



# **Energy Efficiency Resource Standards for IOUs, Municipal, and Cooperative Utilities: Can One Size Fit All?**

ACEEE 5<sup>th</sup> National Conference  
on Energy Efficiency as a Resource

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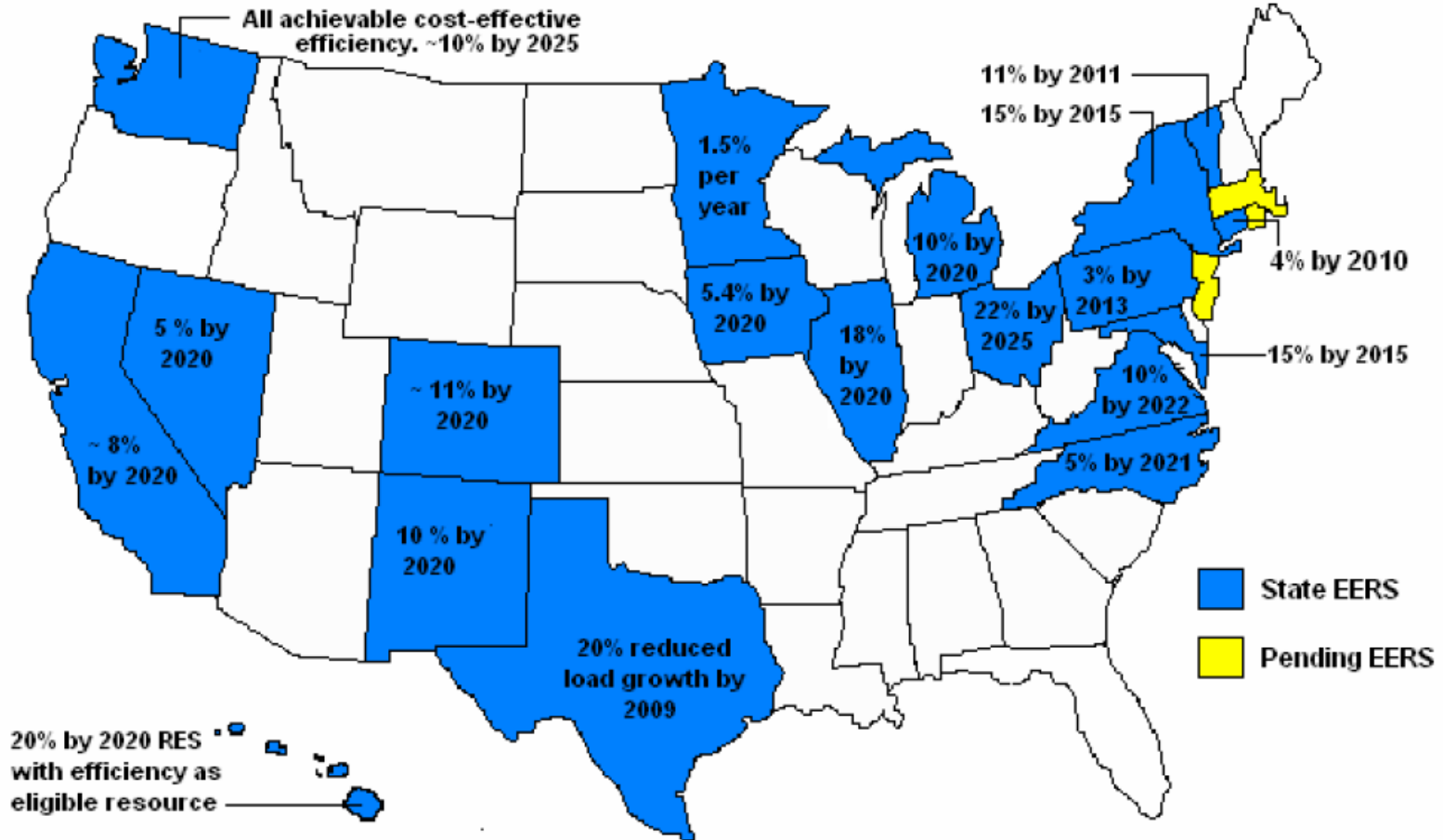
# Agenda

- Introduction
- Benchmarking Results of DSM Programs for
  - IOUs and Agencies
  - Municipal and Cooperative Utilities
  - Overall, Best Practice, and by State
- Conclusions & Recommendations

# Energy Efficiency Resource Standard (EERS)

- Energy savings targets for utilities, achieved by end-user energy efficiency improvements
- Typically implemented at the state level
- May include market-based trading system
- Analogous to a Renewable Portfolio Standard

# States with Energy Efficiency Resource Standards



ACEEE. (June 2009).

# EERS for Munis & Coops v. EERS for IOUs

- Fewer than 20 PUCs have jurisdiction over Munis & Coops.
- Munis & Coops are subject to state EE goals in ~13 states.
- EERS for IOUs generally include specific savings mandates and sometimes include failure penalties.
- Mandates for Munis & Coops are generally looser than those governing IOUs, often requiring only self-established savings goals with no failure penalties.

Zimmerman, Emily. ASE. (September 2009). Via personal correspondence.  
American Public Power Association. (January 2009). Energy Efficiency Provisions.

# What are current DSM programs actually achieving?

- What are *typical* savings?
- What are *best practice* savings?
- For IOUs?
- For municipal and cooperative utilities?

# DSM Benchmarking Analysis

- Summit Blue conducted the analysis presented as part of several DSM potential studies. Analysis used publicly available data, primary utility DSM annual regulatory reports, as well as FERC Form 861 baseline sales data.
- Collected 2007 utility and agency DSM program results and baseline sales information from 78 organizations across North America.
- Normalized DSM program results using baseline sales data to determine the percentages of baseline sales and peak demands conserved through DSM programs.
- Also calculated costs of conserved energy and demand on a first year basis.
- Summit Blue used these analysis results to set DSM potential and program cost benchmarks.

# Organizations Benchmarked: IOUs & State Agencies

<b>Region</b>	<b>State Agency or Investor-Owned Utility</b>	<b>State</b>
<i>Midwest</i>	Interstate Power & Light	IA
	Interstate Power & Light	MN
	MidAmerican Energy	IA
	Minnesota Power	MN
	Otter Tail Power	MN
	Wisconsin Focus on Energy	WI
	Xcel Energy	MN
<i>Northeast</i>	Efficiency Maine	ME
	Efficiency Vermont	VT
	National Grid	MA
	NSTAR	MA
<i>West</i>	Arizona Public Service	AZ
	Pacific Gas & Electric*	CA
	San Diego Gas & Electric*	CA
	Southern California Edison*	CA
	SWEPCO	TX
	Xcel Energy	CO

\*-Complete data for CA IOUs were not available. Thus the three IOUs are represented only in the State statistics that follow.



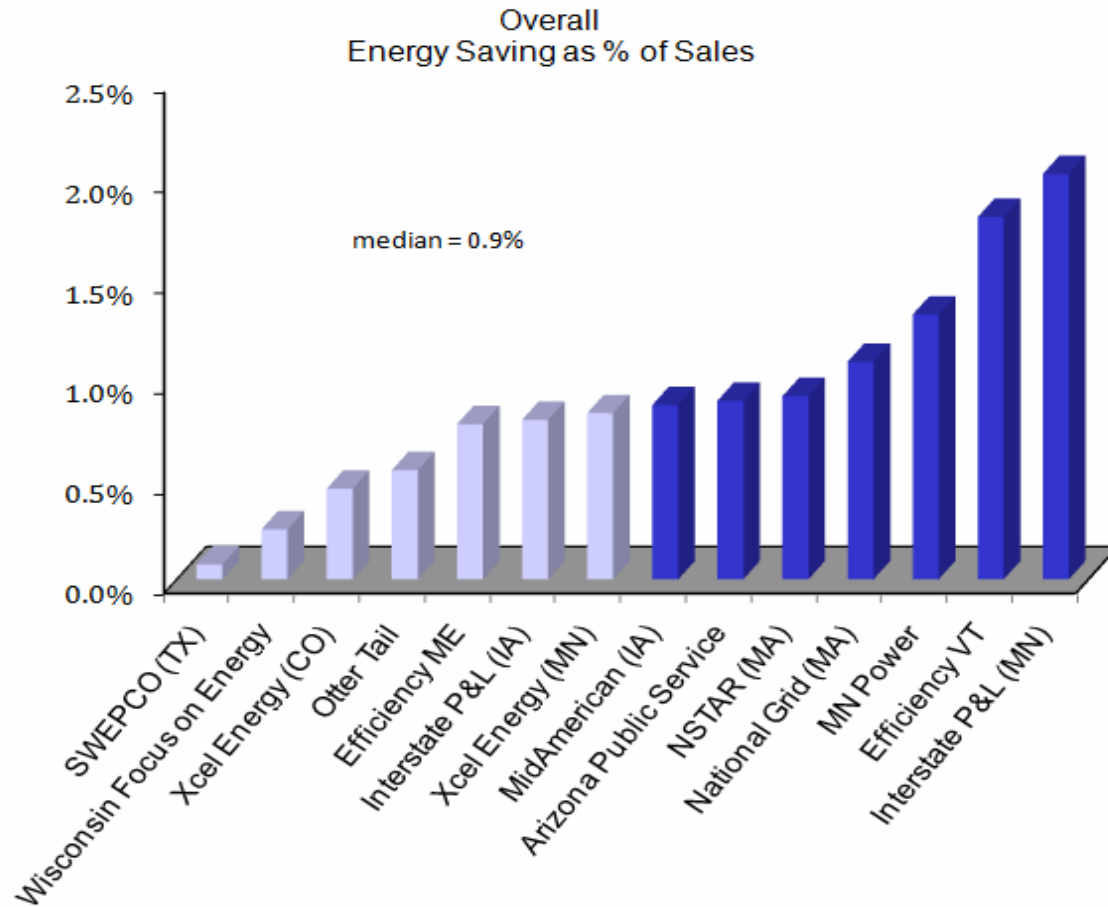
# Organizations Benchmarked: Municipal & Cooperative Utilities

California		Iowa	Minnesota
Alameda P&T	Modesto Irrigation	Algona Muni	Alexandria L&P Muni
Anaheim Public	Moreno Valley	Atlantic Muni	Brainerd Muni
Azusa Light & Water	Needles	Cedar Falls Muni	City of Anoka Muni
Banning Electric	Palo Alto	Greenfield Muni	East River Coop
Biggs	Pasadena W&P	Harlan Muni	Great River Energy Coop
Burbank Water & Power	Plumas-Sierra Rural Electric Coop	Independence Muni	Jackson Muni
Colton Electric	Redding Electric	Indianola Muni	Marshall Muni
Corona Dept of Water & Power	Riverside Public	Muscatine Muni	Minnkota Coop
Glendale Water & Power	Roseville Electric	Osage Muni	Moorhead Muni
Gridley Municipal	Sacramento Muni	Spencer Muni	MN Valley L&P Coop
Healdsburg	Shasta Lake	Waverly Muni	Shakopee Muni
Imperial Irrigation	Silicon Valley Power		Sioux Valley Coop
Lassen Municipal	Trinity Public	<b>Vermont</b>	The Triad Muni
LA Dept of W&P	Truckee Donner Public	Burlington Electric	Willmar Muni
Lodi Electric	Turlock Irrigation		
Lompoc	Ukiah Public	<b>Connecticut</b>	
Merced Irrigation	Vernon Light & Power	CT Municipal Electric Energy Coop	

# DSM Benchmarking Context

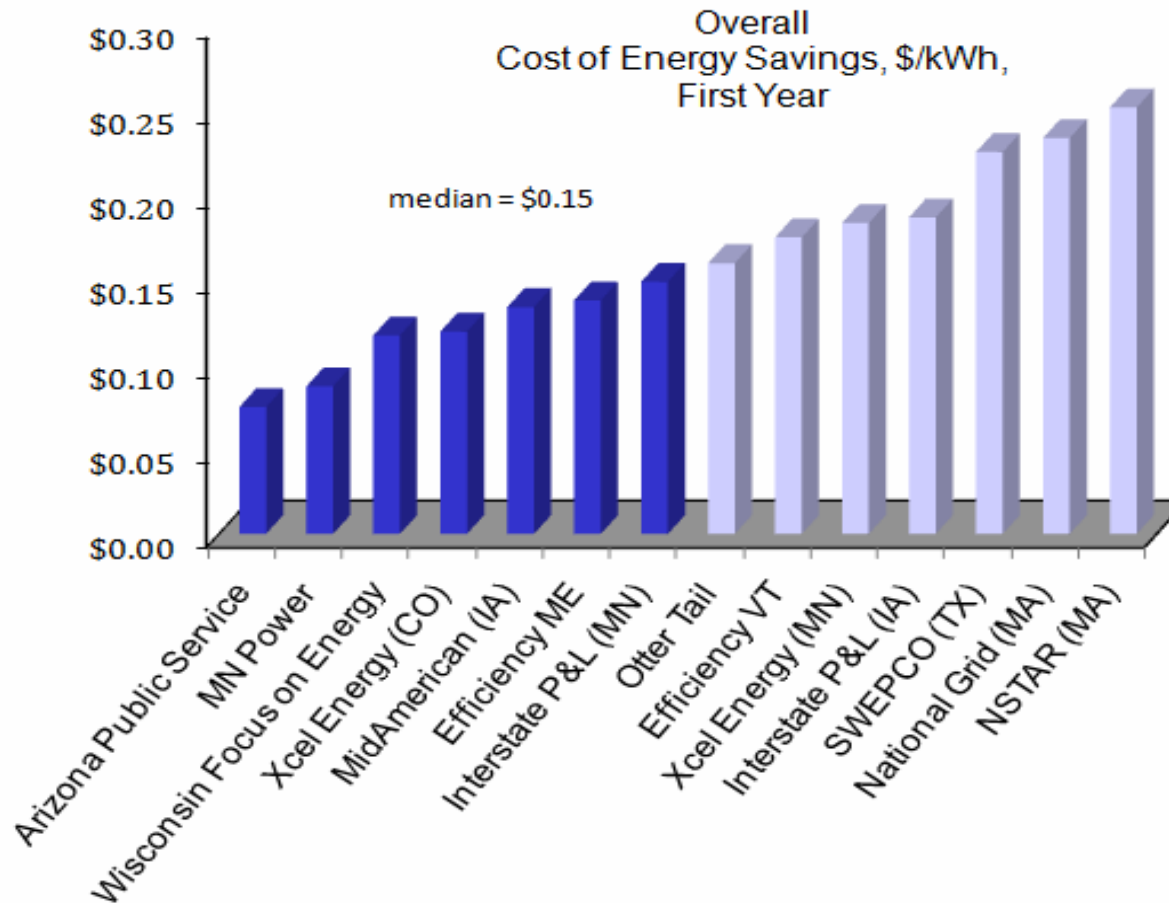
- DSM requirements and regulatory treatment have significant influences on overall program results.
- In 2007 in Minnesota, electric utilities were required to spend 1.5%-2% of their revenues on EE/DR. Program cost recovery was guaranteed, and performance-based EE/DR financial incentives could be up to 30% of program costs.
- Given the variation in organizations' portfolio composition and evaluation and reporting practices, results cannot be considered a strictly "apples-and-apples" comparison.

# DSM Energy Savings as Percent of Sales: IOU & Agency



# Costs of Conserved Energy

## \$/kWh First Year: IOU & Agency



# Medians of Energy Savings and First Year Costs of Savings

	Energy Savings as % of Sales		First Year Cost of Energy Savings \$/kWh	
	Median of All	Median of Best Practice	Median of All	Median of Best Practice
<b>IOUs &amp; Agencies</b>	<b>0.9%</b>	<b>1.1%</b>	<b>\$0.15</b>	<b>\$0.11</b>
Munis & Coops	0.3%	0.5%	\$0.33	\$0.14

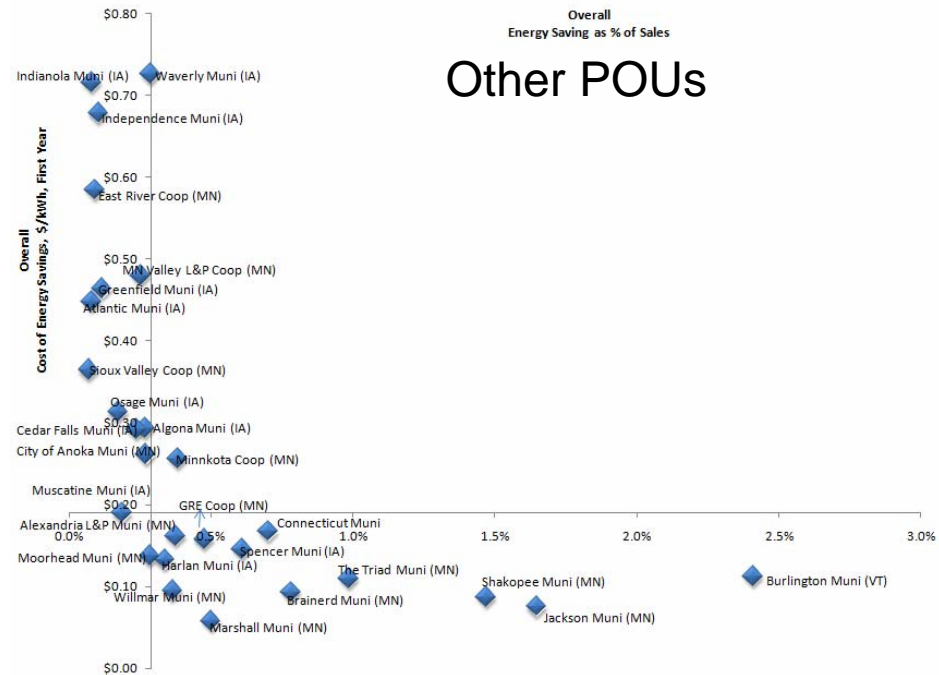
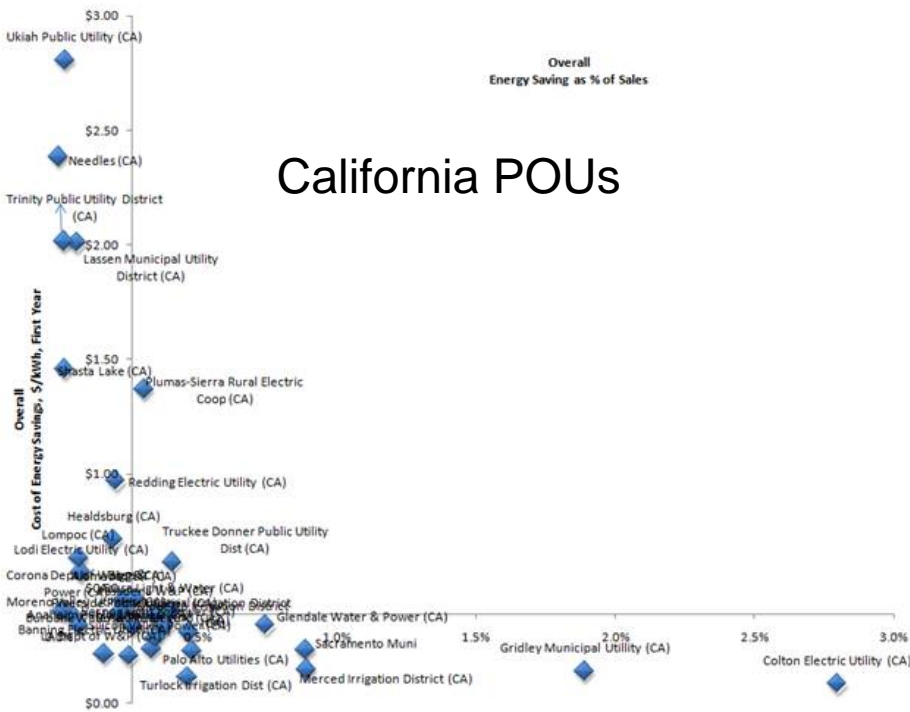
# Conserved Energy and First Year Costs of Conserved Energy: IOU & Agency



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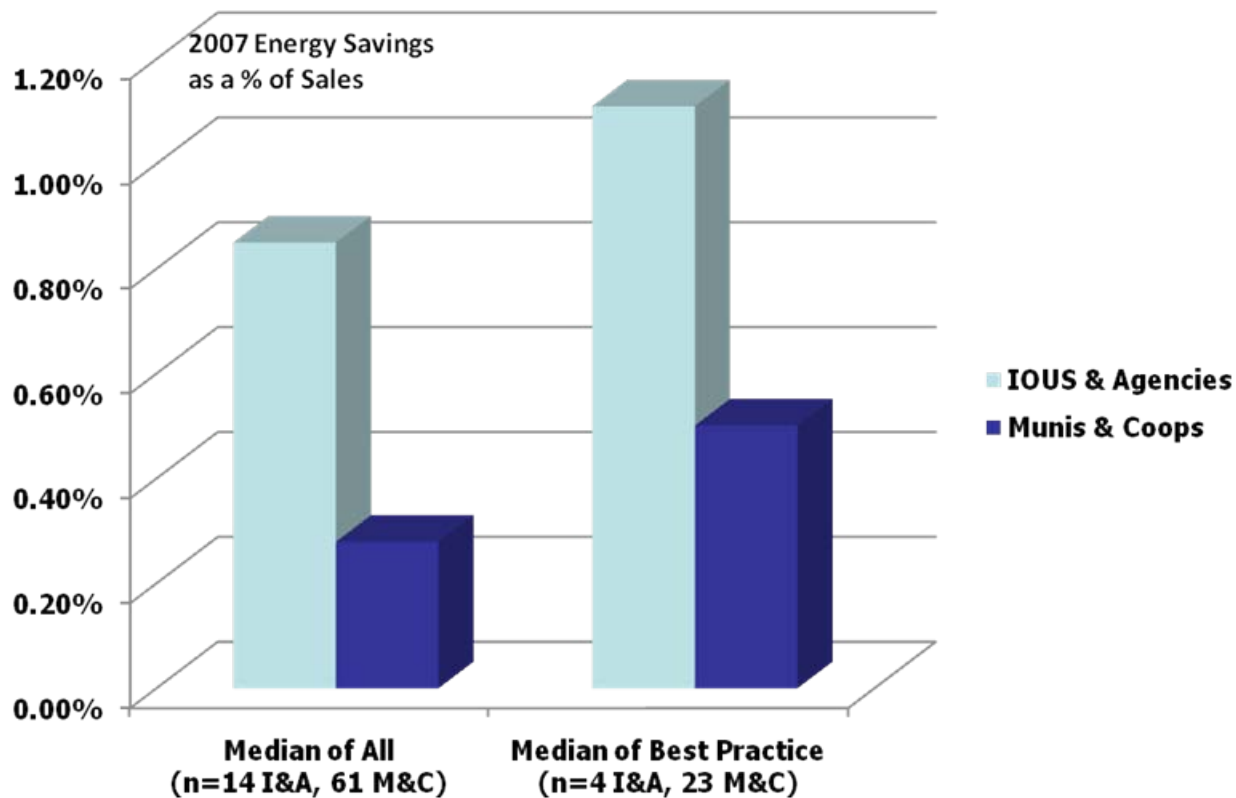




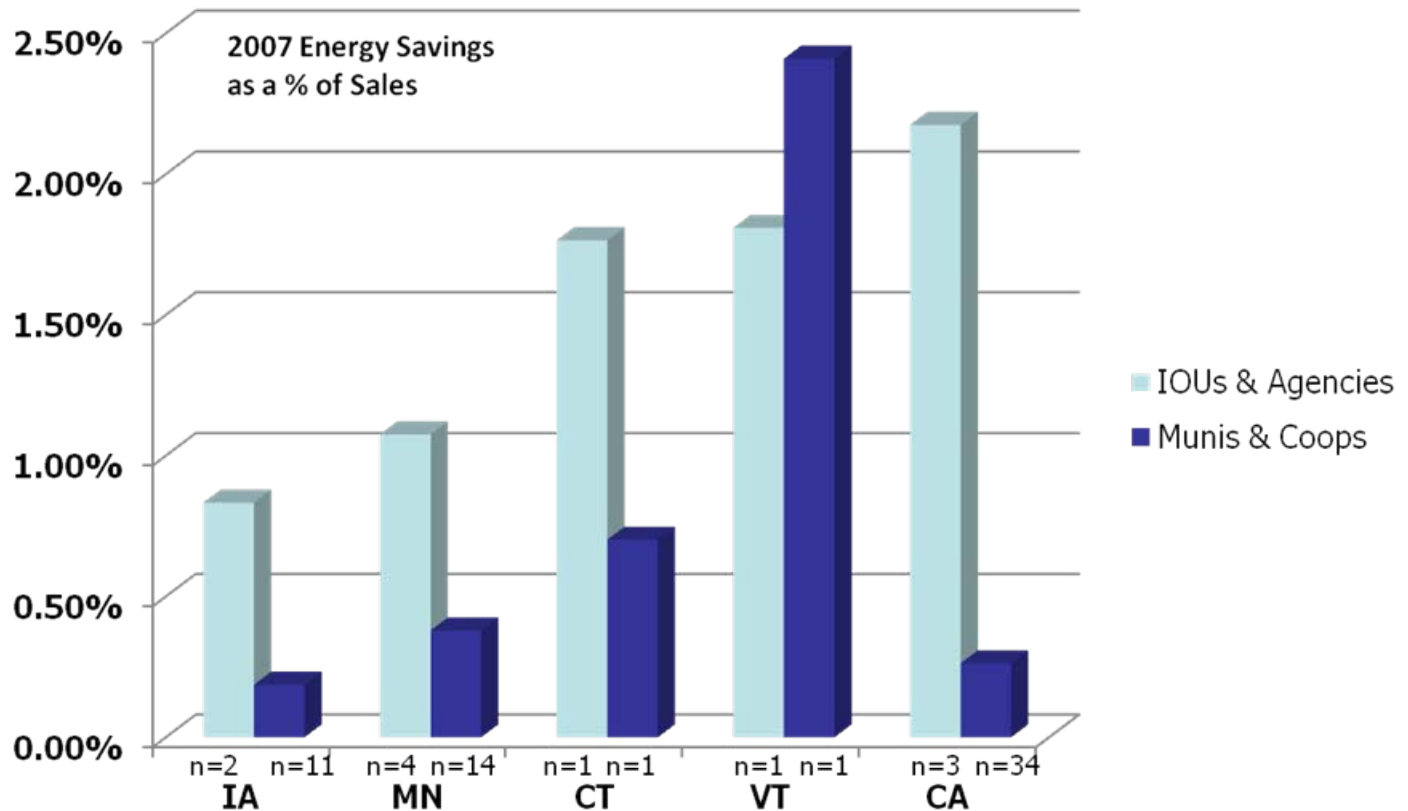
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# Medians of Energy Savings of All and of Best Practice: IOUs & Agencies and Munis & Coops



# Medians of Energy Savings by State: IOUs and POUUs



# Summary

## One-Third

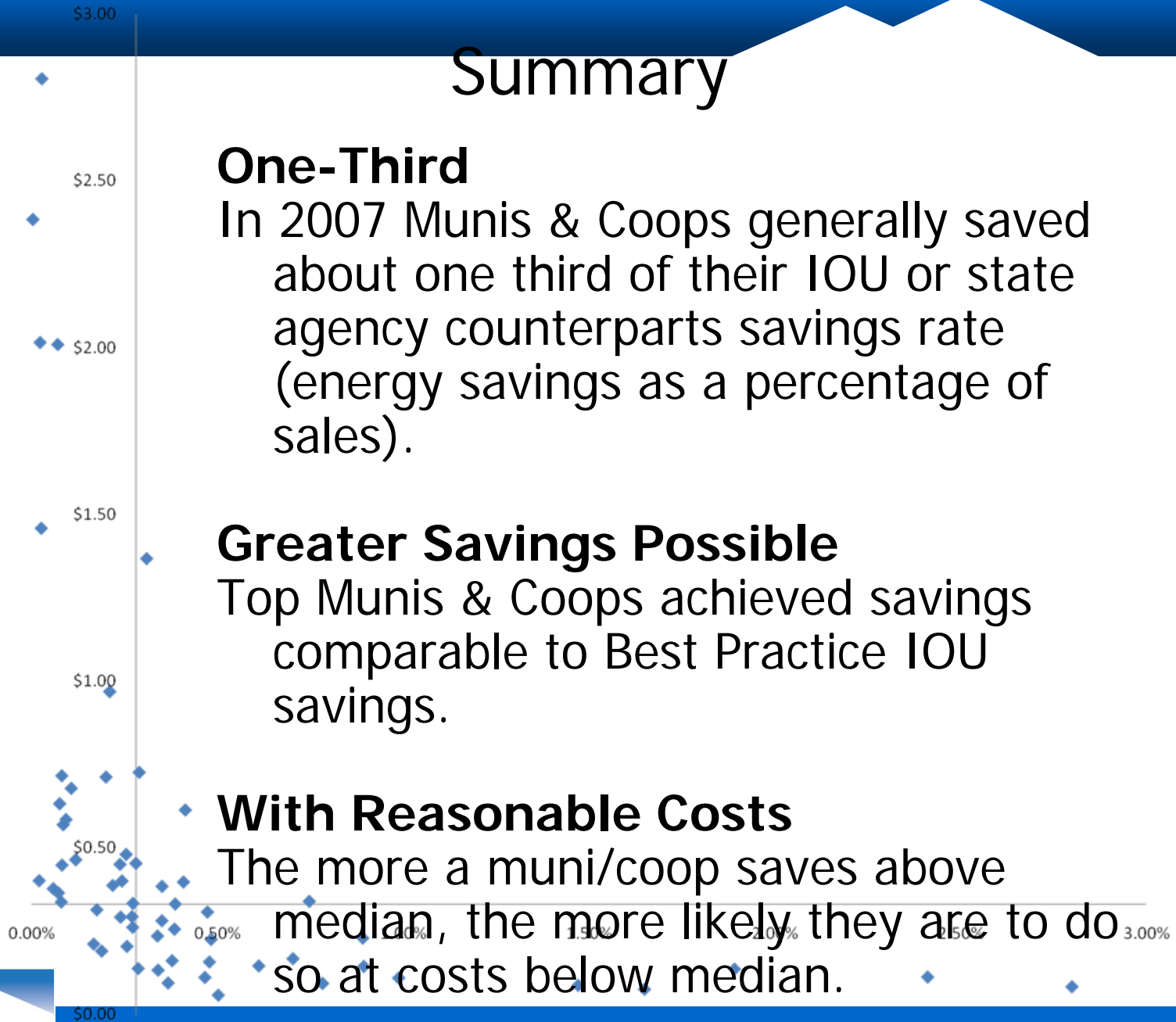
In 2007 Munis & Coops generally saved about one third of their IOU or state agency counterparts savings rate (energy savings as a percentage of sales).

## Greater Savings Possible

Top Munis & Coops achieved savings comparable to Best Practice IOU savings.

## With Reasonable Costs

The more a muni/coop saves above median, the more likely they are to do so at costs below median.



# Recommendations & Conclusion

## Collaboration Yields Greater Cost-Effective Savings

Munis & Coops can achieve greater savings at lower costs by collaborating with IOUs or state agencies in state-wide programs.

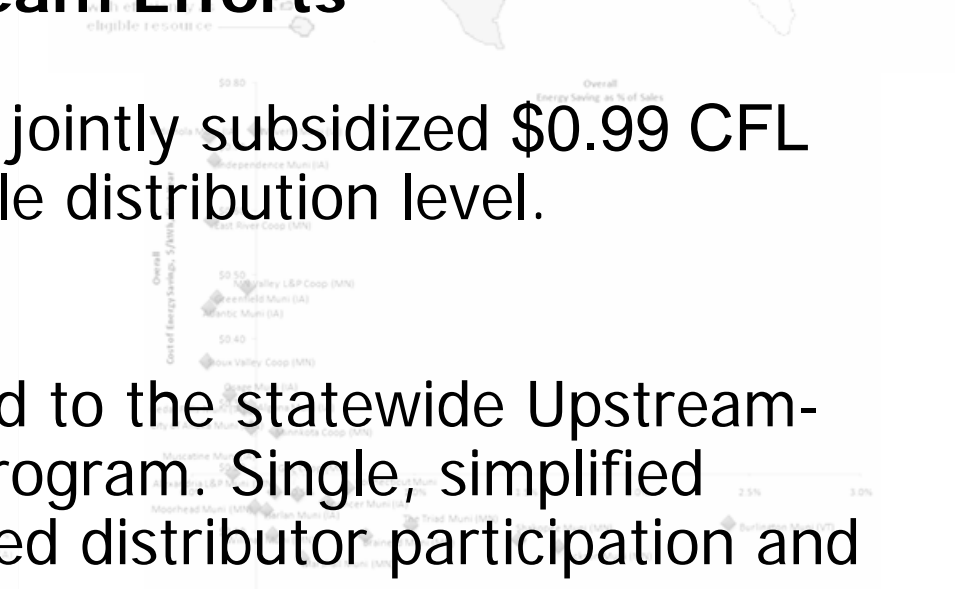
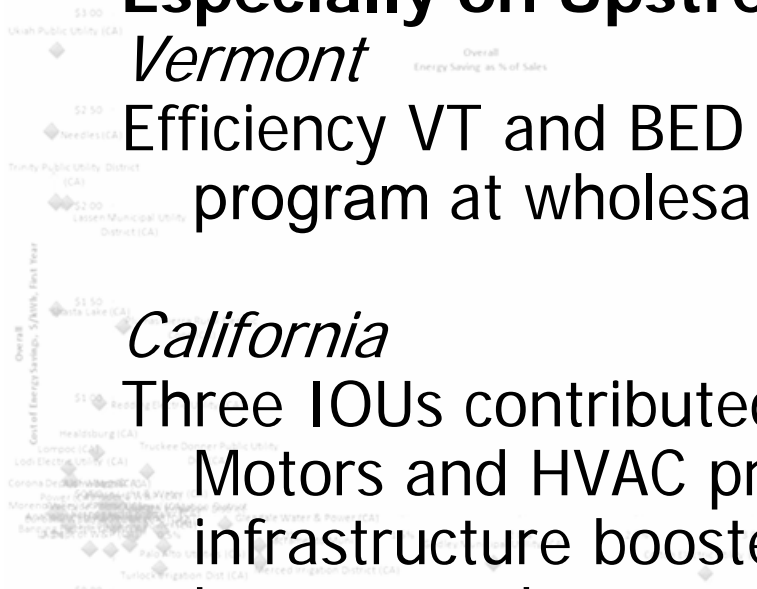
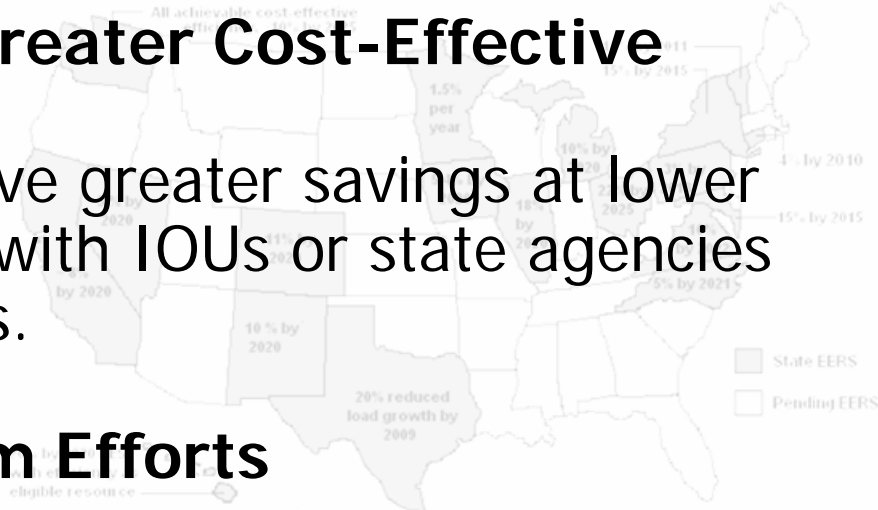
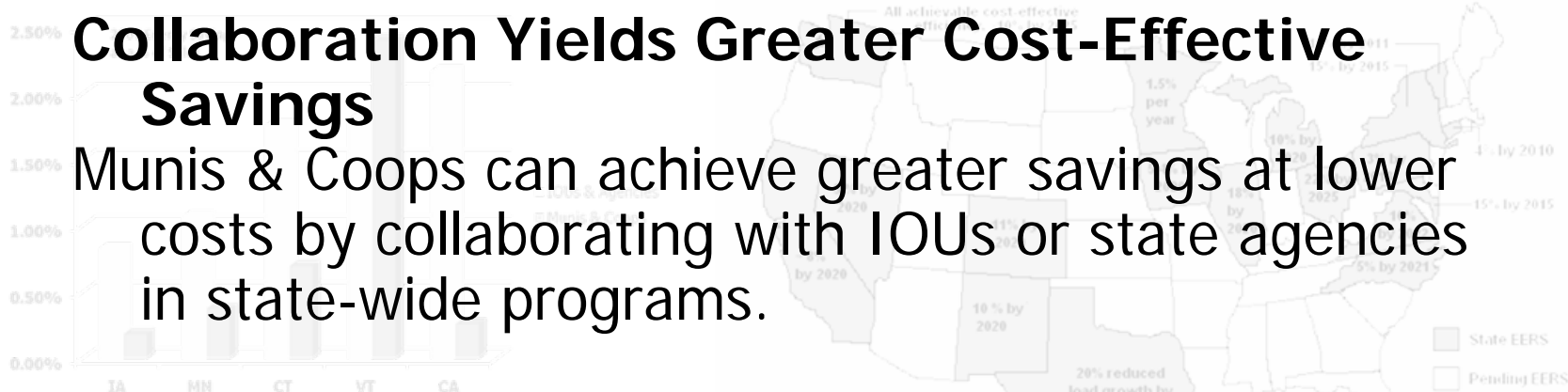
## Especially on Upstream Efforts

### *Vermont*

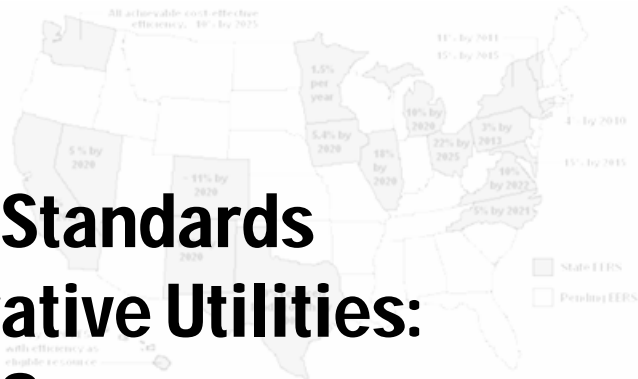
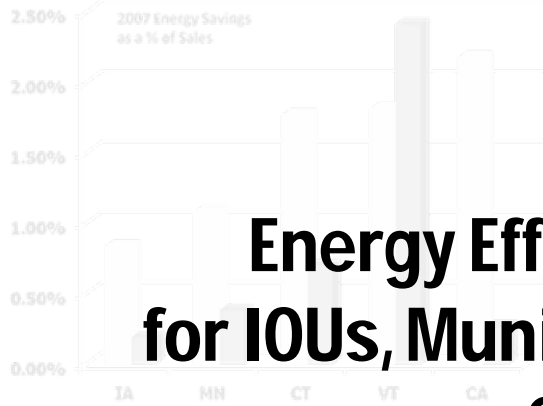
Efficiency VT and BED jointly subsidized \$0.99 CFL program at wholesale distribution level.

### *California*

Three IOUs contributed to the statewide Upstream-Motors and HVAC program. Single, simplified infrastructure boosted distributor participation and kept costs down.



# SUMMIT BLUE CONSULTING, LLC



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