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# Decoupling: Successes and Issues

## APPA Business and Finance

### Presented by Jim Lazar, Senior Advisor

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**The Regulatory Assistance Project**

50 State Street, Suite 3  
Montpelier, VT 05602

Phone: 802-223-8199  
[www.raponline.org](http://www.raponline.org)

# The Regulatory Assistance Project (RAP)

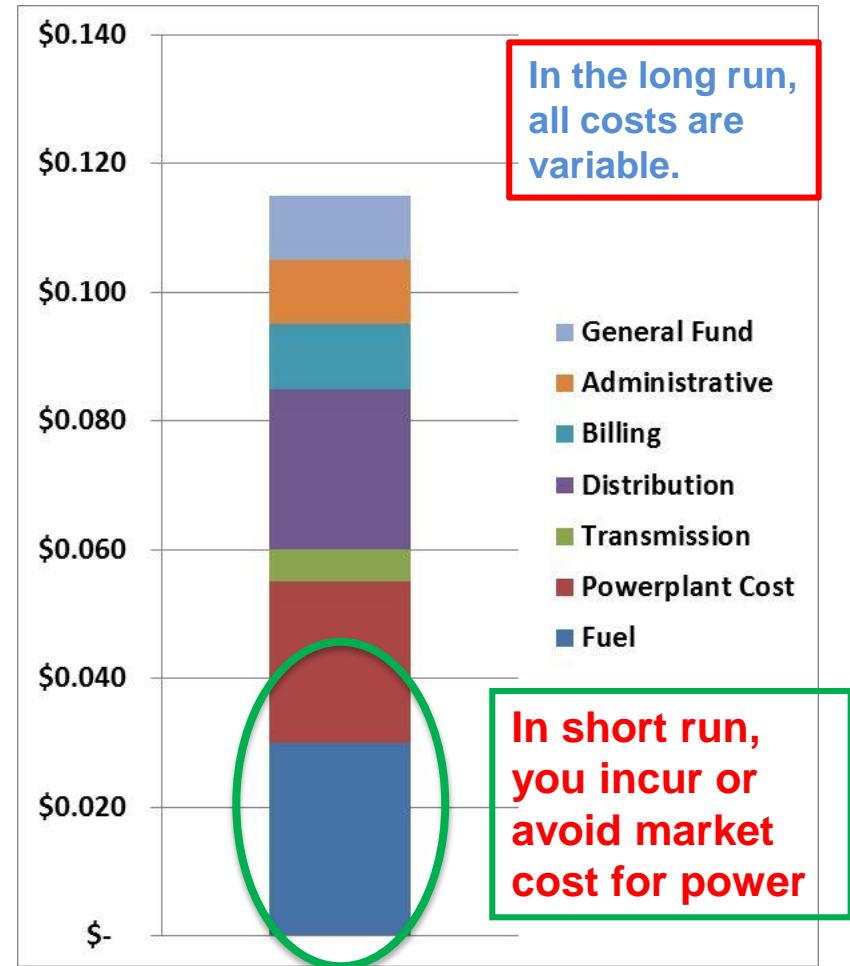
We are a global, non-profit team of experts focused on the long-term economic and environmental sustainability of the power sector. We provide assistance to government officials on a broad range of energy and environmental issues.

# What's the Problem?

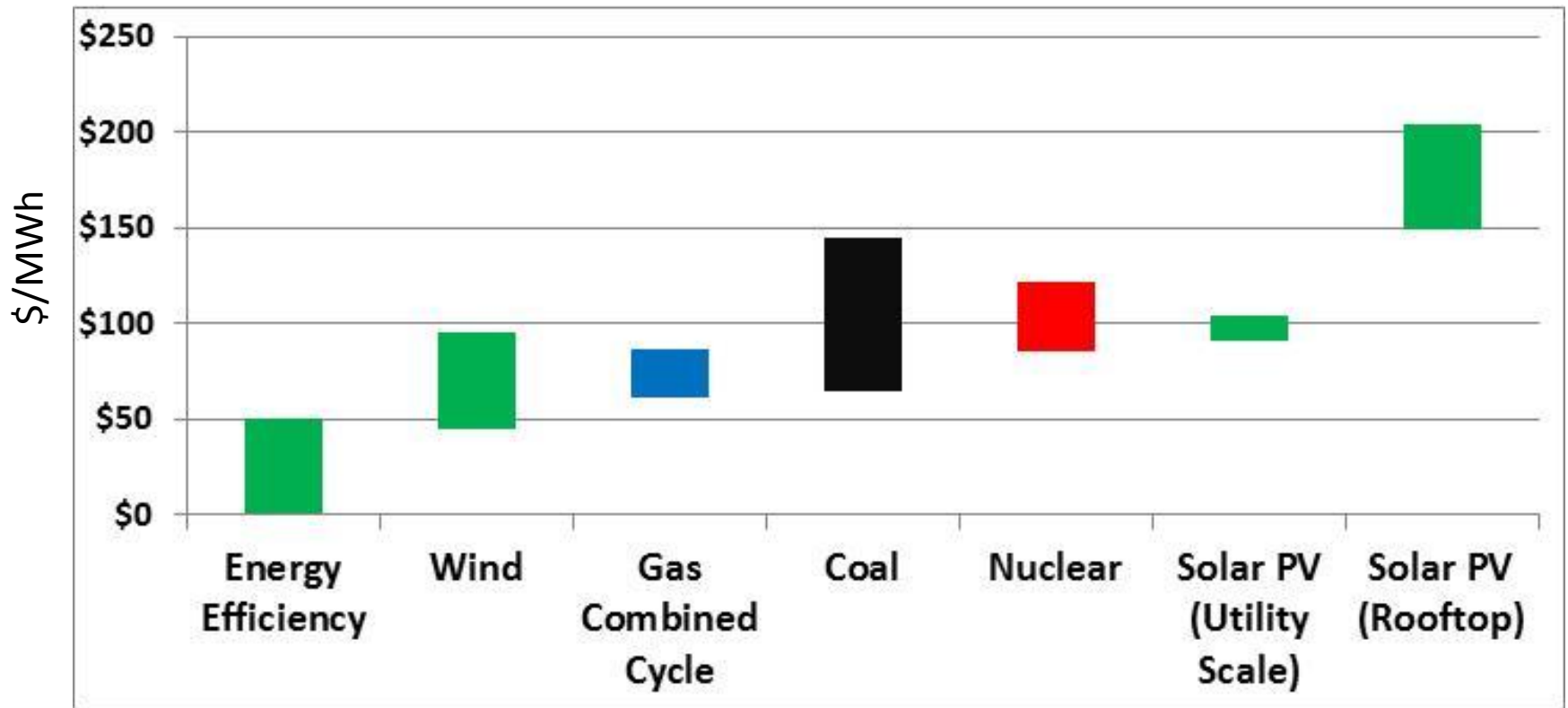
- Distribution costs do not vary in the short-run with sales variations.
- Forward-looking rate designs have low customer charges, and recover other costs in the per-kWh rate.
- Energy efficiency and renewable energy deployment causes net-revenue instability.

# What Causes Net Revenue Instability?

- To encourage economic efficiency, rates should reflect long-run marginal costs, including societal costs like emissions.
- In the short run, utility expenses vary with short-run marginal costs.
- These may be **VERY** different from long-run costs.



# Energy Efficiency Is the Lowest Cost Resource



Source: Lazard, 2014

# Lost Margin Recovery Methods

Most Common:

- Lost revenue adjustment mechanism (LRAM)
- Straight fixed variable rates (SFV)
- Decoupling

# Straight Fixed/Variable Rates (SFV)

- Fixed monthly charge for all distribution costs
- Reduces the volumetric component of rates to just power costs
- Probably the worst solution to the throughput incentive:
  - Distorts prices away from long-run marginal cost
  - Hurts energy efficiency efforts
  - Harms low-income households
  - Unfair to urban and apartment dwellers

# Rate Design Affects Usage

Traditional Rate vs. Straight Fixed / Variable Rate			
Rate Element		Traditional	SFV
Customer Charge		\$ 5.00	\$ 45.00
Usage Charge		\$ 0.10	\$ 0.05
Total Bill for 800 kWh usage		\$ 85.00	\$ 85.00

50% Difference in per-kWh rate

= 10% - 20% increase in usage

= More than a decade of energy efficiency program achievement



# Revenue Regulation (Decoupling)

- A method of adjusting utility (prices) between rate cases to account for changes in sales volumes. Most decoupling mechanisms contain a method to update allowed revenues for customer growth and/or attrition factors.
- Goal is to eliminate the “throughput incentive.”

# How Decoupling Works

## Periodic Decoupling Calculation

### From the Rate Case

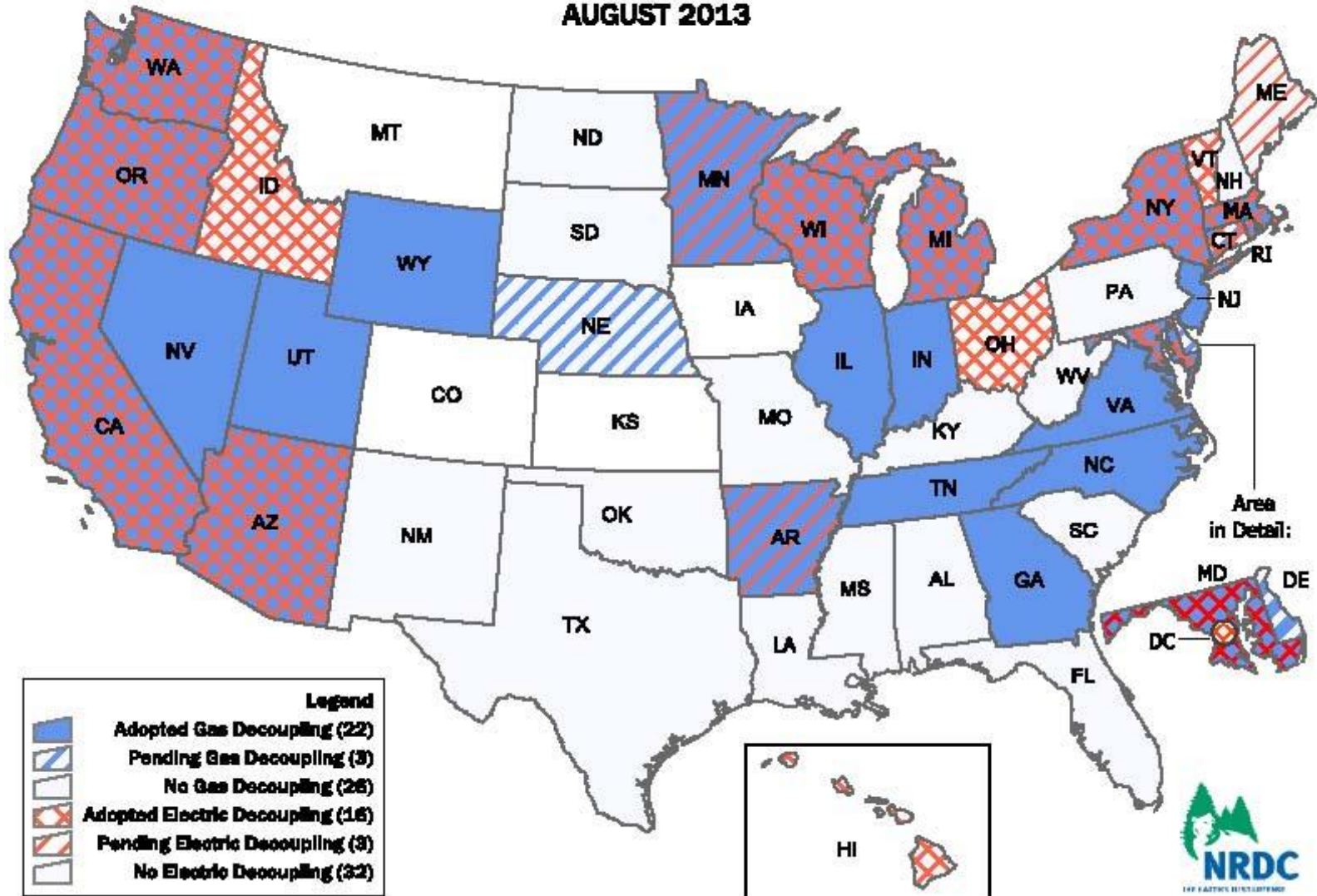
Allowed Revenues	\$10,000,000
Test Year Unit Sales	100,000,000
Price	\$0.10000

### Post Rate Case Calculation

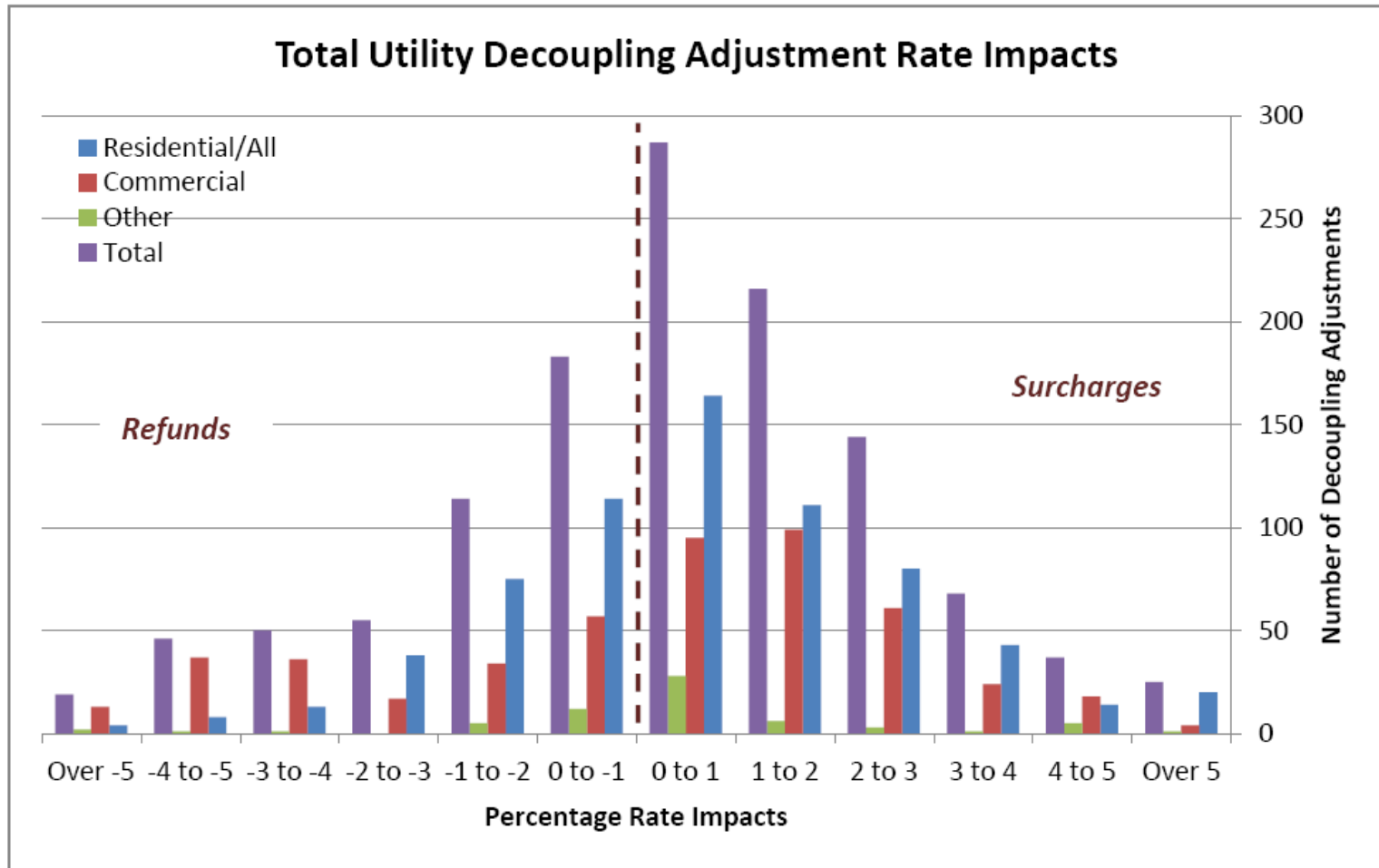
Actual Unit Sales	99,500,000
Required Total Price	\$0.1005025
Decoupling Price "Adjustment"	\$0.0005025

# Gas and Electric Decoupling in the US

AUGUST 2013



# Decoupling Rate Adjustments Have Generally Been Very Small



# Case Studies

- Pacific G&E (CA)
- Idaho Power Company
- Baltimore G&E (MD)
- Hawaiian Electric
- Wisconsin Public Service
- National Grid (Massachusetts)

## Decoupling Case Studies: Revenue Regulation Implementation in Six States

Authors

Janine Migden-Ostrander, Betty Watson, Dave Lamont, Richard Sedano

Available at: <http://www.raponline.org/document/download/id/7209>

# Pacific Gas and Electric Co. California

- Originally adopted in 1982
- Annual Review of Attrition
- 96% of costs are tracked
- Separate Shareholder Incentive
- Separate Cost Recovery
- Energy efficiency: >1% per year
- ACEEE Ranking: #2



# Idaho Power Company

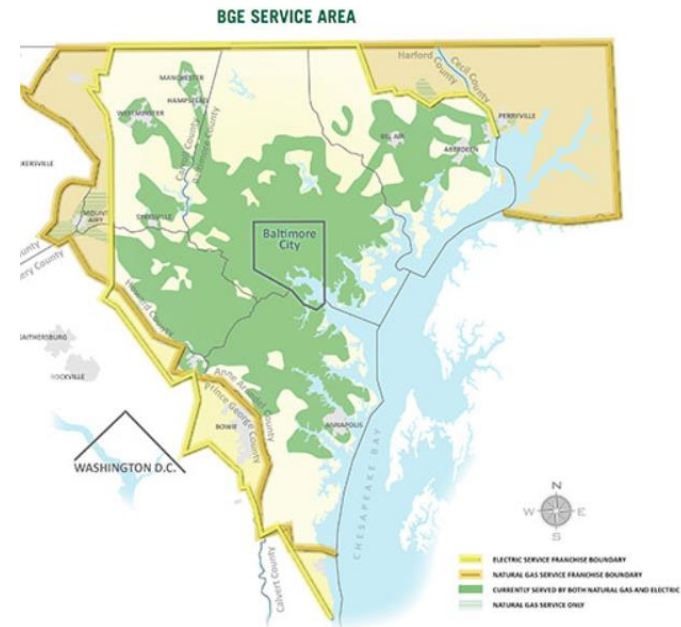
## Idaho

- Implemented 2007
- Revenue Per Customer
- Weather-Normalized
- Residential / Small Commercial
- Separate Cost Recovery
- No Shareholder Incentive
- Saves = 1.2%/year (2012)
- ACEEE Ranking: 31



# Baltimore Gas and Electric Maryland

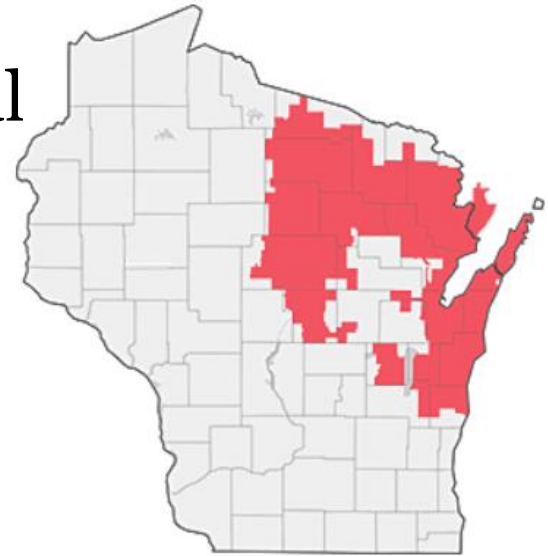
- Gas Implemented 1998; Electric in 2007
- Residential and General Service
- Distribution only
- Revenue per customer
- **Monthly adjustment**
- 0.5% reduction in ROE
- Savings = 1.7% (2011)
- ACEEE Ranking: 9





# Wisconsin Public Service Wisconsin

- Implemented in 2009
- Residential / Small Commercial
- Forecast test year
- **No adjustment**
- Savings: 1.2%
- ACEEE Ranking: 23



# National Grid Massachusetts

- Adopted 2008
- Distribution-only
- Annual Attrition Review
- Annual reconciliation
- Energy Savings: 1.59%
- ACEEE Ranking: #1

nationalgrid



# Hawaiian Electric

- Established 2011
- Replaced LRAM
- Annual Attrition Review
- 2% - 4% Annual Increases
- Solar; EE; Cost Escalation
- Earnings sharing mechanism
- Energy Efficiency: 1.31% (2011)
- ACEEE Ranking: #20



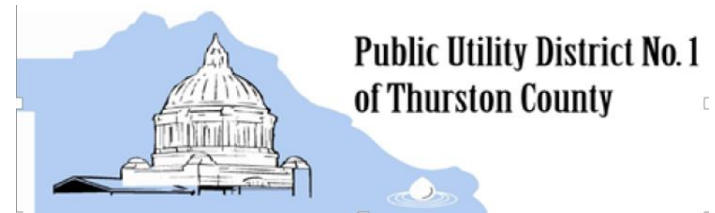
# Decoupling “Light” for Public Power

- Most contentious issues have been fear of excess shareholder return
- Not an issue for public power
- Concern about net income still an issue, but precision less important
- Thurston PUD (water) has a simplified approach

# Thurston PUD

## Revenue Adjustment

- Small water utility
- 80% non-volumetric cost
- 30% non-volumetric revenues
- 4-step inclining block rate design
- Implemented 2012
- Six month adjustment period
- For each 1% change in sales, compared to budget forecast, per-ccf price is changed by 0.5% (up or down)



# Summary

- IOU experiences use many methods
- Generally tied to energy efficiency performance
- Precision less important for consumer-owned utilities
- Good alternative to regressive rate design

## About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power and natural gas sectors. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

Learn more about RAP at [www.raponline.org](http://www.raponline.org)

[jlazar@raponline.org](mailto:jlazar@raponline.org)



### **The Regulatory Assistance Project**

Beijing, China • Berlin, Germany • Brussels, Belgium • **Montpelier, Vermont USA** • New Delhi, India  
50 State Street, Suite 3 • Montpelier, VT 05602 • phone: +1 802-223-8199 • fax: +1 802-223-8172

[www.raponline.org](http://www.raponline.org)