Ratemaking Alternatives

IPU Fundamentals Course

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Introduction

US gas and electric utilities face challenging business conditions in many states today

Alternatives to traditional cost of service ratemaking ("COSR") --- collectively called "Altreg" --- are frequently used to address these challenges

This presentation

- explains Altreg rationales and salient options
- notes key precedents & recent developments
- stresses "utility of the future" challenges
- spotlights *performance-based* Altreg approaches

The focus will mainly be on electric utilities.

The Age of Altreg

What's Driving Altreg?

Energy utilities face a host of challenging business conditions today.

Mounting climate concerns spur calls for more demand-side management ("DSM"), distributed power generation ("DG"), clean power generation, and "beneficial" electrification (e.g., more electric vehicles and heat pumps, less gas space heating).

Advanced metering infrastructure ("AMI") and other costly "smart grid" technologies have proliferated.

Some utilities need high replacement capex and/or more reliability and resilience.

Demand growth is sluggish for many utilities while straining capacity in others (e.g., sunbelt).

What's Driving Altreg? (cont'd)

Where demand growth is sluggish --- or strains capacity--- cost tends to grow faster than revenue.

Under COSR, utilities respond with frequent rate cases that

- raise regulatory cost
- distract from important "utility of the future" generic issues
- weaken utility incentives to contain cost

The closer a utility's revenue tracks its cost, the stronger is its incentive to over-capitalize.

Business conditions were more favorable in the "golden age" of COSR, when COSR became a tradition.

What's Driving Altreg? (*cont'd*)

Utilities also have weak incentives to contain environmental damage from their operations

- DSM and DG reduce capital expenditure ("capex") opportunities
- Since utilities are compensated for many fixed costs through usage charges, usage growth bolsters margins and DSM and DG reduce these margins.
- Costs of energy commodities are tracked
- US utilities don't pay carbon taxes. These taxes would, in any event, likely be tracked

>>> (Well-funded) green interests are now influential ratemaking activists

>>> Utilities need to facilitate energy transition cost-effectively.

Altreg Options

Altreg Options

COSR shortcomings have spurred development of Altreg options

Utilities favor options that accelerate revenue growth and reduce risk of investment

- Fully-forecasted test years
- Extra trackers for rapidly-rising costs
- Formula rates
- Multiyear rate plans

Altreg Options (cont'd)

Regulators appraise Altreg options using a broader set of criteria

- Reasonably compensatory for efficient utilities
- Incentivize good utility performance
- Streamline ratemaking

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Altreg Options (cont'd)

Limited Reforms

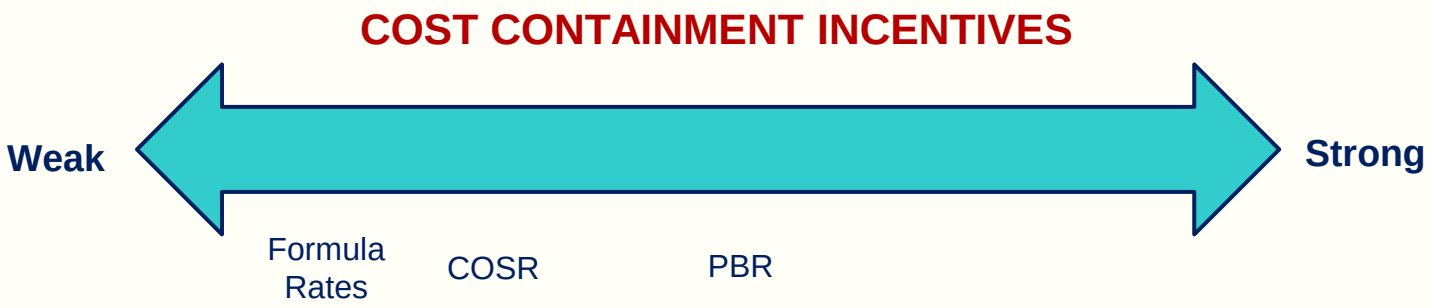
- Cost Trackers
- Revenue Decoupling
- Targeted Performance Incentive Mechanisms
- Targeted Incentives for Underused Practices
- Forward Test Years

Sweeping Reforms

- Formula Rate Plans
- Multiyear Rate Plans

Altreg Options (cont'd)

Altreg options can also be ranked by their incentive properties.



Cost Trackers and Formula Rates

Cost Trackers

What Are They?

Mechanism to expedite recovery of targeted costs between general rate cases

Tracker (aka balancing or variance account) keeps track of unrecovered cost

Costs deemed prudent can be recovered promptly with a rate surcharge (aka “rider”) or deferred as “regulatory assets” for future recovery

Cost Trackers (cont'd)

Cost Tracker Precedents

Utilities have long tracked *large, volatile* costs

- fuel and purchased power
- pensions
- severe storms

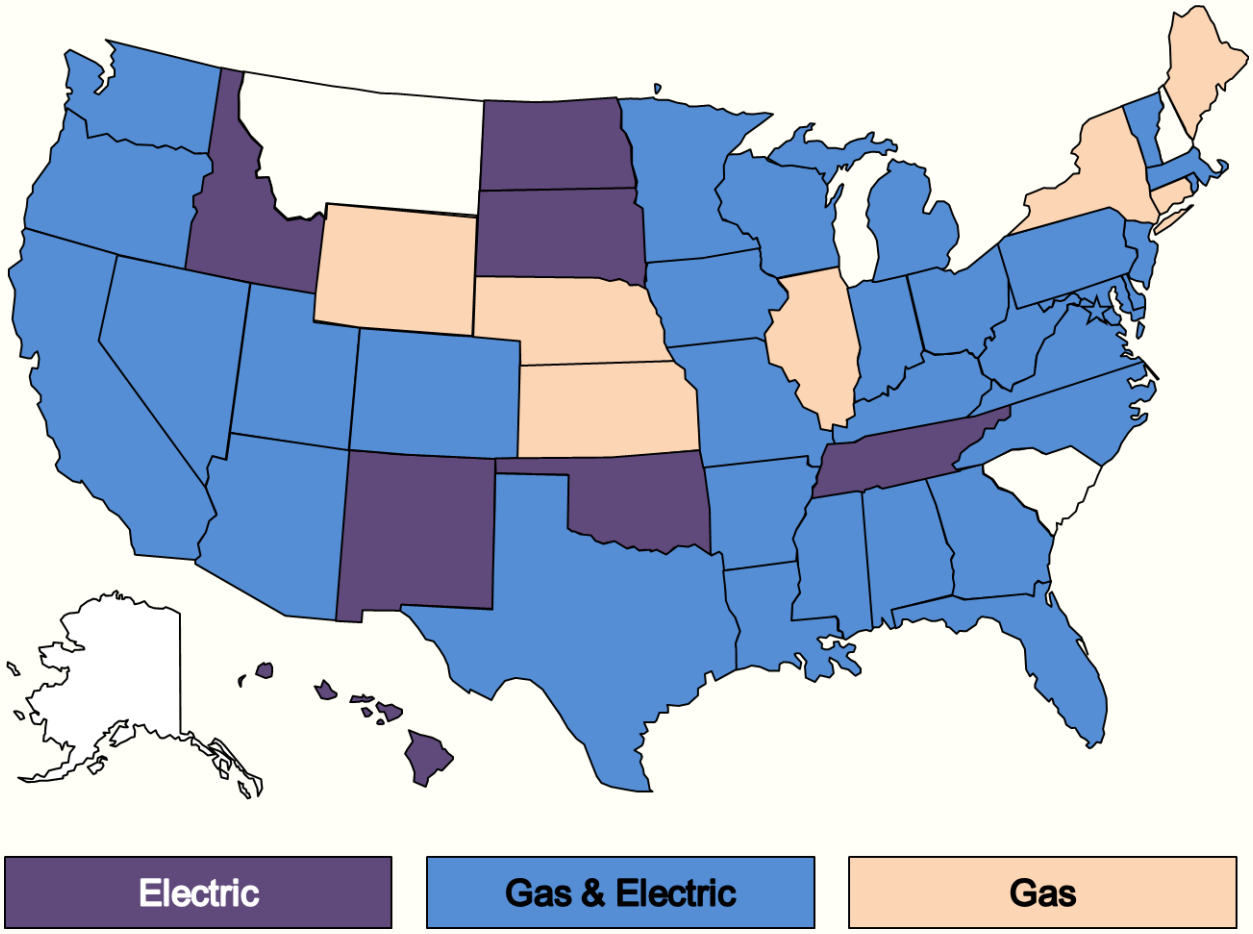
Cost trackers increasingly used for *rapidly rising* costs.

- Health care
- Vegetation management
- Capital expenditures

Recent Capex Tracker Precedents

Capital cost trackers are most popular form of Altreg in US

Especially popular for gas utilities



Capex Trackers: Pro

Incremental rather than sweeping reform

Encourages needed investments (e.g., gas safety)

Reduce rate case frequency

- Stronger incentives to contain costs that *aren't tracked*
- More time and resources available to address
  - prudence of tracked costs
  - other regulatory issues

Capex Trackers: Con

Information asymmetries raise concern about “single issue ratemaking”.

Trackers weaken incentive to contain tracked costs.

Need for proposed capex often hard to assess.

Inadequate utility support for proposed capex

Utilities don’t usually promise less frequent rate cases.

Formula Rates

What Are They?

Revenue adjusted annually to reflect utility's cost of service without general rate cases

>>> "cost of service formula" is essentially a broad-scope cost tracker

In retail ratemaking, rates typically adjusted if rate of return on equity ("ROE") differs from target

Scope of prudence reviews sometimes narrowed

"Bells & whistles" sometimes added to strengthen formula rate incentives

- Deadband around ROE target
- *growth Revenue$^{O\&M}$ < Growth Inflation + 0.5%*

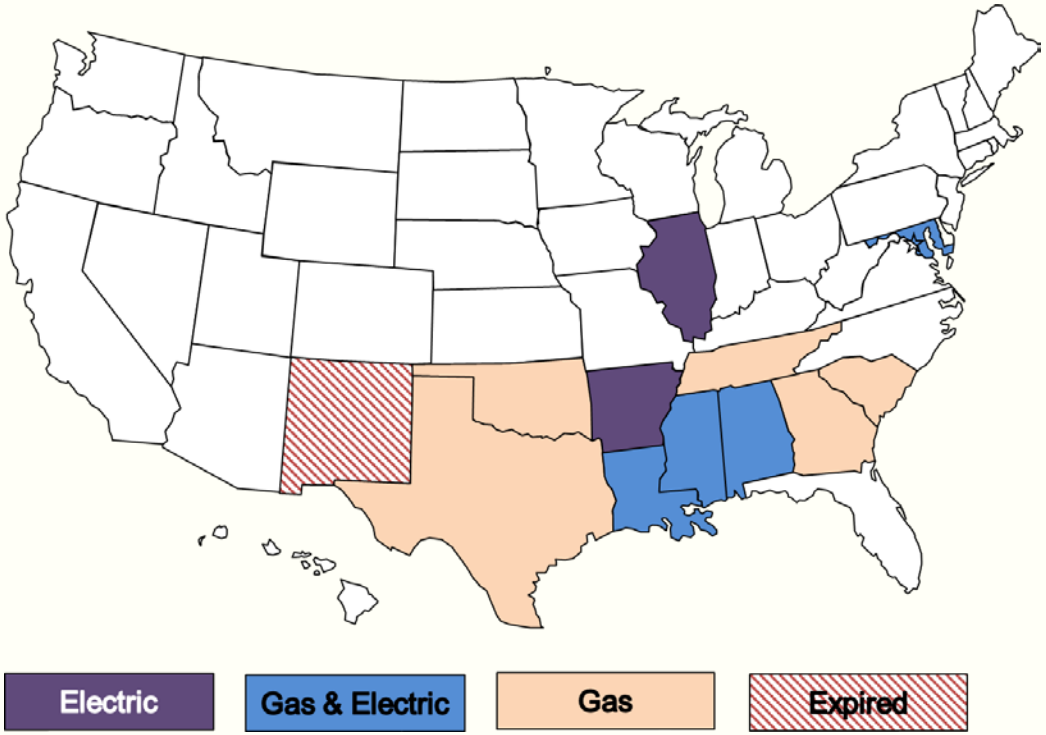
Formula Rate Precedents

Formula rates are the norm for power transmission at Federal Energy Regulatory Commission ("FERC")

Popular for *retail* electric and (especially) gas ratemaking in the Southeast

Alabama was early adopter

Exelon has championed formula rates in Illinois and Mid-Atlantic region



Note: Shaded jurisdictions reflect regulatory approval of formula rate plans for one or more utilities in their jurisdiction.

Formula Rates: Pro

Encourage needed capex (e.g. transmission)

Reduce utility risk >>> could lower target ROE

Streamline regulation

Formula Rates: Con

Limit prudence reviews and role of state commission

Weaken cost containment incentives

e.g., Productivity trend of US power transmitters is negative

>>> Formula rates opposed by many consumer groups and regulators often require legislative mandate (e.g., AR, IL, TN)

[1] PEG reported in recent Ontario testimony that the multifactor productivity trend of a large sample of US electric utilities in the provision of power transmission services averaged -2.26% over the fifteen years ending in 2019. Please see Mark Newton Lowry (2021), "Transmission Productivity and Benchmarking Study," filed in Régie de l'énergie Demande R-4167-2021, p. 84.

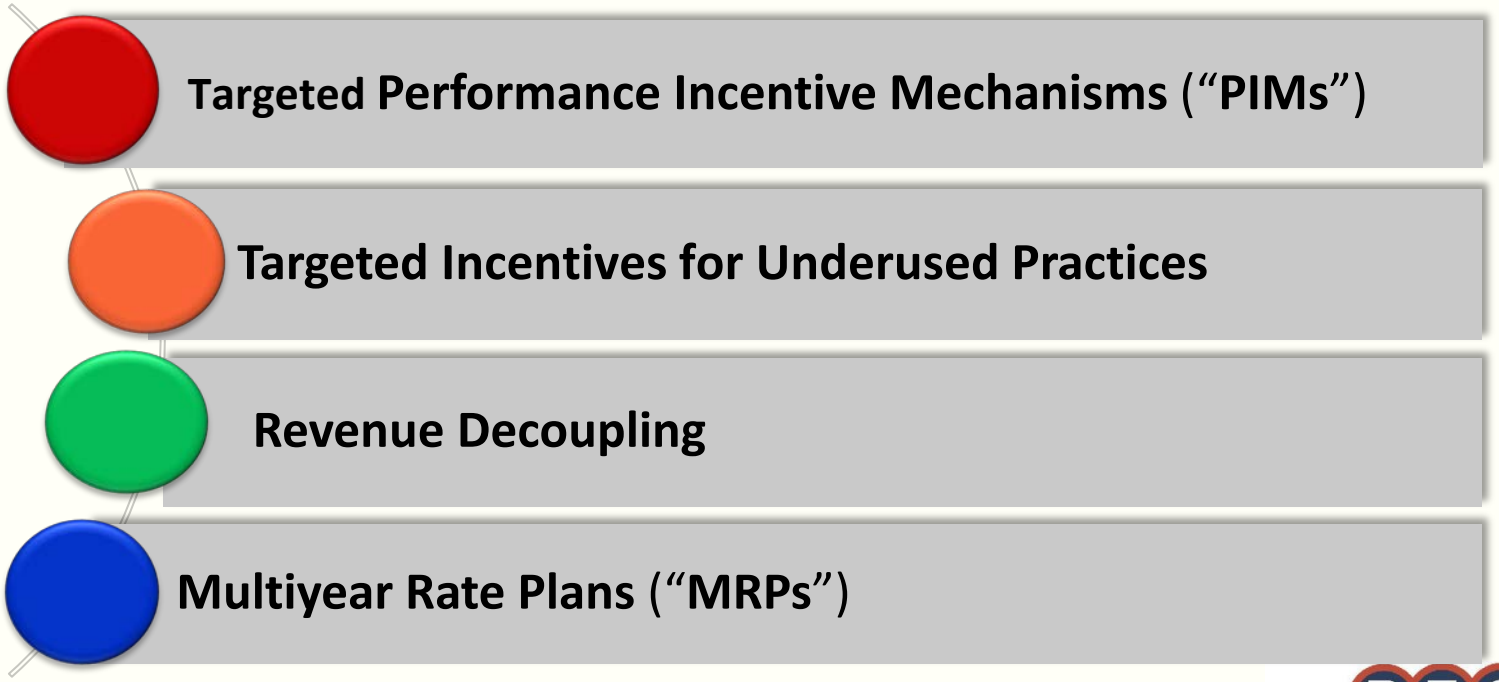
Performance-Based Ratemaking

PBR Alternatives

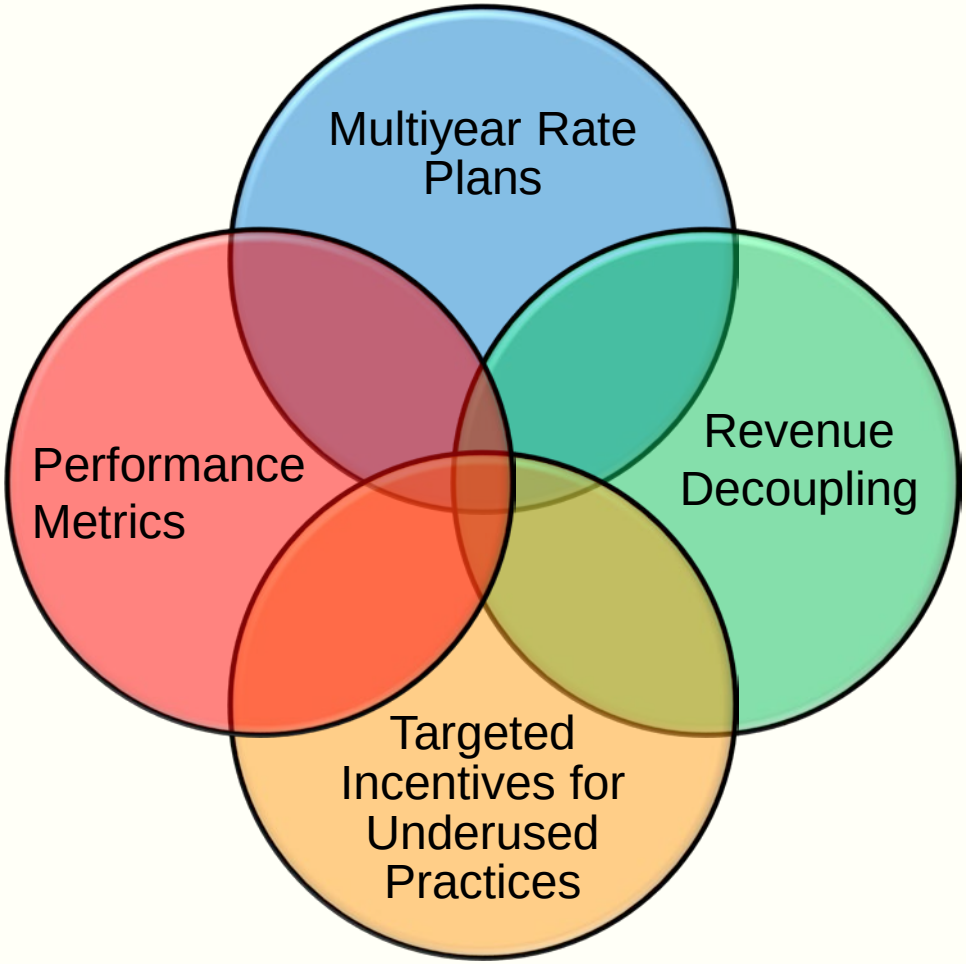
PBR is form of Altreg designed to align utility incentives with the interests of customers and society.

Some PBR approaches have other benefits (e.g., streamlined ratemaking).

Four established approaches



Basic PBR Approaches are Often Combined



Britain's "RIIO" approach to ratemaking combines all 4

Revenue Decoupling

What Is It?

Decoupling usually entails two mechanisms.

A revenue decoupling mechanism ("RDM") uses tracker and rider to make *actual* revenue track *allowed* revenue closely.

>>> revenue (and earnings) "decoupled" from system use

Revenue doesn't grow with billing determinants

However, a revenue adjustment mechanism ("RAM") escalates allowed revenue automatically for external cost drivers (e.g., customer growth)

Revenue Decoupling: Pro

Removes utility's "throughput" disincentive to embrace DSM and DG

Compensates for *all* sources of slow demand growth

No need for high fixed charges that discourage DSM and DG

Encourages innovative (e.g., time-sensitive) rate designs

>>> Decoupling popular with green interests

Reduces rate case frequency if volume growth is *slow*

Revenue Decoupling: Con

Discourages beneficial electrification and efforts to build price-sensitive (e.g., large industrial) loads

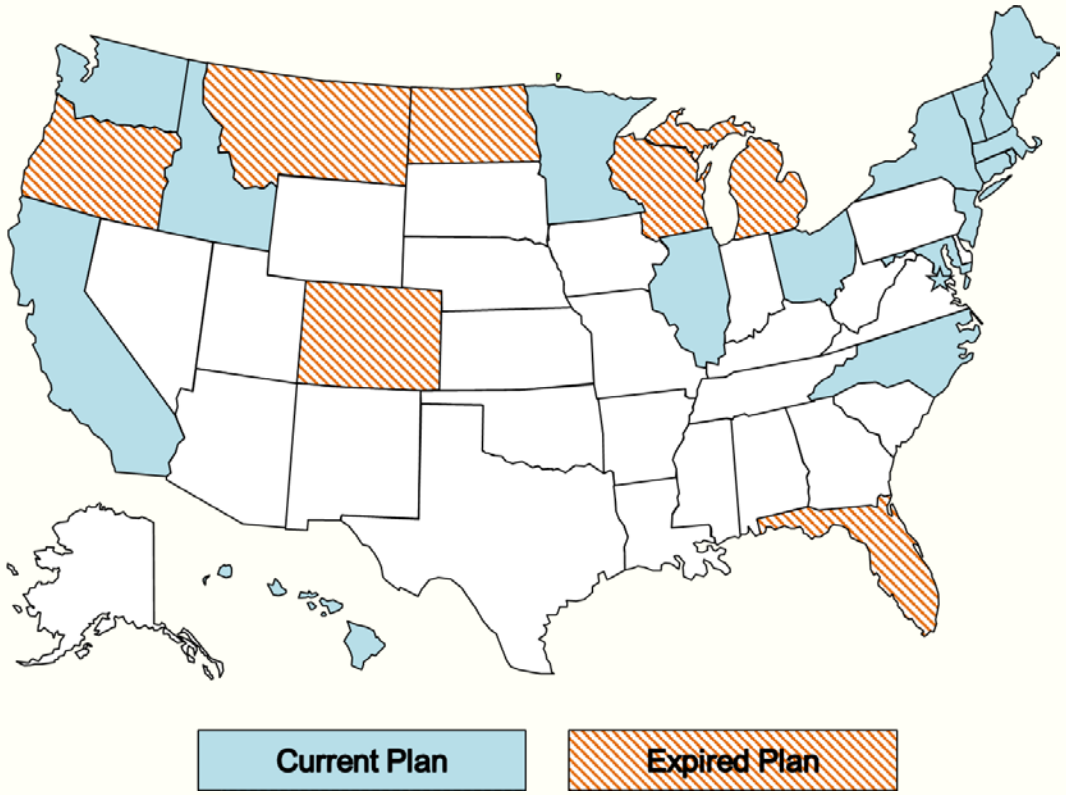
>>> Decoupling may not apply to all rate classes

Increases rate case frequency if volume growth is *rapid*

Revenue Decoupling Precedents: Electric

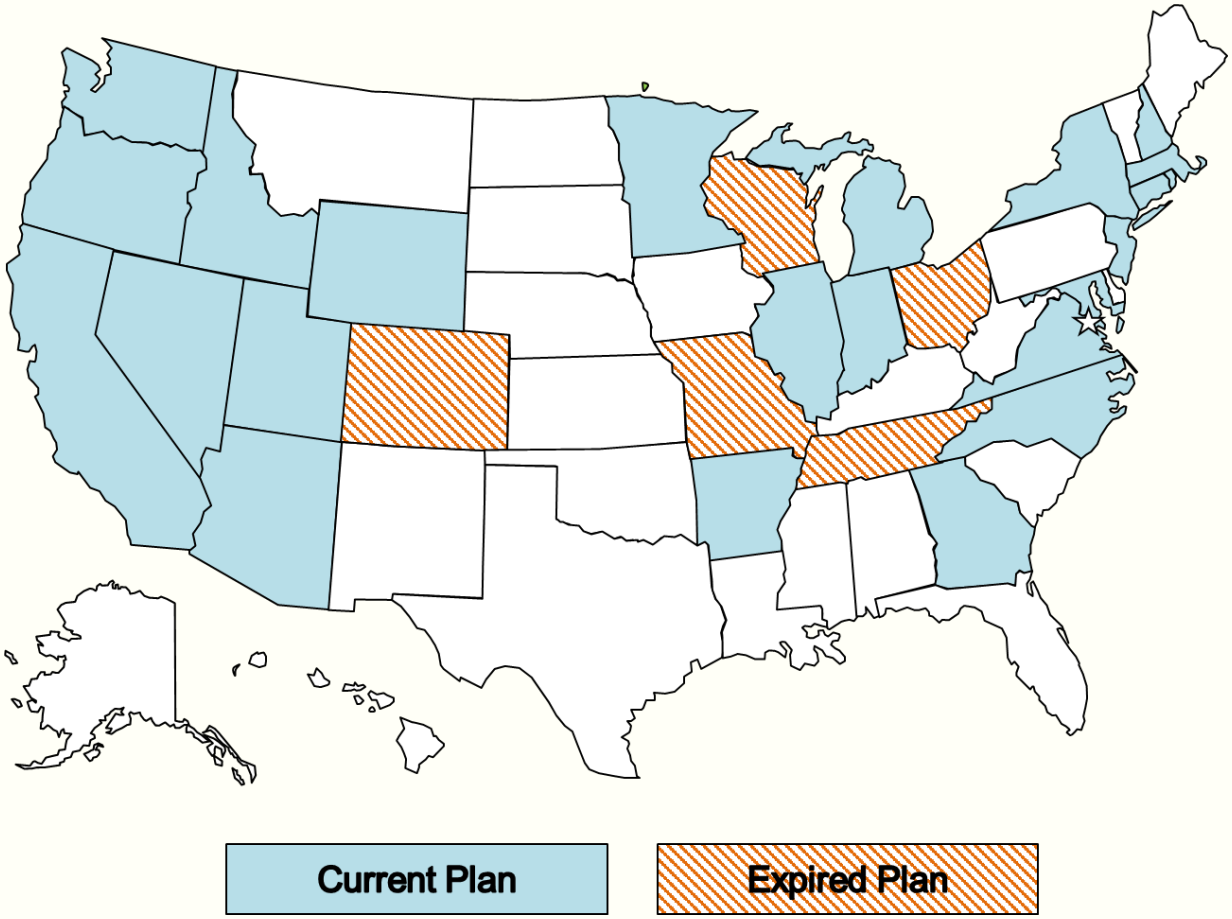
California was revenue decoupling pioneer

Decoupling now generally popular in states that encourage DSM and DG
Decoupling less popular in sunbelt states that are experiencing rapid demand growth



Revenue Decoupling Precedents: Gas

Decoupling even more popular for gas distributors because of chronically slow volume growth



Performance Metrics and PIMs

Performance metrics quantify utility activities in key performance areas

Several potential uses

- **Monitor Only**
- **Monitor with Target**
- **Performance Incentive Mechanisms ("PIMs")**

PIMs link revenue to performance as measured using metrics.

Publicly-available "dashboards" summarize utility performance using shortlist of metrics

PIM Design

Here is a simple example of a PIM

Reliability is measured using system average interruption duration index ("SAIDI")

$$Revenue\ Adjustment = \$ \times (SAIDI^{Target} - SAIDI^{Utility})$$

Components	
Performance metric (aka "output")	$SAIDI^{Utility}$
Performance Target	$SAIDI^{Target}$
Performance Appraisal	$SAIDI^{Target} - SAIDI^{Utility}$
Award/Penalty Rate	$\$$

Revenue adjustments are typically made using rate riders

What Do Metrics and PIMs Target?

Most PIMs approved to date have targeted

Service quality

- Reliability
- Customer services

Energy conservation

Provides “positive” incentive to contain tracked energy costs and capex

What Do Metrics and PIMs Target? (cont'd)

Metrics and PIMs focus of PBR proceedings in CO, CT, DC, HI, MD, MN, NY, WI

New performance metrics (sometimes called "policy" metrics) and PIMs address emerging issues.

Policy PIMs

Peak load management

- System load peakedness
- Non-wire alternatives ("NWAs") to distribution grid investments
  e.g., Brooklyn-Queens Demand Management Project

Advanced metering infrastructure use and functionality

Quality of service to DG customers and independent power producers

Beneficial electrification (electric vehicles and heat pumps)

Other Policy Metrics Greenhouse gas emissions, equity issues

Hawaiian Electric Key Performance Metrics

Service Reliability


Power Supply & Generation


Renewable Energy


Customer Service

Financial


Safety

Rates and Revenues

Emerging Technologies

Source: https://www.hawaiianelectric.com/about-us/performance-scorecards-and-metrics

Metric and PIM Advantages

Target “holes” in regulatory system incentives

Alert utility to key concerns

- Areas of poor performance
- Emerging performance issues (e.g., system resilience and AMI)

>>> Metrics and PIMs are “utility infielders” of PBR

PIM Challenges

Lots of design and data collection work for “smallish” benefits

Focus of PIM activism frequently not on vital consumer concerns like cost (e.g., cost benchmarking rare in US proceedings)

>>> Few policy PIMs have as yet been approved

Targeted Incentives for Underused Practices

Rationale

Utilities tend to underuse certain inputs and practices, like those that

- are promising but risky
- limit utility capex opportunities
  - DSM and DG
  - Power purchases
  - facility maintenance and refurbishment
  - cloud computing

Targeted incentives can “nudge” utilities in right direction

Targeted Incentives for Underused Practices

Popular Approaches

Track their costs (e.g., DSM, FERC transmission formula rates)

Capitalize costs and add an ROE premium

- Some utilities (e.g., BC Hydro) capitalize DSM expenses
- Transmission ROE premia at FERC
- British regulator capitalizes share of total expenditures ("totex")

Management fee

Securitization of stranded generation assets

Ex-ante approval (e.g., policy statements and pilot programs)

Multiyear Rate Plans

Key Components

- Rate case moratorium (e.g., 3-5 year rate case cycle)
- Between rate cases, an attrition relief mechanism ("ARM") provides automatic rate relief for attrition using *predetermined formulas that aren't linked* (like a cost tracker or formula rate) *to utility's contemporaneous cost growth.*

  >>> Stronger cost containment incentives, streamlined regulation

- Some costs (e.g. energy) receive tracker treatment
- PIMs for reliability and customer service quality

Optional "Bells and Whistles"

- Additional metrics and PIMs (e.g., conservation and peak load management)
- Cost benchmarking
- Revenue decoupling
- Targeted incentives for underused practices (e.g., pilot programs)
- Earnings sharing mechanism

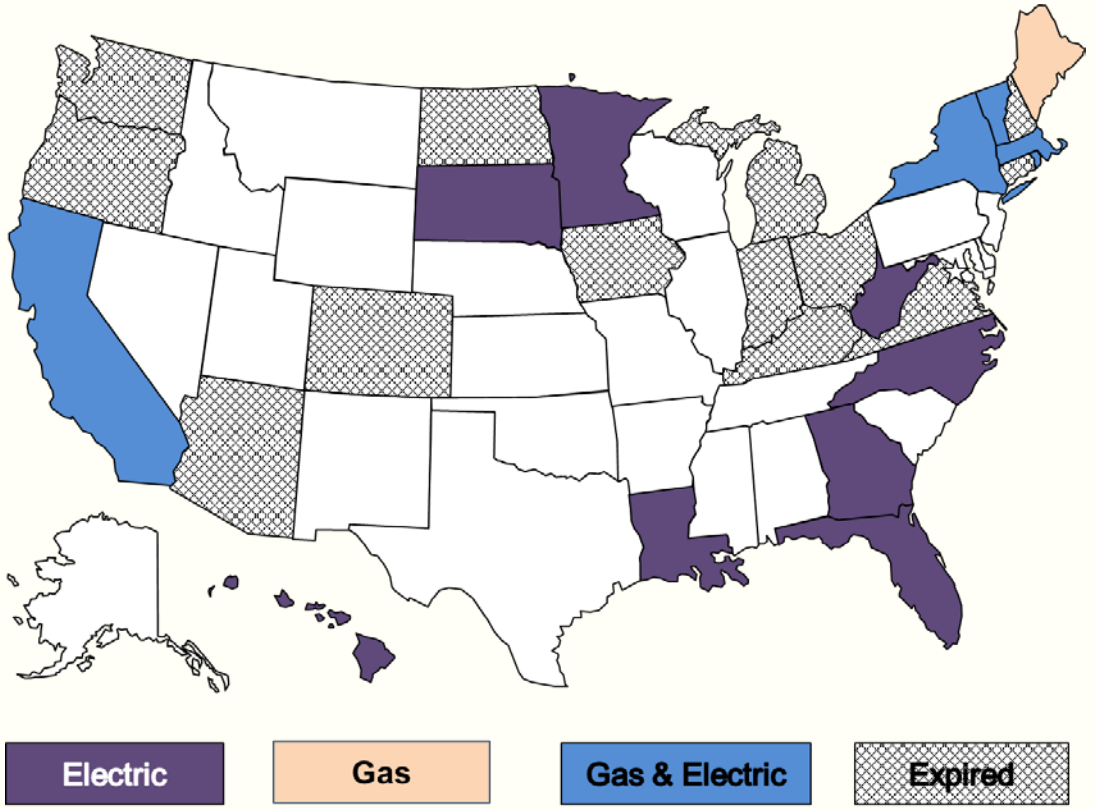
MRPs in the US

MRPs first used in US railroad and telecom industries.

Now popular for retail electric utility rates.

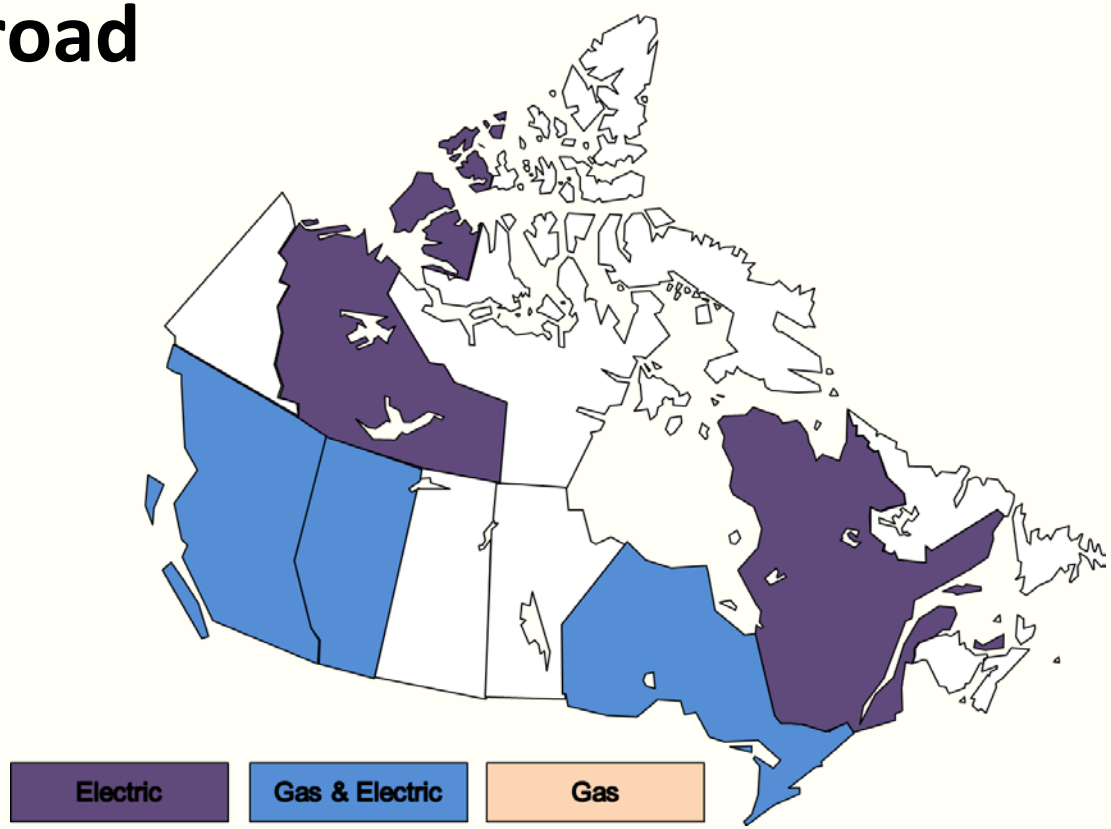
California and Northeast (e.g., MA and NY) were MRP pioneers.

Recent legislation encourages MRPs in CT, NC and WA state.



Regulatory schemes in some states are *called* MRPs but act more like formula rates due to fine-print "reconciliation mechanisms" (e.g., DC, IL, MD).

MRPs Abroad



MRPs are more popular in Canada, Britain, Australia, Latin America, and Europe. Ontario and Alberta are world class practitioners.

Impetus for MRPs abroad often comes from policymakers and/or regulators.

ARM Design Options

Several well-established ARM design approaches

Predetermined "Stair Steps"

e.g., 3% in 2024, 2% in 2025, 1% in 2026

Stairsteps usually based on forecasts.

Many utilities prefer this approach, which preapproves capex [e.g., NY, MN]

Indexing

e.g., *growth Revenue = Inflation + growth Customers – X Factor – Stretch Factor*

X factor reflects industry total factor productivity ("TFP") trend

Utilities frequently ask for supplemental capital revenue. (e.g., MA, ON, Alberta)

ARM Design Options (cont'd)

Hybrid

e.g., Indexing of O&M revenue

Stair step for capital revenue

Stairsteps may be based on forecasts or average historical capex

[e.g. CA and the "K-bar" approaches used in Alberta and MA]

Tracker/Freeze

Track some rapidly-growing (e.g. generation) costs and otherwise freeze rates [e.g. FL, WV]

MRP Case Study: Consolidated Edison of NY

Plan Term 3 years beginning January 2023

Predetermined Base Revenue "Stair Steps" Based on Forecasts

2023	2024	2025
6.6%	6.2%	5.8%

Capex underspends trued up at end of plan

Earnings Sharing Mechanism

Revenue Decoupling Most services

PIMs

- Reliability & customer services
- Energy efficiency
- Policy PIMs encourage NWA projects, peak load reductions, DG, beneficial electrification, and managed EV charging

Reference: New York Public Service Commission Case 22-E-0064

MRP Case Study: Hawaiian Electric Companies

Plan Term 5 years beginning June 2021

Revenue Cap Index ARM: *growth GDPPI - Productivity Factor - Consumer Dividends*
where Productivity Factor = 0

Cost trackers for exceptional O&M and capital projects, renewable energy interconnections

Revenue Decoupling All services

Earnings Sharing Mechanism Symmetric with a +/- 300 basis point deadband

PIMs

- Reliability & customer service quality
- Policy PIMs encourage low-to-moderate income energy efficiency program participation and savings; timely DG interconnection approvals and interconnections of large-scale renewables; demand response procurement; early renewable portfolio standard compliance; AMI utilization; and generation reliability.

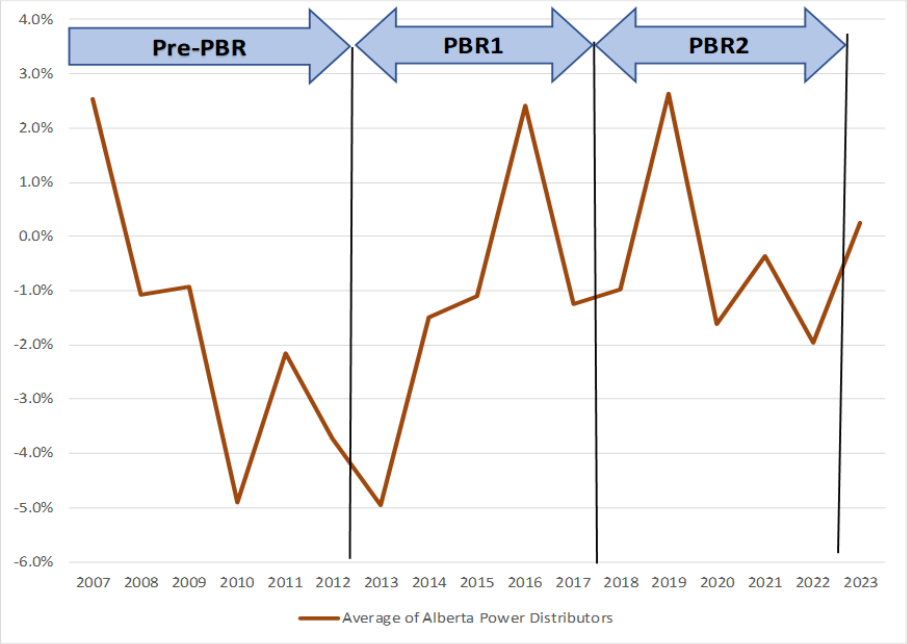
Expedited Pilot Review Process

Reference: Hawaii Public Utilities Commission Docket 2018-0088

Do MRPs Improve Performance Incentives? (cont'd)

- MRPs made mandatory for Alberta gas and electric power distributors after years of frequent rate cases
- Recent PEG study found that MRPs accelerated their multifactor productivity growth after years of frequent rate cases[1]
- *Capital* productivity surged when capex cost trackers in PBR1 were replaced in PBR2 with fixed capex budgets based on historical costs[1]

Multifactor Productivity Growth of Alberta Power Distributors 2008-2023



[1] Lowry, Mark Newton, David Hovde, Rebecca Kavan, and Matthew Makos. "Impact of Multiyear Rate Plans on Power Distributor Productivity: Evidence from Alberta," *The Electricity Journal*, Volume 36, Issue 5, June 2023.

MRP Pros and Cons

Advantages

- Addresses utility attrition without frequent rate cases
- Strengthens utility incentive to contain costs (including capex). Cost efficiency is a central focus.
- Often combined with other PBR tools

Disadvantages

- Consumer groups dislike automatic rate increases, high earnings
- ARM design methods can be complex and controversial
- Performance incentives weakened by earnings sharing
- Utilities have "captured" MRP design process in some jurisdictions.

Conclusions

Conclusions

We live in “Age of Altreg” where Altreg provisions are key ratemaking issues.

Understanding Altreg increases your effectiveness in regulatory arena.

Altreg options are diverse.

Multiyear rate plans and other PBR approaches are increasingly popular.

Utilities seeking faster revenue growth must “jump through PBR hoops.”

Best form of PBR for energy transition is hot issue

While promising, PBR is a work in progress.

Appendix

Acronyms

AMI	Advanced metering infrastructure
COSR	Cost of service regulation
DG	Distributed generation
DSM	Demand-side management
MFP	Multifactor Productivity
MRP	Multiyear rate plans
O&M	Operation and maintenance
PBR	Performance-based ratemaking
PIM	Targeted performance incentive mechanism
VIEU	Vertically integrated electric utility

Glossary of Terms

Advanced Metering Infrastructure ("AMI"): An integrated system of smart meters, communications networks, and data management systems that enables two-way communication between the electric company and customers.

Attrition Relief Mechanism ("ARM"): A key component of MRPs which automatically adjusts rates or revenue to address electric company cost pressures between general rate reviews without closely tracking the growth of all of the company's *own* costs. Methods used to design ARMs include forecasts and indexation to quantifiable external cost drivers such as inflation and customer growth.

Base Rates: The components of an electric company's rates which provide compensation for costs of non-energy inputs such as labor, materials, services, and capital.

Beneficial Electrification: Replacement of fossil fueled equipment such as motor vehicles and space heaters with alternatives that rely on electric energy.

Capex: Capital expenditures.

Cost of Service Regulation ("COSR"): The traditional North American approach to ratemaking which resets base rates in irregularly timed rate cases to reflect the cost of service that regulators deem prudent.

Cost Tracker: A mechanism providing expedited recovery of targeted costs that are deemed prudent by regulators. A tracker is an account of costs that are eligible for recovery. The balance in such an account is typically recovered promptly via rate riders. Tracker treatment was traditionally limited to costs that are large, volatile, and largely beyond the control of the electric company. In more recent years, trackers have been used to address rapidly rising costs and costs of underused practices.

Distributed Energy Resources ("DERs"): Technologies, services, and practices that can improve efficiency or generate, manage, or store energy on the customer side of the meter. DERs include energy efficiency and demand response programs, distributed generation, energy management systems, and batteries.

Glossary of Terms ("cont'd)

Earnings Sharing Mechanism ("ESM"): An ESM automatically shares surplus and/or deficit earnings, between electric companies and customers, which result when the rate of return on equity deviates from its commission-approved target. ESMs often have dead bands in which earnings associated with a certain range of ROE variances aren't shared.

Electric Vehicle Supply Equipment ("EVSE"): Equipment that enables the supply of electricity to electric vehicles.

Federal Energy Regulatory Commission ("FERC"): The federal agency responsible for regulating rates for services offered in interstate commerce. These services include power transmission, bulk power sales, and interstate gas pipeline transportation and storage.

Formula Rate Plan ("FRP"): A formula rate plan is designed to make a company's revenue closely track its own cost of service. It typically entails a mechanism for truing up a utility's revenue to the portion of its actual costs that regulators deem prudent. Formula rates are widely used by the FERC in power transmission regulation.

Greenhouse Gas ("GHG"): A gas that contributes to atmospheric warming by absorbing infrared radiation. GHGs include carbon dioxide, methane, nitrous oxide, and ozone.

Lost Revenue Adjustment Mechanism ("LRAM"): A ratemaking mechanism that compensates electric companies for the estimated base revenue that is lost from specific causes such as their demand-side management programs and distributed generation. LRAMs require estimates of load impacts.

Marketing/Pricing Flexibility: Flexibility afforded to electric companies to fashion rates and other terms of service in certain markets. Light-handed regulation of rates and services with certain attributes is commonly used to provide flexibility. Services that have been deemed eligible for flexibility include optional tariffs for standard services, optional value-added (aka discretionary) services, and services to competitive markets.

Glossary of Terms (cont'd)

Multi-Year Rate Plan ("MRP"): A common approach to PBR that typically features a multiyear moratorium on general rate reviews, an attrition relief mechanism, and several PIMs.

Off-Ramp Mechanism: An MRP provision that permits the reconsideration or suspension of an MRP under pre-specified conditions (e.g., persistent high or low ROEs).

Ofgem: The Office of Gas and Electricity Markets, the regulator of gas and electric utilities in Great Britain.

Performance-Based Regulation ("PBR"): An approach to ratemaking designed to strengthen electric company performance incentives. Some PBR approaches also streamline ratemaking.

Performance Incentive Mechanism ("PIM"): A mechanism consisting of one or more metrics, targets, and financial incentives (rewards and/or penalties) which is designed to strengthen performance incentives in a targeted area such as reliability or energy efficiency.

Performance Metric System: A system of metrics used to appraise the performance of an electric company in one or more areas (e.g., reliability, environmental performance, and cost). These systems may include metrics without targets, metrics with targets, and PIMs.

Productivity: The ratio of outputs to inputs is a rough measure of operating efficiency which controls for the impact of input prices and operating scale on cost. Studies of productivity trends have been used in many MRP proceedings to set the X factor term of indexed ARM formulas.

Rate Base: In the calculation of the revenue requirement, the rate base is the value of plant on which the electric company earns a pro forma return. It typically reflects the net (depreciated) historical value of plant and an adjustment for accumulated deferred income taxes.

Rate Review: A proceeding to reset an electric company's base revenue requirement to better reflect the cost of service. These proceedings may also consider other issues such as rate designs.

Glossary of Terms (cont'd)

Rate Review Moratorium: A set period of time without general rate reviews.

Rate Rider: A mechanism, frequently outlined on tariff sheets, which allows an electric company to receive rate adjustments between rate cases.

Rate of Return on Equity ("ROE"): The rate of return on the value of equity capital invested. The target ROE is a prominent issue in rate cases.

Revenue Adjustment Mechanism ("RAM"): A common component of revenue decoupling which escalates allowed revenue based on an external driver of cost growth such as customer growth.

Revenue Cap Index: A formula sometimes used for escalating allowed revenue in MRPs which typically includes an inflation index and an X factor.

Revenue Decoupling: A mechanism for relaxing the link between an electric company's revenue and use of its system, which makes periodic rate adjustments to ensure that actual revenue closely tracks allowed revenue between rate reviews. A companion revenue adjustment mechanism typically escalates allowed revenue between rate reviews for a key cost driver such as customer growth.

Revenue Requirement: The annual revenue that the electric company is entitled to collect as compensation for the cost of service. The amount is periodically recalculated in rate reviews to reflect costs and may be escalated by other mechanisms (e.g., cost trackers and ARMs) between rate reviews. The corresponding cost is typically the sum of operation and maintenance expenses, depreciation, taxes, and a return on rate base less other operating revenues.

RIIO: The British approach to PBR. The acronym stands for Revenues = Incentives + Innovation + Outputs. RIIO involves MRPs that include a forecast-based attrition relief mechanism, revenue decoupling, and an extensive set of metrics and PIMs.

Glossary of Terms (cont'd)

Scorecard: A summary of an electric company's performance, using various metrics, which is often reported on a publicly available website.

Test Year: A specific period in which an electric company's costs and billing determinants are considered in a rate review. Some states use a historical test year and adjust billing determinants and costs for known and measurable changes. Other states use a fully forecasted test year that considers other possible changes.

Throughput Incentive: Under traditional regulation, electric companies can increase earnings by increasing sales or billing demand between rate reviews because the marginal cost of incremental system use is typically well below marginal revenue due to usage charges recovering some fixed costs.

Totex: Under RIIO, capital, operation, and maintenance expenditures are combined into one category: "total expenditures," or "totex" when setting the revenue requirement. The company earns a return on a pre-determined portion of totex. This treatment seeks to balance the incentive to spend on capital and O&M inputs.

X-Factor (aka Productivity Factor): A term in an indexed ARM formula which reflects the typical impact of productivity growth on cost growth. The X factor may also incorporate a stretch factor and an adjustment for the inaccuracy of the inflation measure that is used in the ARM formula.

Drawbacks of decoupling in an era of beneficial electrification have boosted prospects for alternative Altreg approaches

Lost Revenue Adjustment Mechanisms

LRAMs compensate utilities for estimated margins they lose due to *their* DSM programs, and possibly also DERs

Requires estimates of load losses

Tends to focus on programs where impacts easily measured

Utilities

- assume risk of conventional demand fluctuations
- retain rate design freedom

Do MRPs Improve Utility Performance?

PEG studied cost impact of MRP's and extended rate stayouts in 2017 Berkeley Lab paper.[1]

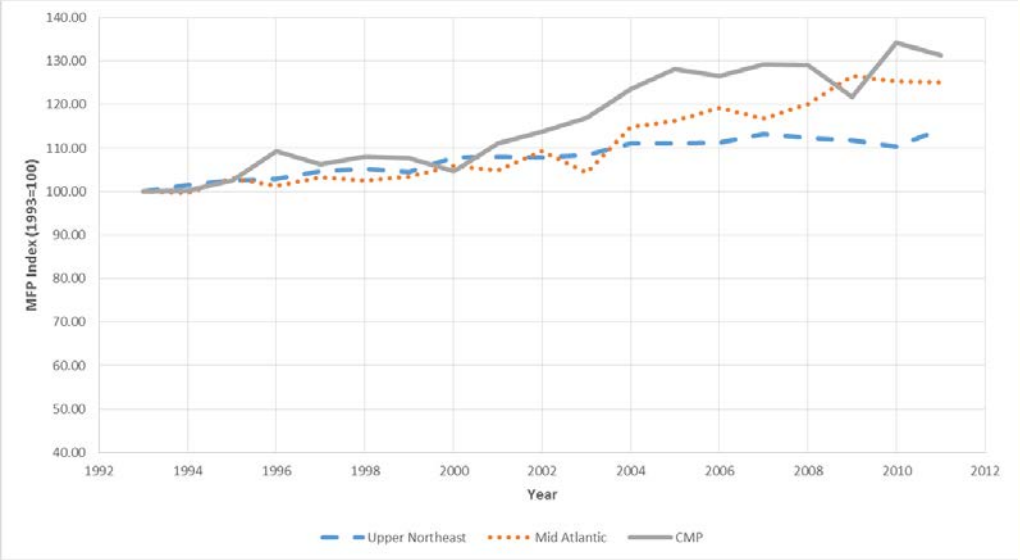
Central Maine Power ("CMP") faced material bypass risk from pulp & paper customers in 1990s.

Ultimately operated under four consecutive MRPs

Power distributor productivity growth of CMP under MRPs far exceeded eastern norms.

Productivity growth of mid-Atlantic distributors was also quite rapid.

Multifactor Productivity ("MFP") Growth Of Central Maine Power and Other Eastern Power Distributors 1994-2011[1]



[1]Mark N. Lowry, Matt Makos, and Jeff Deason, "State Performance-Based Regulation Using Multiyear Rate Plans for U.S. Electric Utilities, Ed. L. Schwartz, 2017. Available at: https://eta-publications.lbl.gov/sites/default/files/multiyear_rate_plan_gmlc_1.4.29_final_report071217.pdf

Suggestions for Further Reading

Green Mountain Power: Multi-Year Regulation Plan 2023-2026, October 1, 2022. https://greenmountainpower.com/wp-content/uploads/2022/09/Multi-Year-Regulation-Plan.pdf

Lazar, Jim, Frederick Weston, and Wayne Shirley (2011). "Revenue Regulation and Decoupling: A Guide to Theory and Application," https://www.raponline.org/knowledge-center/revenue-regulation-and-decoupling-a-guide-to-theory-and-application/

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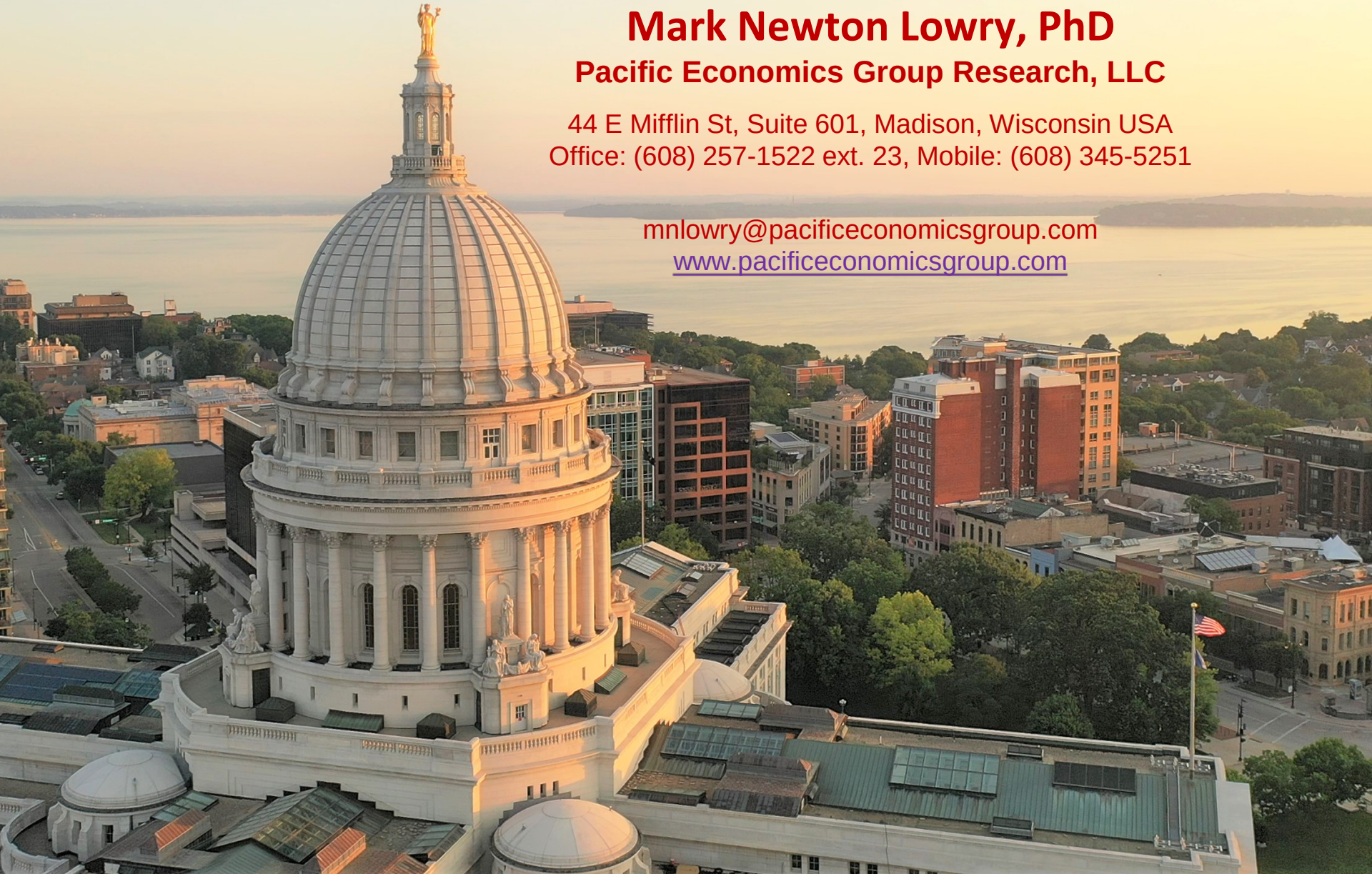

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