

Trends in Utility DSM Programs and Exemplary Programs for Low- Income Customers

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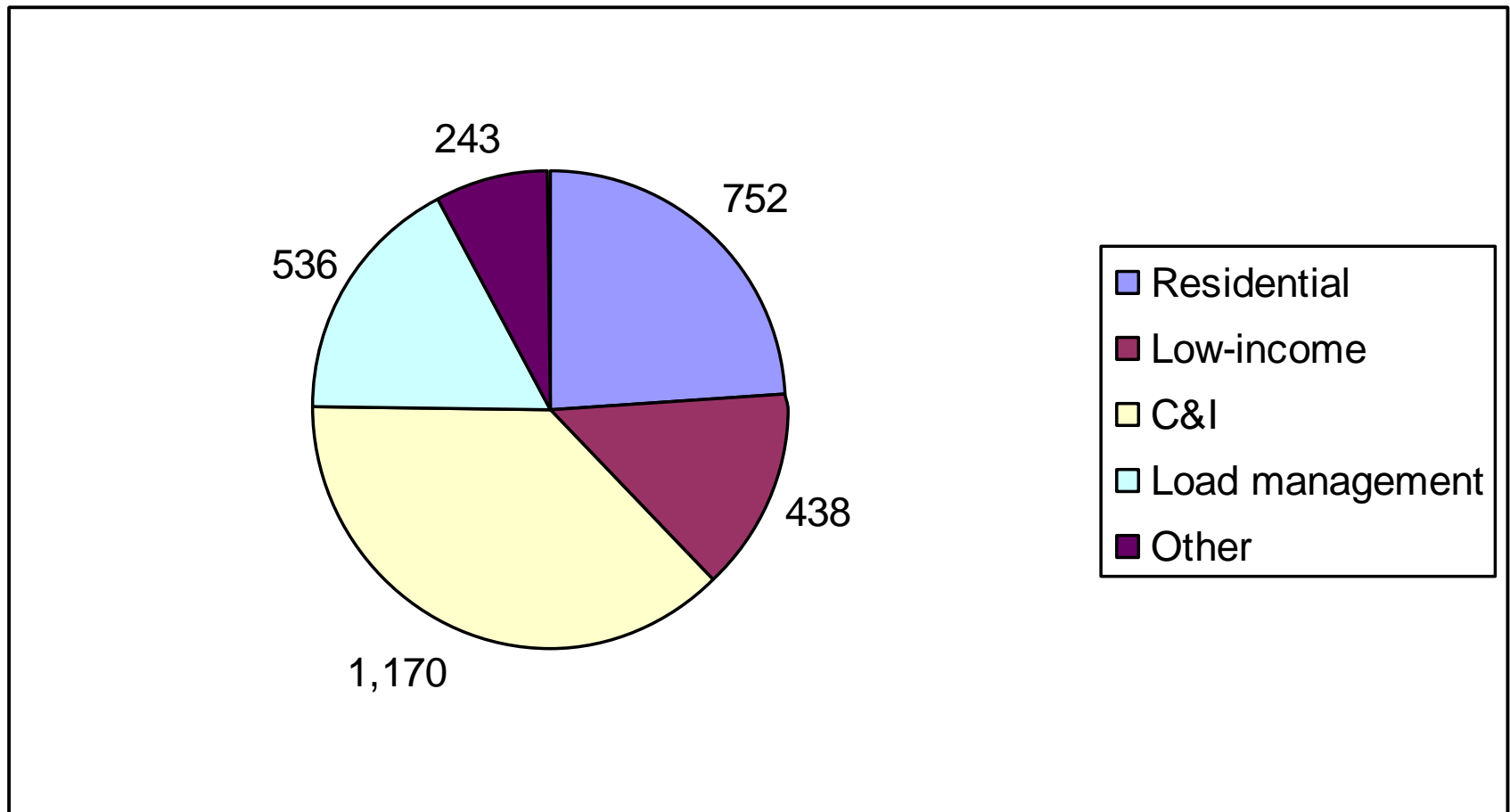
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Utility Demand-Side Management (DSM) Programs Are on the Rise

- Total budget for electric and gas utility DSM programs in U.S. reached \$3.1 billion in 2007; budget up 20% compared to 2006 alone
- Low-income programs - \$438 million (14% of total)
- Leading states (CA, CT, VT, RI, IA) are spending \geq \$20 per capita on DSM programs; national average is around \$10.50 per capita

Funding for Different Types of DSM Programs in 2007 (million \$)



Source: Consortium for Energy Efficiency (CEE)

Results of Utility Demand-Side Management (DSM) Programs

- ❑ Leading states/utilities are cutting energy use by 1% per year or more, significantly reducing load growth
- ❑ Avg. cost of saved energy = 2-3 cents per kWh, far less than the cost for any form of new electricity supply
- ❑ Many utilities are cutting peak demand more than energy consumption in % terms
- ❑ DSM programs provide environmental as well as economic benefits, including reduction in GHG emissions

Electric Utility DSM Funding in the Southwest

State	DSM program budget (million \$ per year)					
	2002	2004	2005	2006	2007	2008 (est)
AZ	4	4	10	19	32	42
CO	11	21	24	18	25	32
NV	3	11	14	30	38	54
NM	1	1	1	1	4	9
UT	9	16	20	25	30	33
WY	~0	~0	~0	~0	~0	1
Region	29	54	70	93	129	171

Source: SWEEP data

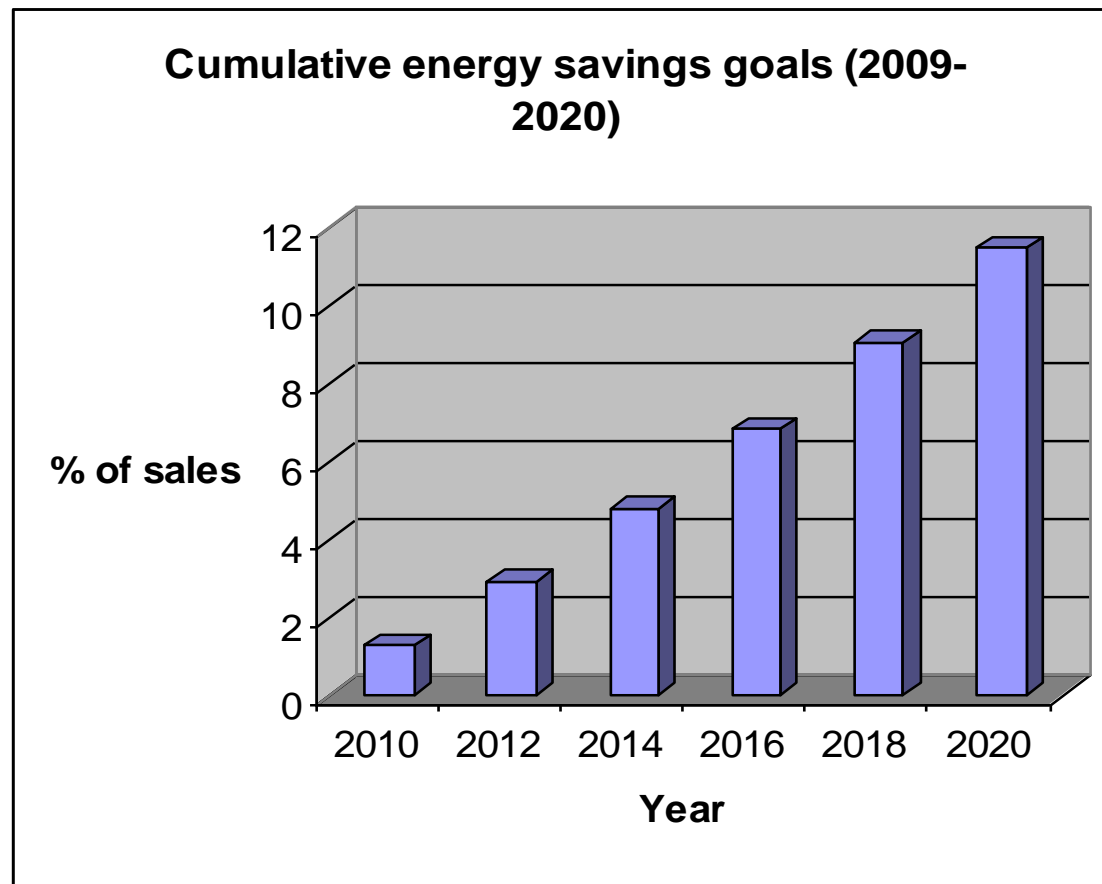
Energy Savings Are Growing Too

- ❑ Xcel Energy (CO) reducing electricity use by $\sim 0.5\%$ per year, planning to save 0.75% per year by 2010
- ❑ Rocky Mountain Power (UT) reducing electricity use by $\sim 0.7\%$ per year
- ❑ Nevada Power Co. (southern NV) reducing electricity use by $\sim 0.8\%$ per year
- ❑ Sierra Pacific Power Co. (northern NV) planning to reduce electricity use by $\sim 0.9\%$ per year starting in 2008
- ❑ All much greater than savings 2-3 yrs ago

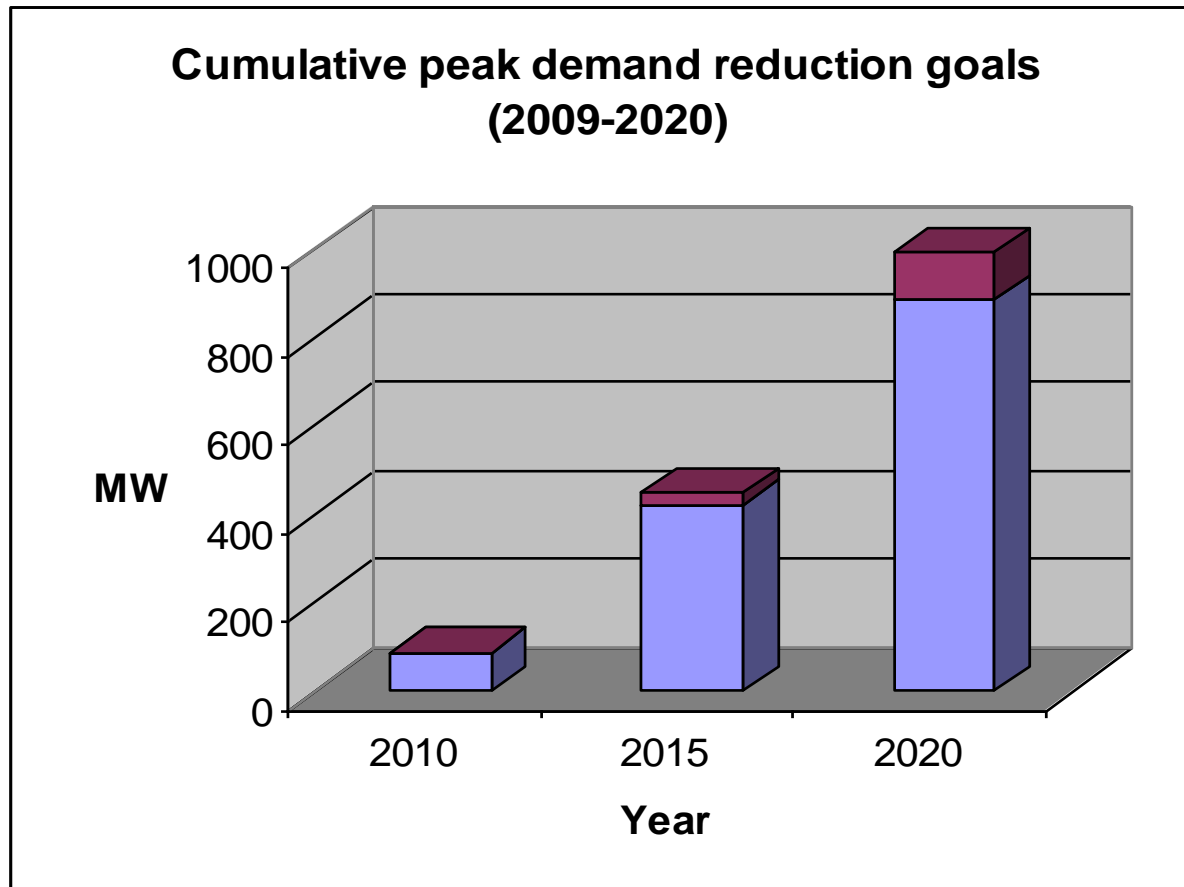
New DSM Policies Just Adopted for Xcel Energy – Colorado

- Energy savings goal of 0.75%/yr by 2010, ramping up to 1%/yr by 2015 and 1.2%/yr by 2019
- Incentive for utility tied to savings achieved and net economic benefits of the DSM programs; incentive starts at achieving 80% of savings goal and reaches max at 150% of savings goal, but capped at 20% of DSM expenditures
- DSM programs for low-income customers not required to have BCR > 1.0

Energy Savings Goals for 2009-2020 DSM Programs (cumulative)



Peak Reduction Goals for 2009-2020 DSM Programs (cumulative)



Exemplary Low-Income DSM Programs – National Grid (MA, RI, NH)

- Partnership with CAP agencies, served over 40,000 households (25% of those eligible) since 1996; budget ~\$7 million per year
- Appliance audits and replacement where justified; CFL distribution; weatherization of electric and oil-heated homes
- All EE measures must be cost effective
- Education and training component
- Average electricity savings of 1,050 kWh/yr

Source: ACEEE

Exemplary Low-Income DSM Programs – EmPower New York

- ❑ Implemented through network of well-trained contractors; budget ~\$17 million per year; ~17,000 homes served per year
- ❑ Appliance replacement and CFL distribution (ENERGY STAR models); weatherization services coordinated with WAP; third party inspections and quality assurance
- ❑ Average cost of \$1,070 and energy bill savings of \$253 per home (~10%); cost effective based on energy savings alone

Source: ACEEE

Exemplary Low-Income DSM Programs – PG&E Energy Partners

- ❑ Utility program implemented through contractors, served nearly 1 million households (54% of those eligible) since 1983; budget ~\$90 million per year
- ❑ Home energy analysis, consumer education; free energy efficiency services including weatherization, appliance and HVAC system repair or replacement, and CFL distribution
- ❑ Strong community outreach component
- ❑ Program has average cost of about \$1,300 and life-cycle energy savings of about \$650 per home; i.e., program is not cost effective based on energy benefits alone

Exemplary Low-Income DSM Programs – PECO LIUR Program

- ❑ Targeted to high usage electric and gas customers
- ❑ Utility program implemented through a contractor, served around 60,000 households since 1999; budget ~\$6.5 million per year
- ❑ Instrumented audits; weatherization services; refrigerator, water heater or AC replacement, and CFL distribution
- ❑ Energy education component
- ❑ Achieving about 10% energy savings at average cost of under \$1,000 per home including program administration; cost-effective based on energy savings alone

Conclusion Regarding Exemplary Low-Income DSM Programs

- ❑ Programs can be successfully implemented either through trained contractors or WAP agencies
- ❑ Focus on building envelope, appliance and HVAC equipment, and lighting measures, targeting largest energy savings opportunities
- ❑ Include energy education
- ❑ Programs can be cost-effective based on energy savings alone in regions with substantial heating load; may not be cost effective without valuing non-energy benefits in other regions
- ❑ Utility programs can achieve high penetration if implemented for a decade or more, with 10-15% energy savings per household on average

SWEEP:

Dedicated to More Efficient Energy Use in the Southwest

Resources available online at:

www.swenergy.org

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