVENTS GREEN INFO GROUPS PEOPLE FORUMS LIVE GREEN

learn

DIGITAL SWITCH MEAN A NEW TV? GO GREEN WHEN YOU CHOOSE



Despite the sour economy and many consumers' newfound sense of thrift, there's one goody that market watchers still think many Americans will buy in coming weeks: televisions.

[CONTINUE](#) [0 COMMENTS](#)


THE YEAR OF LIVING GREENLY

Saving green: It's the economy, stupid
September 21, 2008
Gas and food prices are ugly. No surprise to anyone to read this. The green lining is that it does have me—and ...

ON THE GREEN

Algae-powered cars?
November 12, 2008
A Colorado company appears to be on the verge of converting algae into large amounts of renewable biofuel, which ...

GREEN-TOPIC VIDEOS



LED freezer lights

Merchants save energy and money with new lighting technologies.

[Watch Video](#)

Challenges

- Burden of proof for behavior programs is very high
 - Short history in EE
 - Requires thinking completely differently about persistence of energy savings
 - Expectation of similar precision as with monitored equipment that has 10+ year average life
- But...
 - This has been done in health education and other fields
 - There is HUGE potential energy savings out there
 - Low cost compared to equipment change-outs may compensate for reduced certainty of impacts



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