RAP | Energy solutions for a changing world

Revenue Regulation Paves the Way for Utility Innovation and Efficiency

Presented by Janine Migden-Ostrander and Dave Lamont

September 11, 2014

The Regulatory Assistance Project

50 State Street, Suite 3
Montpelier, VT 05602

Phone: 802-223-8199
www.raponline.org

Revenue Regulation

For the latest RAP publication on revenue regulation, please visit the RAP Library and search for the document ID

Decoupling Case Studies: Revenue Regulation Implementation in Six States
http://www.raponline.org/document/download/id/7209

For general information on revenue regulation, please see

Revenue Regulation and Decoupling: A Guide to Theory and Application
http://www.raponline.org/document/download/id/902

Six Revenue Regulation Plans Studied

Utility	State
Pacific Gas and Electric	CA
Idaho Power Company	ID
Baltimore Gas and Electric	MD
Wisconsin Public Service Corporation	WI
National Grid	MA
Hawaiian Electric Company	HI

Today's Webinar

1. Introduction
2. Selected Features of Revenue Regulation Plans
3. Decision Points for Regulators and Stakeholders
4. Questions
5. Top Takeaways

Topics Covered in the Paper

- Authority
- Revenue requirements
- Test year
- Rate of return effects
- Effects on bond rating
- Customer classes included
- Utility functions included
- Cost excluded from revenue regulation mechanism
- Revenue adjustment mechanism in revenue regulation
- Calculation of actual revenue
- Rate adjustments
- Rate case requirements
- Collection mechanism and timing
- Allocation of revenue regulation revenue surpluses or deficits
- Carrying charges
- Rate caps and collars
- Actual historical adjustments
- Complementary policies

Revenue Adjustment Mechanism (RAM) in Deregulation

- Stairstep
- Indexing
- Revenue per Customer (RPC)
- Hybrid
- No RAM

Revenue Adjustment Mechanism (RAM) in Deregulation

Type of Revenue Adjustment Mechanism	
Pacific Gas & Electric	*Hybrid*
Idaho Power Company	*RPC*
Baltimore Gas & Electric	*RPC*
Wisconsin Public Service Corporation	*RPC*
National Grid	*No RAM; potential capital expenditure adjustment*
Hawaiian Electric Company	*Hybrid*

Customer Classes Included in Revenue Regulation

Pacific Gas & Electric	*All customer classes*
Idaho Power Company	*Residential and small general service*
Baltimore Gas & Electric	*Residential and small general service*
Wisconsin Public Service Corporation	*All customer classes*
National Grid	*All customer classes*
Hawaiian Electric Company	*All customer classes*

Utility Functions Excluded in the Revenue Regulation Plan

Pacific Gas & Electric	*Energy procurement costs*
Idaho Power Company	*All variable costs*
Baltimore Gas & Electric	*Energy supply costs*
Wisconsin Public Service Corporation	*Energy costs*
National Grid	*Energy supply costs for basic service customers, transmission costs, the energy efficiency system benefits charge and reconciling charge, and costs recovered through the residential assistance adjustment factor*
Hawaiian Electric Company	*Fuel and purchased power*

Rate Adjustment Mechanisms: Rate Case Requirements

Rate Case Requirements	
Pacific Gas & Electric	*Every three years; annual "attrition" adjustments in between*
Idaho Power Company	*No requirement*
Baltimore Gas & Electric	*No requirement*
Wisconsin Public Service Corporation	*Annual rate case*
National Grid	*Annual capital expenditure adjustment case*
Hawaiian Electric Company	*Abbreviated annual rate case*

Rate Adjustment Mechanisms: Collection Mechanisms

Rate Adjustments	
Pacific Gas & Electric	*Base rates adjusted annually*
Idaho Power Company	*Annual adjustment through surcharge*
Baltimore Gas & Electric	*Monthly adjustment through surcharge*
Wisconsin Public Service Corporation	*Annual adjustment through rate case*
National Grid	*Annual adjustment*
Hawaiian Electric Company	*Annual adjustment*

Rate Adjustment Mechanisms: Allocation of Surpluses and Credits

Allocation of Surplus or Deficit	
Pacific Gas & Electric	*Allocated to all customers according to business unit (e.g., electric distribution, electric generation)*
Idaho Power Company	*Included in the annual adjustment mechanism for each customer class*
Baltimore Gas & Electric	*Separate for each customer class*
Wisconsin Public Service Corporation	*Allocated to all customers, except certain tariffs (see above)*
National Grid	*Separate for each customer class*
Hawaiian Electric Company	*Separate for residential and commercial/industrial*

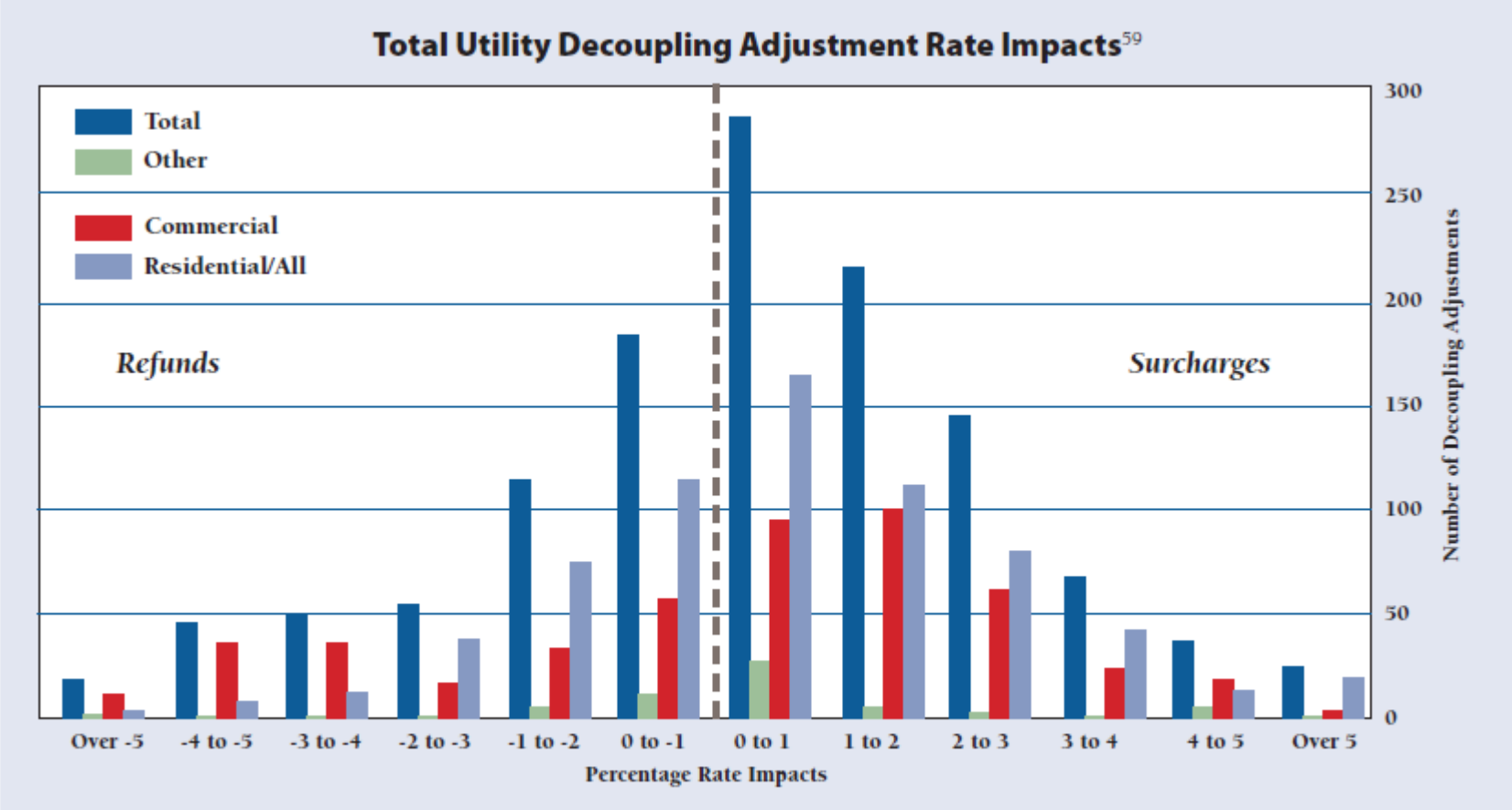
Rate Adjustment Mechanisms: Carrying Charges

Carrying Charges	
Pacific Gas & Electric	*None*
Idaho Power Company	*Yes*
Baltimore Gas & Electric	*None*
Wisconsin Public Service Corporation	*Yes, at the short-term debt rate*
National Grid	*Yes, at the customer deposit rate*
Hawaiian Electric Company	*Yes, at the customer deposit rate*

Rate Adjustment Mechanisms: Rate Caps and Collars

	Cap on Rate Adjustment
Pacific Gas & Electric	*No*
Idaho Power Company	*3% rate cap; excess carried over to next period*
Baltimore Gas & Electric	*10% rate cap; excess carried over to next period*
Wisconsin Public Service Corporation	*Cap of $14 million per year*
National Grid	*$170 million in CapEx*
Hawaiian Electric Company	*No*

Rate Adjustment Mechanisms: Actual Historical Adjustments



59 Morgan, P. (2012, December). Graceful Systems, LLC. *A decade of decoupling for US energy utilities: rate impacts, designs and observations.* p5.

Complementary Policies: Energy Efficiency

- Energy Efficiency (EE) is often treated as complementary with decoupling in that without EE, decoupling would not be available.
- States have varying levels of EE requirements determined by the legislature or the courts.
- Decoupling removes the throughput incentive that deters utilities from engaging in EE due to lost revenue potential

Complementary Policies: Incentive Structures

- Revenue regulation only removes the disincentive to pursue energy efficiency – it does not create an incentive
- Some states have instituted some form of incentives to reward the desired outcome.
- The goal is to incentivize management to aggressively pursue energy efficiency and garner shareholder support in the face of lost investment opportunity.

Complementary Policies: Rate Design

- Rate design plays an important role in terms of the price signals it sends regarding conservation.
- With inclining rates, customers engaged in EE can save more by staying in the lower usage tier.
- Declining block rates discourage conservation by providing lower rates in the 2nd and 3rd tier, acting like a bulk discount.

Complementary Policies: Performance Incentives

- Performance Incentives send policy messages to utilities and can be used to reward behavior that is consistent with the policy directions of the state.
- Performance incentives are used sometimes to reward utilities for not cutting services and reliability in order to increase their margins.
- These incentives can complement decoupling by providing utilities greater assurance of recovering revenues while still providing reliable service.

Complementary Policies for Utilities Studies

Complementary Policies for Energy Efficiency

	Energy Efficiency Requirement	Incentive Structure	Default Residential Rate Design	Performance Incentives
Pacific Gas & Electric[62]	*1% annually*	*Risk reward incentive mechanism*	*Inclining block*	*Reliability reporting only*
Idaho Power Company[63]	*IRP*	*No*	*Inclining block*	*None*
Baltimore Gas & Electric	*10% by 2015*	*No*	*TOU, seasonal*	*Under consideration*
Wisconsin Public Service Corporation[64]	*0.75% annually*	*No*	*Flat*	*Reliability reporting only*
National Grid[65]	*2.4% annually*	*5% of program costs*	*Inclining block*	*Service quality reward and penalty*
Hawaiian Electric Company[66]	*Energy efficiency can satisfy portion of RPS*	*Third-party administrator paid for contract performance*	*Inclining block*	*Under consideration*

Decision Points

There are many ways to implement revenue regulation and multiple decision points that regulators must consider in designing a revenue regulation mechanism. They include:

- Should revenue regulation apply to all functions (generation, transmission, and distribution)?
- Should revenue regulation apply to all customer classes?
- Should there be symmetry such that a reconciliation adjustment occurs for both over- and under-recoveries?

Decision Points

- Should recovery of indicated surcharges be conditioned on acceptable performance on customer service quality or energy efficiency goals?
- Should there be an attrition adjustment to account for other expenses, or should the revenue regulation adjustment be limited to reconciling existing revenue requirements?
- Should there be an inflation adjustment?

Decision Points

- To calculate the revenue requirements, should the current or accrual method be used?
- Should the adjustments be made in rate cases or through a rider?
- How frequently should adjustments be made: monthly, annually, or some other time period?
- Depending on the period of time between true-up and recovery, should there be carrying charges, and if so, how should they be calculated?

Decision Points

- Should there be a requirement authorizing the frequency of rate case?
- Should there be an annual cap on the amount of the adjustment, and if so, should there be an opportunity to carry over any additional amounts and for how many years?
- Should there be an adjustment to the cost of capital to reflect the reduced risk?

These case studies demonstrate that there are many ways to design a decoupling mechanism to meet the policy objectives of any state.

QUESTIONS?

Measuring the Success of Decoupling

A revenue regulation mechanism designed to promote energy efficiency may be viewed as successful if the utility:

- Is no longer concerned about increases and decreases in sales;
- Is no longer taking actions to increase sales or reduce decreases in sales; and,
- Is improving the overall efficiency of its operations and management.
- Is changing to utility culture so as to embrace EE

Measuring the Success of Decoupling

Other measures of success include:

- Acceptance by stakeholders
- How the mechanism impacts rates
- Ability and activity of utility to focus on EE and provide customers with a lower cost option and better customer interactions
- Positive view by financial institutions
- Increase in EE and distributed resources

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 sector. 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

Janine Migden-Ostrander – jmigden@raponline.org
Dave Lamont – dlamont@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