





David E. Dismukes, Ph.D. Professor & Associate Executive Director Center for Energy Studies Louisiana State University

National Association of State Utility Consumer Advocates (NASUCA) Mid-Year Meeting June 11, 2007



- Aligns utility incentives with energy efficiency.
- Assists utility in earning its authorized rate of return that is challenged by the decreasing use per customer problem (gas).
- Easier for customers to understand and reduces bill volatility.
- Reduces regulatory costs and the need for frequent rate cases.



- <u>Straight-Fixed Variable Rate Design:</u> eliminates all variable distribution charges and DNG costs are recovered through a fixed delivery services charge or an increase in the fixed customer charge alone (gas LDCs).
- <u>Sales-Revenue Decoupling</u>: separates revenue recovery from sales (sets annual revenues to a "per-customer" target.) Can be done on a full or partial basis.
- <u>Sales-Margin Decoupling:</u> separates margin recovery from sales (sets margin per customer target). Can also be done on a full or partial basis.



States with Energy Efficiency Programs – Decoupling Status (Gas & Electric)

State has energy efficiency program, decoupling is not used (10 states)

State has energy efficiency program, decoupling was proposed but not adopted (11 states)

State has energy efficiency program, currently investigating decoupling (3 states)

State has energy efficiency program, decoupling has been approved for at least one utility (9 states)

State has no energy efficiency program, decoupling has been approved for at least one utility (1state)

Note: In Connecticut, the electric utilities do not have decoupling, but two natural gas LDCs have a partial decoupling mechanism in connection with their energy efficiency programs for low-income customers (a conservation adjustment mechanism). Washington has utilities with decoupling, but rejected the most recent utility proposal (January 2007). In Michigan, revenue decoupling was proposed by the Michigan Staff but opposed by the Michigan AG. The MPSC approved a stipulation that excluded revenue decoupling. In Kansas, revenue decoupling was proposed by Aquila. The parties involved agreed to a stipulation that excluded revenue decoupling while the Commission investigates it further in a general docket.



States that have Considered SFV



Note: In Michigan, SFV was proposed by SEMCO Energy but opposed by the Michigan AG. The MPSC approved a stipulation that excluded SFV.



- Represents a significant departure from traditional regulation.
- Shifts sales risks from utilities to customers.
- The impact of changes in use per customer for the gas industry are overstated and address the wrong causes on changes in margins.
 Power industry faces an entirely different set of usage trends.
- At best, the incentive issue is not resolved and never can be with revenue decoupling.

- Current proposals, offered in conjunction with other "regulatory remedies" diminishes the simplicity argument and raises questions about the purpose of proposal.
- Proportionality issue changing the rate design for all customers based upon programs for which an exceptionally small percentage of the customers will participate.
- Is actually contrary to "sound economic principles" and wellgrounded regulatory policies.



Risks that are Shifted to Ratepayers

Economy

Weather

Commodity Prices

Other Unanticipated Factors



1872 1882 1892 1902 1912 1922 1932 1942 1952 1962 1972 1982 1992



US Residential Natural Gas Use

While overall use per customer is decreasing, overall residential natural gas usage is flat to increasing.





Retail prices have increased significantly since 2000-2001.





The commodity share of overall natural gas rate has increased over recent years. 60% Wellhead as Percent of Burnertip - % 50% 40% 30% 20% 10% 0% 1970 1974 1978 1982 1986 1990 1994 1998 2002

Center for Energy Studies

Yet despite high prices, and decreases in use per customer, overall DNG revenues per customer are at close to historic highs.





Summary Financial Impact of Changes in Use and Customers, "Wild West Utility" (2001-2005)

Wild West LDC is facing significant growth challenges – ROE impacts of decreases in use per customer pale in comparison to change in rate base and new customer capital expenses.

	2001	2002	2003	2004	2005	2006			
Return on Equity	11.000/	11.00%	44.000/	44.000/	44.000/	44.00%			
ROE Impact of Change in	11.00%	11.00%	11.20%	11.20%	11.20%	11.20%			
Use per Customer	0.00%	-0.60%	1.99%	-0.41%	-0.87%	-0.41%			
ROE Impact Change in Customers	0.00%	1.04%	1.66%	1.17%	1.51%	1.51%			
ROE Impact Change in Expenses Rate Base and Capital Elements	-0.54%	-2.38%	-3.76%	-1.92%	-1.16%	-2.08%			
Actual Achieved ROE	10.46%	9.06%	11.09%	10.05%	10.68%	10.22%			
Is decoupling a solution to the "use per customer problem" or an "end- run" on a rate case?									
						1			



Significant change in rate design for a very small change in overall sales and very limited number of customers.

	Program Spending (million \$)	Percent of Retail Revenues (%)	Gas Savings (Mcf/year)	Percent of Gas Sales Saved (%)	Volume saved per million \$ (Mcf/year)	Benefit- Cost Ratio
Aquila	\$ 2.10	1.4%	146,000	0.5%	69,000	-
Centerpoint	\$ 5.60	0.5%	720,000	0.5%	128,600	2.60
Keyspan	\$ 12.00	1.0%	490,000	0.4%	41,000	3.00
Northwest Natural Gas	\$ 4.70	0.7%	85,000	0.1%	18,000	-
NSTAR	\$ 3.90	0.8%	71,500	0.2%	18,000	2.29
PG&E	\$ 13.50	0.4%	2,000,000	0.7%	148,000	2.10
PSE	\$ 3.80	0.4%	311,000	0.5%	82,275	1.93
SoCal Gas	\$ 21.00	0.6%	1,100,000	0.3%	52,000	2.67
Vermont Gas	\$ 1.10	1.6%	57,000	1.0%	52,000	5.60
Xcel Energy (MN)	\$ 4.00	0.7%	663,000	0.9%	166,000	1.56

Generally, less than one-half of one percent.

Source: S. Tegen and H. Geller, Natural Gas Demand-Side Management Programs: A National Survey. Boulder, CO: Southwest Energy Efficiency Project. January 2006. Based upon surveyed findings of the top ten gas utilities in 2004.



Incremental Impact of DSM Implementation on Shareholders, Wild West Utility

	Ch	ange in Rever	nue		ncome Impac			
	Use per Customer	DSM	New Customers	Use per Customer	DSM	New Customers	Shareholders Equity	Impact on ROE
2007	\$ (1,971,361)	\$ (288,537)	\$ 7,052,203	\$ (1,221,185)	\$ (178,738)	\$ 4,368,579	\$ 313,071,056	0.95%
2008	\$ (2,905,519)	\$ (608,826)	\$ 6,391,367	\$ (1,799,862)	\$ (377,145)	\$ 3,959,215	\$ 339,501,229	0.52%
2009	\$ (4,485,340)	\$ (943,652)	\$ 6,213,829	\$ (2,778,502)	\$ (584,557)	\$ 3,849,237	\$ 363,965,179	0.13%
Total	\$ (9,362,220)	\$ (1,841,015)	\$ 19,657,399	\$ (5,799,549)	\$ (1,140,440)	\$ 12,177,031	Net Impact:	1.61% \$ 5,237,041.80
 Reduced revenues/income reduces overall taxes and needs to be considered. A one percent per year (3 percent cumulative) reduction is beyond current experience. The additional income created by customer growth from the test year is completely ignored (and its corresponding income effects). Net impact for a growing LDC is moderate – the net income								



- Reduces customers' ability to have full control of their energy savings. Reduces, in part, incentive to conserve particularly with SFV.
- If successful in reducing sales incentive, then also reduces incentive to measure sales losses and savings. You have "decoupled" DSM performance to any form of measurement.
- If successful in reducing sales incentive, then reduces incentive to promote efficient natural gas use and economic development.
- Revenues more difficult to estimate than costs, creating revenue certainty reduces incentive to push cost efficiency.

George A. Schreiber, Jr., SEMCO Company President and Chief Executive Officer, said, "I am very pleased with the Company's results for 2006. We achieved these results, despite warmer-than-normal temperatures and continued customer conservation, which, when combined, adversely impacted 2006 earnings by an estimated \$3.5 million." Schreiber added, "One way we overcame the impact of the weather and customer conservation was to keep spending under control."



States with Third-Party Administrators

Energy Trust of Oregon began in 2002. It is charged with investing in cost-effective energy conservation, helping to pay above-market costs of renewable resources and encouraging energy market transformation. NYSERDA administers the New York Energy \$mart program, designed to support certain public benefit programs. Efficiency Vermont is a state-wide residential rebate program.

The Maine PUC may use a thirdparty administrator for electric DSM, but to date has administered these in house.

In Wisconsin, DSM programs are implemented statewide by a third-party administrator (Focus on Energy).

> Vectren, (Indiana Gas Company; and Southern Indiana Gas and Electric Company) will use an independent third-party administrator for its natural gas DSM programs.

New Jersey's Clean Energy Program, administered by the BPU promotes energy efficiency and offers financial incentives, programs and services. The Energy Conservation Management Board in Connecticut has the responsibility to approve energy efficiency plans and budgets



- Projected test years: forecasts could account for anticipated energy efficiency savings.
- **<u>Cost-effectiveness tests:</u>** screening on RIM-passing measures only.
- Lost Revenues (ex post): periodic filings on proven, ex post lost revenues/sales.
- **<u>Rate design (inclining blocks)</u>**: higher rates in upper blocks.
- <u>Repression adjustments</u>: usage adjustment to correct of DSM-related reductions in usage.
- **Direct Incentives:** performance-based incentives for programs.
- **<u>Risk Management:</u>** if volatility is an issue, then manage it.
- More frequent rate cases: traditional approach at correcting rates that get out of balance.



Questions, Comments, & Discussion

dismukes@lsu.edu

www.enrg.lsu.edu