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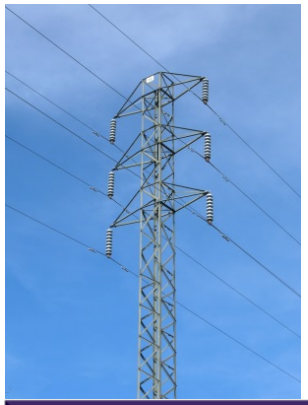


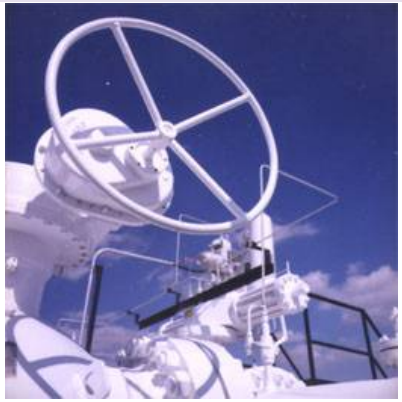

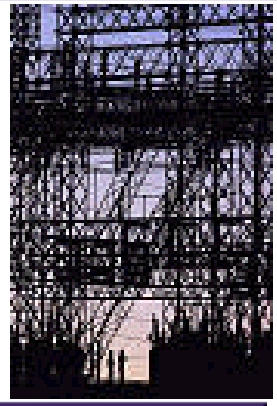

Incentives, Risk and the Changing Nature of Utility Regulation

NARUC Staff Subcommittee on Accounting and Finance Meetings, New Orleans, Louisiana

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Take-Aways

Interesting time for the consideration of alternative gas/electric regulation given **other policy agendas**.

Regulatory lag is not "bad" -- Primary incentive mechanism included in regulation that should **increase utility efficiency incentives** in a manner **similar to competitive markets** (efficiency leads to increased profitability).

(Most) trackers are the antithesis to PBR since they are not tied to performance, are periodic, and cost-plus based.

Do utilities want PBR and rewards for efficiency or do they want insulate themselves from cost-recovery risk? Utilities in today's environment **may not be supportive of performance based approaches** since it requires them to bear performance risk of their investments.

Alternative regulation is a **modification** of, not a **substitute** for, traditional regulation

A good alternative regulation program ensures that the **risks and rewards** between ratepayers and utilities are **balanced**.

Traditional Regulation

Why Are Utilities Regulated?

Utilities are regulated for two reasons:

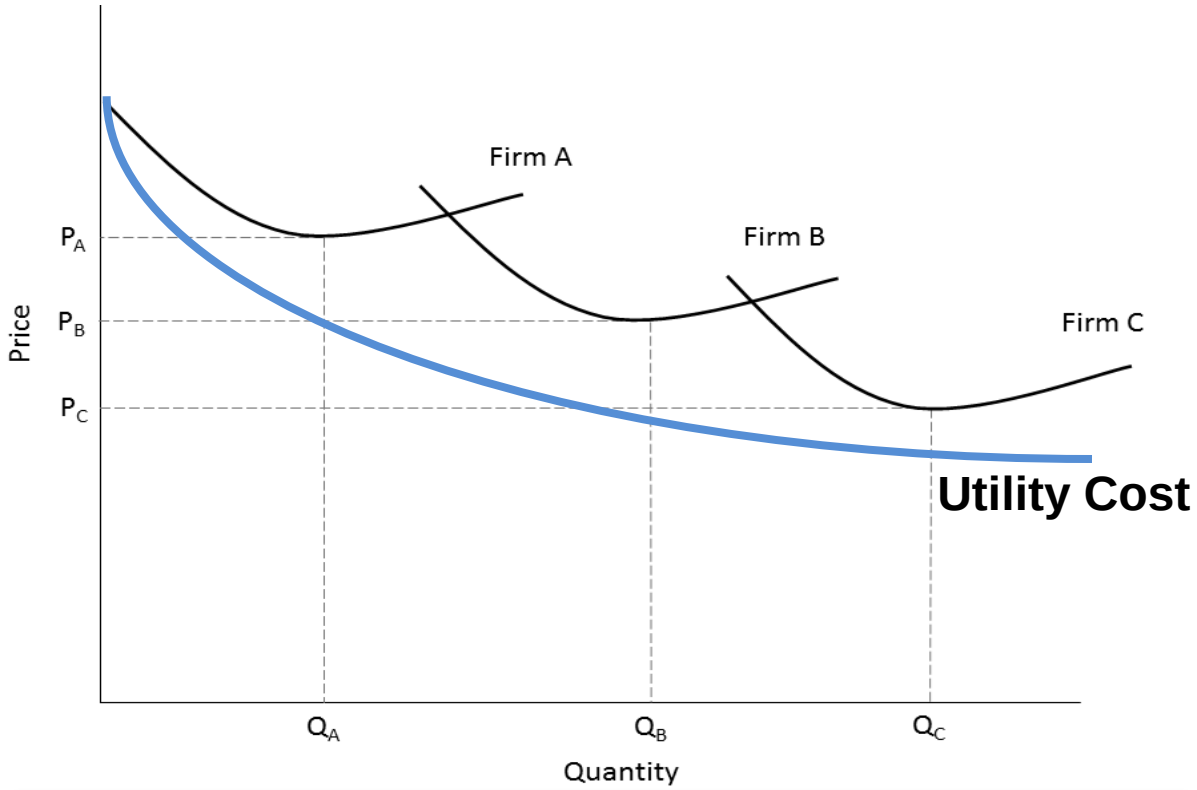
1. Utilities are **imbued with the public interest**: utilities provide critical services (electricity, natural gas) that are essential for a modern economy; and

2. Utilities are "**natural monopolies**." Utilities have (natural) cost characteristics that allow them to drive competitors out of the market and then price their services at rates higher than competitive markets.

These two conditions serve as the basis for utility regulation.

Utility Natural Monopoly Conditions

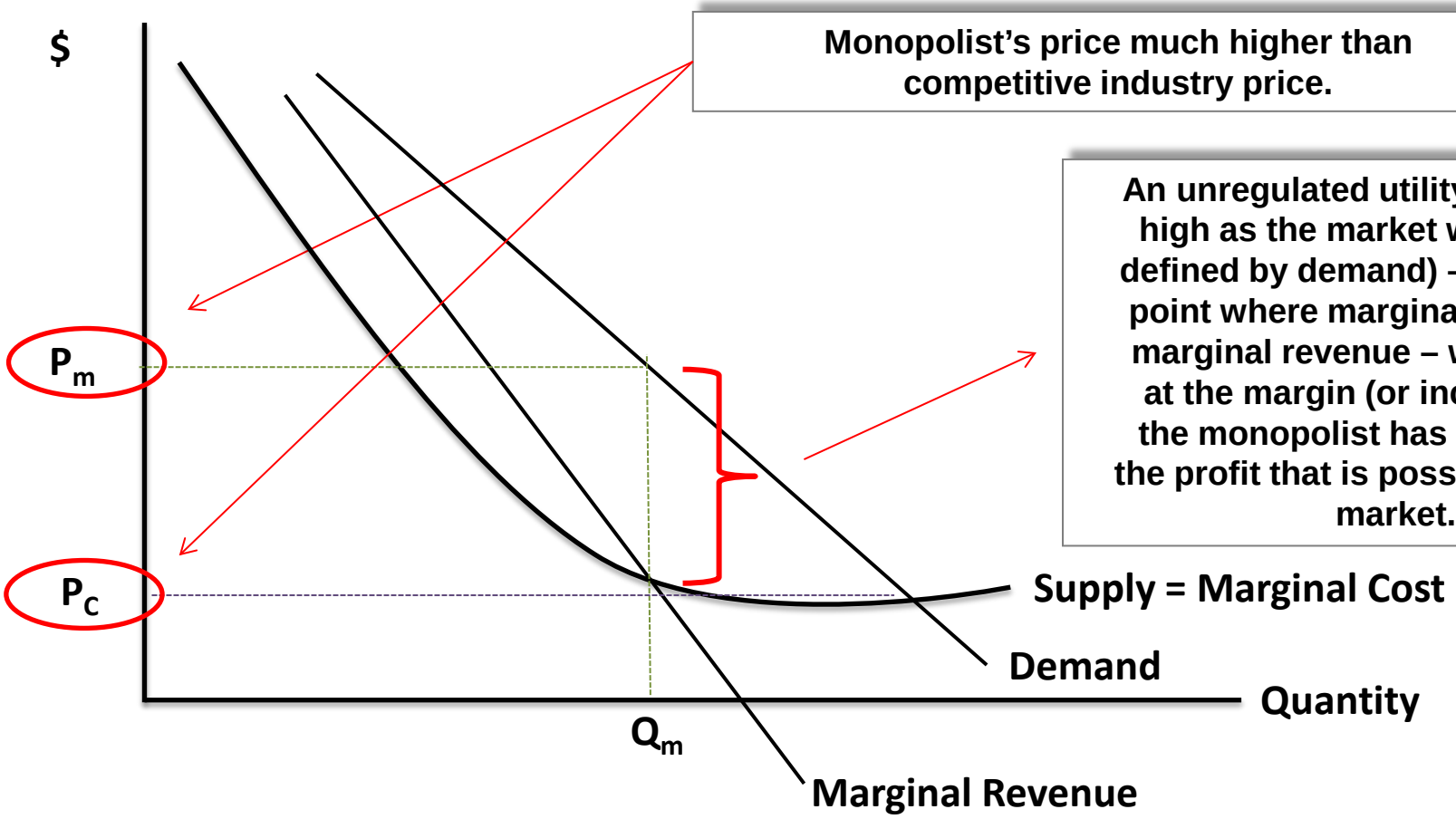
- Natural monopolies have large "economies of scale" which means that a utility's average costs tend to decrease as output expands.
- This cost advantage allows utilities to squeeze out potential higher-cost competitors.
- This cost advantage also means that the most efficient outcome for society is to let one, low-cost firm serve the entire market.



The problem with only allowing one firm to serve the market is that the single firm becomes a monopolist that has the ability to charge unnecessarily high prices and limit how much it produces.

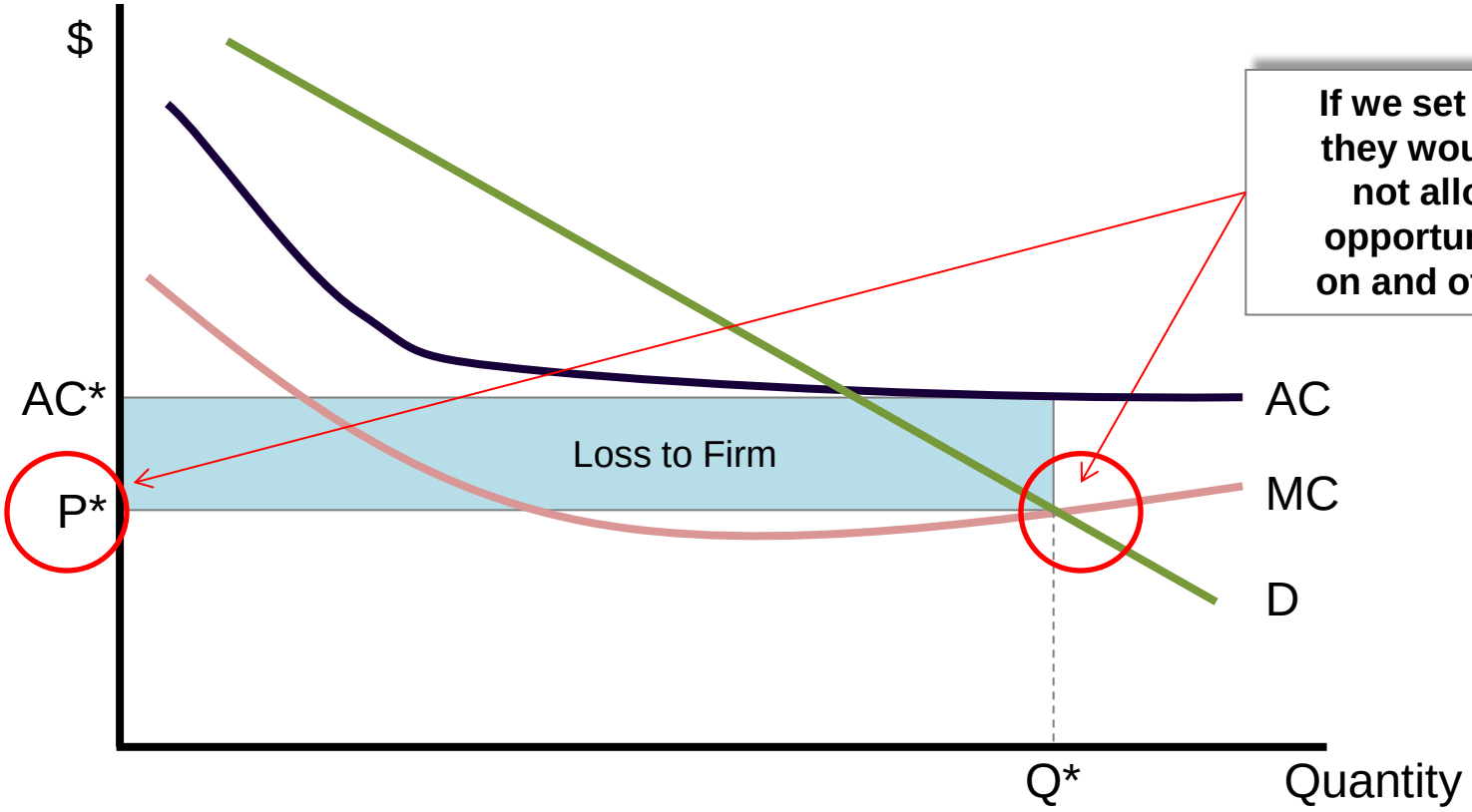
What Would Happen if We Didn't Regulate?

If we did not regulate utilities, they could price far higher than what would normally occur in a competitive market.



The Natural Monopoly Problem: Setting Prices at Optimal Levels

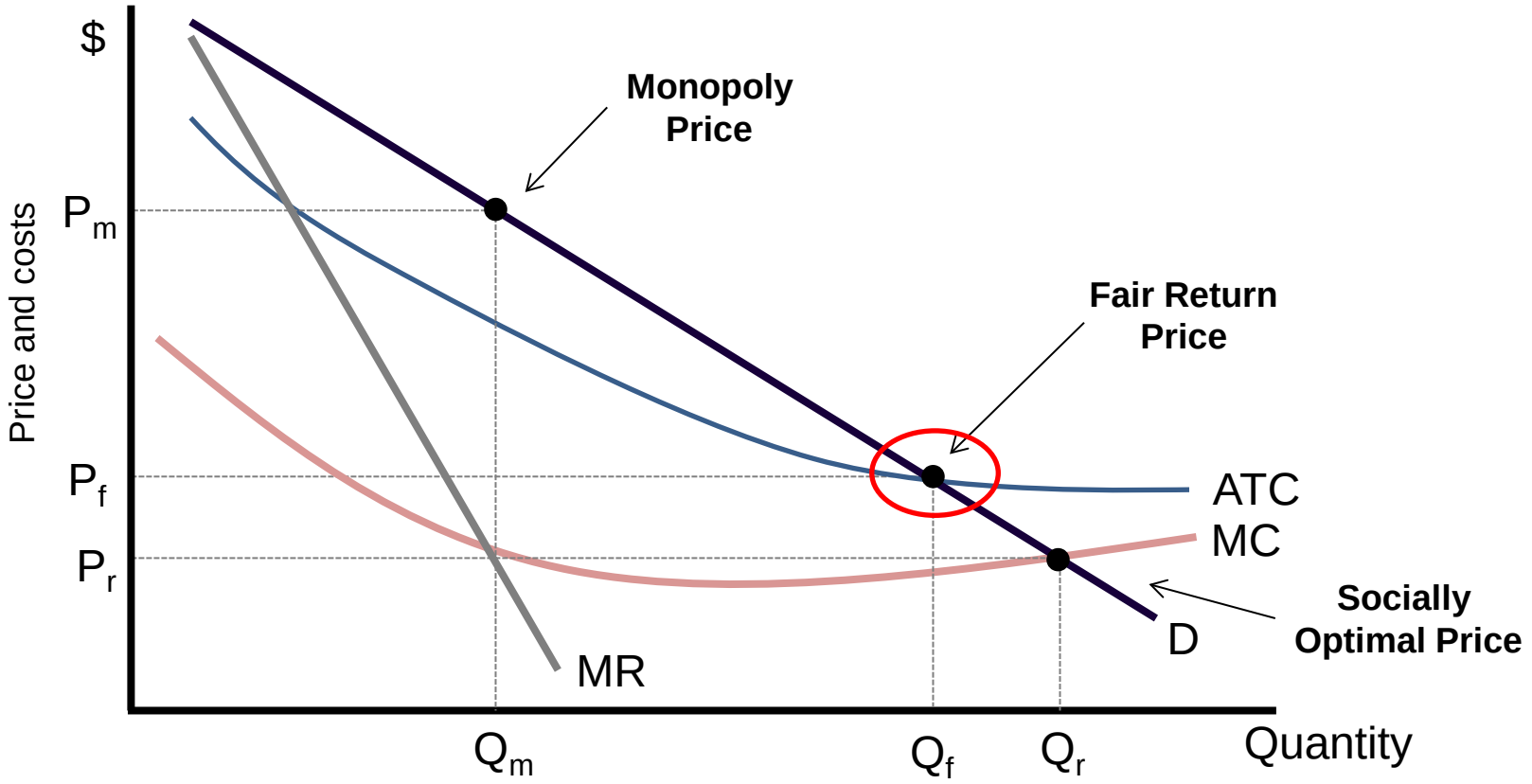
If competitive industries set prices at marginal costs, why don't we force utilities to simply price their services at marginal costs? Primarily, because they have a large amount of shorter run fixed costs that have to get recovered. If we priced at marginal costs, utilities would go bankrupt.



If we set prices to MC then they would be too low and not allow the utility the opportunity to earn return on and of their investment.

Comparison of Various Monopoly/Regulated Pricing Outcomes

Regulators, therefore, have to choose prices that reflect some middle ground that give utilities a "fair-return" for their investments. This results in prices lower than what would occur under an unregulated monopoly, but higher than those arising in competitive markets.



The Relationship Between Regulation and Competition

Traditional regulation limits the degree, nature, and **timing** of price changes **much like competitive markets**.

For instance, **competitive firms** cannot increase market prices, and if they increase their own prices unilaterally, without any industry-wide cost justification (like input cost inflation), they will likely **lose market share and profits**.

In addition, **competitive firms** that **invest in innovative technologies** that reduce costs and/or efficiently expand their abilities to increase the scope of their services, **can increase market share and profitability**.

Traditional regulation can facilitate similar competitive market outcomes through the **timing** of rate changes (rate cases) and what is known as "**regulatory lag**."

Incentives & Regulatory Lag

Regulatory Lag and a Form of Market Discipline

Regulatory lag is the period of time between when a utility's rates go into effect and its next rate case and is an important means by which **traditional regulation** is thought to **inject discipline upon utilities similar to that arising in competitive markets**.

Under traditional regulation, **rates are set on a utility's prudently-incurred costs**:

- If a **utility improves its operating/investment efficiencies** after a rate case, then **the increased profits** associated with these actions accrue to the utility much like they would in a **competitive market.**
- The **inverse occurs if a utility becomes less efficient** or is unable to contain its costs after a rate case: profits will fall much like they would in a competitive market.

Control of Regulatory Lag and Risk Relationships Under Traditional Regulation

Timing of rate case rests with utility – gives utility the ability to **shift the risk of regulation and regulatory lag away from itself** and onto ratepayers.

Utility has "option value" creating a price floor to buttress value.

This price floor **allows shareholders to retain benefits** created by regulatory lag, as well as **the option to defend against challenges to those benefits through the timing of a rate case**.

Often noted that **utility commissions tend to defend against rate increases, but are less aggressive in pursuing rate decreases** when rates are stable or decreasing in real terms.

Source: Graeme Guthrie. (2006) "Regulating Infrastructure: The Impact on Risk and Investment." *Journal of Economic Literature*. 44 (December):925-972. Paul L. Joskow. (1973) "Pricing Decisions of Regulated Firms: A Behavioral Approach." *The Bell Journal of Economics and Management Science*. 4 (Spring):118-140.

Is Regulatory Lag Inherently "Unfair" or "Confiscatory"?

The premise that regulatory lag is somehow **unfair** is simply **antithetical to 40 years of utility regulation research and practice**.

Regulatory lag is **long recognized as imposing discipline** on utility operational and investment decisions.

Regulatory lag **prevents utility regulation from devolving into a "cost-plus" regulatory approach** that simply passes through costs on a dollar for dollar basis to ratepayers, and can lead to cost and investment inefficiencies.

The **cost-plus regulatory approach also shifts a considerable amount of performance-related risk away from utilities and onto ratepayers** and leads to inefficient outcomes, which was recognized as early as the 1960s and has come to be known as the **"Averch-Johnson" or "A-J" effect**.

What is the Averch-Johnson Effect?

Harvey Averch and Leland Johnson and published in the *American Economic Review* in **1962**, posited that rate of return regulation creates **an incentive for regulated utilities to overcapitalize**, resulting in an **inefficient utilization of resources** and higher than optimal rates.

This finding, however, was **premised upon a model with a number of assumptions**, one of which presumed there was no regulatory lag and that rates were set on a period-to-period basis: in other words, rates were set on a "cost-plus" regulatory approach.

Source: H. Averch and L. Johnson. (1962) "Behavior of the Firm under Regulatory Constraint." *American Economic Review*. 52:1052-1069.

Follow-Up A-J Research

Soon after its publication, Averch's and Johnson's article was met with a **flurry of scholarly research** attempting to **empirically verify** the A-J effect, as well as examining the conditions under which the effect would, and would not, be sustained.

Rejoinders to the research noted that two characteristics of the regulatory process tended to temper the likelihood and prevalence of the A-J effect:

1. the possibility of **disallowances** through the prudence review process and
2. the **positive efficiency incentives created by regulatory lag**. In fact, a series of articles published soon afterwards noted that regulatory lag typically creates incentives for utilities to seek efficiency opportunities between rate cases since the gains (profits) from those investments inure to shareholders instead of ratepayers.

Summary: Arguments Supporting Regulatory Lag ("Good Thing")

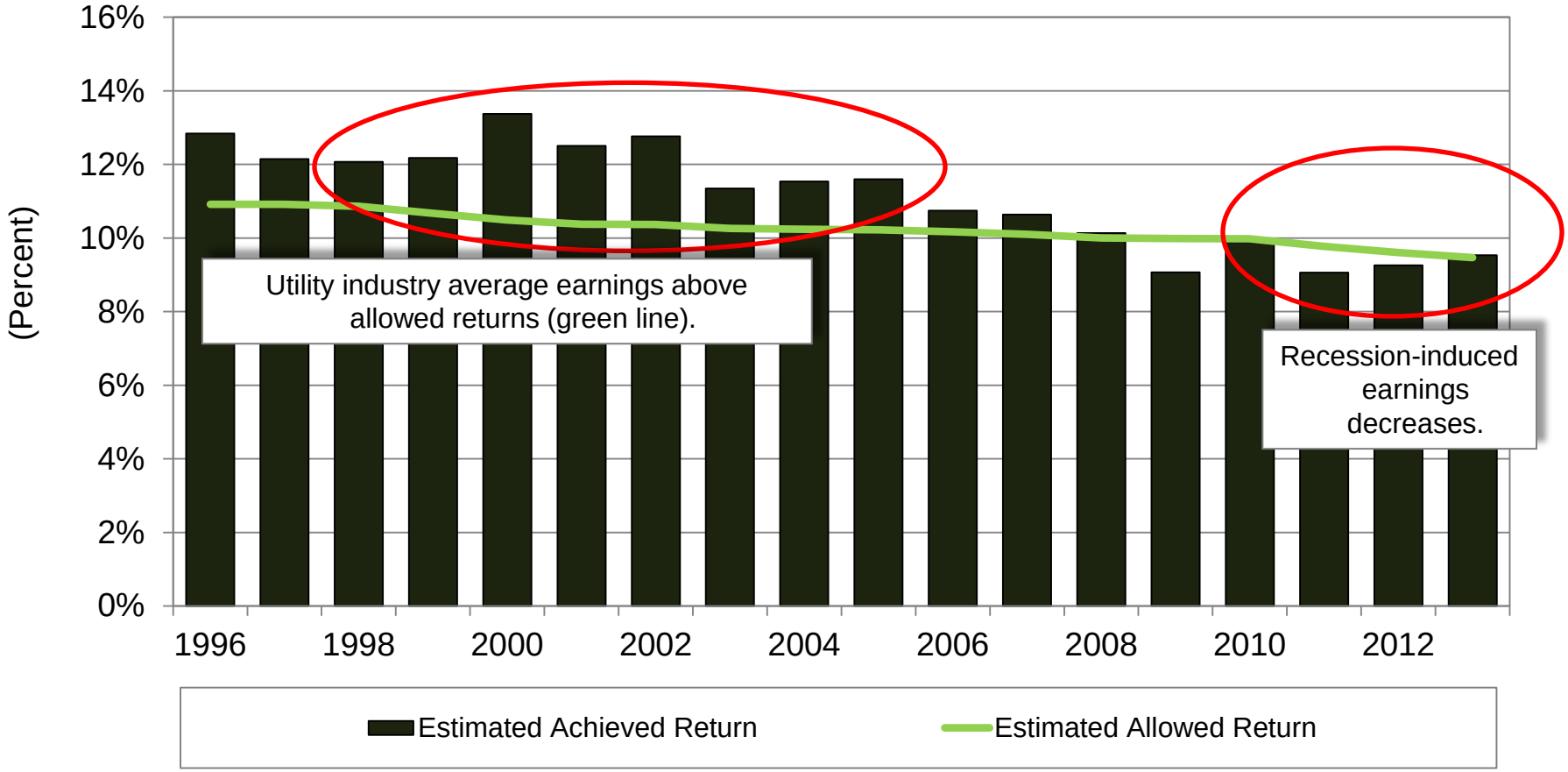
- May impose **discipline** on utility operational and investment decisions: encourages efficiency.
- Prevents utility regulation from devolving into a **"cost-plus" regulatory approach**.
- **Reduces incentives to avoid overcapitalization**, since earnings gained by avoiding inefficient actions are passed directly to shareholders.

Summary: Arguments Against Regulatory Lag ("Bad Thing")

- Utilities view regulatory lag as a problem because **rates do not keep up with rising costs**.
- Hinders **infrastructure development,** capital expenditures and investment in **"non-revenue generating"** system improvements (i.e., safety, reliability, resiliency).
- Theory of regulatory lag is **"time-dated"** – it may have held merit in a **high growth/high productivity environment** but holds less merit today with low energy demand growth and infrastructure replacement challenges.

Historic Utility Earnings Compared to Estimated Allowed ROE for Industry Overall

Historically, electric utilities (on an industry average), have seen periods where they have clearly benefited from regulatory lag. The 2009-2010 recession, however, challenged achieved utility earnings relative to those allowed by regulators.



Note: Estimated achieved return is calculated as Net Income divided by Proprietary Stock (less preferred stock).
Source: Federal Energy Regulatory Commission; and Public Utilities Fortnightly.

Regulatory Lag and Risk

Thus, regulatory lag is only “bad” for inefficient utilities. Some utilities have found **regulatory lag beneficial** and have not filed a traditional rate case for time periods that span anywhere from 7 to 15 years.

Regulatory lag, however, can **increase utility earnings risk** since future market conditions, weather, and the opportunities for innovation are not known with 100 percent certainty: but this is also true for many other energy industries, particularly those **operating in competitive markets**.

Further, **utilities get a fair (i.e., market-based) rate of return** to compensate for operating in markets with these types of rates.

Thus, utilities are compensated in two ways for this risk: (1) they are given an allowed rate of return that **factors in these market risks** and conditions and (2) have the opportunity to achieve **some degree of additional earnings through regulatory lag** (assuming they manage that lag successfully).

Forms of Alternative Regulation & Components

Recently proposed methods for addressing regulatory lag:

- Trackers
- Alternative or Performance-Based Regulation

Trackers: Modification to Traditional Regulation

Definition of Tracker Mechanisms

- Mechanisms that **remove cost and/or revenue recovery from base rates** to a separate rider or tariff.
- Can be for the collection of **new** costs not included in base rates or **true-ups** of revenues or expense items from levels that differ from the test year.
- Recovery typically periodic and **more fre**quent than rate cases.
- While mechanisms can include surcharges and credits they **should not be automatically considered "symmetrical."**
- Mechanisms **originally developed with fuel-cost recovery**, but have expanded to a variety of other sales, capital and expense-related changes.

Tracker Mechanism Examples

Tracker Mechanism	Recovery Type	Purpose
Asset Replacement Riders	Capital	Replace aging or inferior assets.
Inflation Riders	Expense	Inflate costs to match general inflation or other measure.
Asset Development Riders	Capital	Facilitate preferenced assets like baseload generation, smart meters.
Energy Efficiency Riders	Expense	Recover energy efficiency expenses as incurred.
Renewable Energy Riders	Capital	Recovery renewable energy development costs, rebates, and/or PPAs.
Environmental Cost Riders	Capital/Expense	Recovery of capital investment or air emission credits.
Weather Normalization Clauses	Revenue	Recovery of changes in sales due to weather.
Revenue Decoupling	Revenue	Recovery of changes in sales due to other factors.

Commonly Cited Rationales for Trackers

Rationale	Driver
Volatile and unknown cost changes.	Recent increases in commodity costs and inflation.
Remove disincentives to purse public policy goals.	Energy efficiency, renewables, fuel diversity.
Required by “Wall Street.”	Capital crisis/recession.
Required to ensure recovery of revenue requirement.	Changes in UPC, climate change, other “exogenous factors.”
Reduce rate cases.	Increase in recent number of rate cases.

Risk Shifting

Risk Type	Risk Shifting Perceptions	Potential Consequence
Regulatory Risk	Ratepayers have higher burden to prove investments are imprudent rather than utilities proving that they are prudent.	Takes away, or significantly reduces the power of a regulatory disallowance that is long recognized as a powerful regulatory tool in minimizing cost and expense inefficiencies and offsetting potential “A-J” or “X-inefficient” outcomes.
Performance Risk	Ratepayers have higher burden to prove that tracker objectives were not met on sometimes illusive (qualitative) cost and investment decisions.	Effectively paying for a service before it has been rendered.
Sales Risk	Ratepayers will make utilities whole for any change in sales regardless of reason (economy, price, weather).	Decoupling revenues from sales is likely to lead to a decoupling of costs from revenues in a regulated cost-based industry.

Overview of Alternative Regulation

Consideration of Alternative Regulation

The purpose of alternative regulation was to improve utility performance through the **use of incentives**.

Moral hazard notes that often, the informational asymmetry between regulators and regulated companies, **prevents traditional regulation from forcing the most optimal outcome**.

While optimal costs are difficult to observe, profits are not.

Regulated firms are profit maximizing: thus, tying regulatory outcomes to observable **output-based information** (profits) was seen as preferable to unobservable input-based information (costs).

Movement to alternative regulation presumes that these **unobservable efficiency opportunities** actually **exist** and the **benefits** of changing regulation are **greater than the costs**.

How Do Regulators Affect this Change?

Starts with a certain policy leap of faith: regulators have to be willing to allow **prices (or revenues)** become **"decoupled"** with **traditional (utility-specific) measures of costs**.

Alternative forms of regulation inherent recognize that there are (a) **information asymmetries** and (b) there may be certain **risks for utilities** in pushing themselves to achieve certain efficiency improvements.

Alternative regulation moves the traditional regulatory process **away from governing inputs to defining acceptable outputs**.

The process is not unbridled since regulators often build in a hedge that **sets boundaries** on the program (so, this should not be interpreted as "deregulation").

What is Alternative Regulation?

Alternative regulation is a means of regulating utilities that relies **less on a traditional rate case** structure and more on an **annual formulaic-based approach** of setting rates.

Alternative regulation **modifies traditional regulation**: it does not replace traditional regulation. Alternative regulation focuses more on **output and performance** rather than inputs (measuring the cost of service in any given year).

Rationales for the use of alternative regulation:

- "Institutionalize" regulatory lag.
- Reduce asymmetric information problems.
- Reduce administrative costs.

How Does Alternative Regulation "Institutionalize" Regulatory Lag?

Regulatory lag gives **efficient utilities** the opportunity to increase their achieved earnings after a rate case.

These efficiency-induced excess earnings, however, are limited. In theory, under traditional regulation, a regulator can force a utility to **decrease its rates if it finds earnings to be "excessive**." The ambiguity in what constitutes excessive earnings can discourage utilities from pursuing additional efficiency measures.

Alternative regulation attempts to release this excess earnings boundary (and ambiguity) through the use of **pre-defined sharing bands** and percentages with ratepayers. Future changes in rates, under an alternative regulation plan, are **defined by utility performance and its ability to maximize the efficiency opportunities created by regulatory lag**.

In this way, alternative regulation "institutionalizes" or formally "codifies" regulatory lag. This is another reason why **alternative regulation** is often called **"performance-based regulation**."

Definition: Asymmetric Information

What do we mean by **"asymmetric information?"**

Definition: when one contracting party has a **different set of relevant information** relative to another contracting party it can lead to an inefficient outcome.

Pervasive problem in all forms of regulation (utility, environmental, financial, etc.) that **regulators typically have less information about a regulated company's operations** and costs than the regulated company itself.

Informational asymmetries can result in **"gold-plating"** of capital investments and expenses (i.e. cost-inefficiencies). Since cost-of-service regulation is based upon costs, this can lead to inefficient rates.

Alternative regulation is thought to reduce the regulatory problems of asymmetrical information since (1) the regulatory emphasis shifts from **inputs to outputs** and (2) utilities have active rather than passive **profit-maximization incentives**.

How Does Alternative Regulation Reduce Administrative Costs?

Most alternative regulation methods use a formula or pre-defined approach to setting rates on a periodic basis.

This formula is typically set for a **fixed number of years** which can be anywhere from between 3-5 years.

No rate cases are usually allowed during the alternative regulation program time period. Rate cases are not, however, prohibited.

Rates only change by the formula or guidelines.

Avoiding rate cases is thought to **reduce administrative costs** of repeated rate cases although there are annual reviews of costs by regulatory staff during the alternative regulation program period.

Specific alternative regulation plan structure really determines whether or not administrative costs are actually reduced.

Alternative Regulation: Theory v. Practice

Alternative regulation has several theoretical appeals. However, the biggest challenge in program design is in **appropriately assigning risks and rewards** of the alternative regulation plan.

Conceptually, risks can be borne by either party (ratepayer, utility) provided they are **corresponding opportunities for rewards.**

All to often, **program performance risks are shifted entirely on ratepayers**, with few to little rewards.

Few states have an alternative regulation plan like Vermont. California is the only other state with an active alternative regulation plan comparable to Vermont.

Alternative Regulation – Fixed Price Mechanisms

Fixed Price/Fixed Revenue

Prices or revenues are **fixed for a set period of time** (three to five years – or "stay-out" period) after an initial rate case review.

Utility **allowed to retain** a certain share (or large share) of excess **earnings** that arise from **efficiencies** arising during the "stay-out" period.

Rates are recalibrated and program effectiveness is reviewed at the end of the stay-out period.

Examples include post-merger rate freezes, retail restructuring rate freezes.

Inherent assumption in these (fixed) mechanisms is that there are enough **accumulated inefficiencies** that can be garnered over time that will **self-fund the efficiency improvements**.

Why is Timing/"Stay Out" Period Important?

Commonly set in **three to five year range**, although some are set for much longer periods that can include up to one decade.

Length is often part of the regulatory bargain between utilities and regulators and likely determinant on other program components (like earnings sharing bands).

Determination of **stay-out period itself is one subject to** a certain degree of **moral hazard** since the utility will have a better understanding of its short and long run efficiency improvement opportunities.

Does not eliminate opportunism since utilities often have statutory (constitutional?) provisions allowing them to "break" the contract.

Why is Timing/"Stay Out" Period Important?

Argument for long stay-out periods: longer periods give utilities the opportunity for making **longer-run investments** that will yield **efficiency gains** (and returns) over a period of time. Longer stay out periods help to create opportunity to attain the **full return from the investments**.

Arguments for short stay-out periods: allowing long periods of time can result in a **significant disconnect between rates and costs** without recalibration and can lead to utilities earning the same **monopoly returns** regulation is intended to eliminate.

Alternative Regulation: Variable Price Mechanisms

Price Caps

Designed to limit the ability of utilities to earn more than normal profit, while incentivizing the utility to attempt to reduce input costs and invest in productivity improvements.

Price caps typically take the following form:

$$\Delta PI \leq \Delta P - X \pm Z$$

Where:

ΔPI = the rate of change in the price index of regulated prices
ΔP = a measure of price inflation
X = total factor productivity, or an index of expected efficiency gains
Z = a factor capturing other relevant variables

Primary Components of an Alternative Regulation Plan

Alternative regulation plan should be based upon a structure that balances risk and rewards between ratepayers and utilities. These plans are typically based upon three primary components

Formula for allowed annual rate change → Formulas that defines how annual rate changes will be allowed to occur. This also includes a definition of the costs eligible for annual increases.

Earnings sharing mechanism → This mechanism defines how excess earnings, or under-earnings, will be shared between ratepayers and utilities. This can be thought of as the "profit-sharing" aspect of the plan that occurs after the fact.

Program duration → The program duration defines the time period under which utilities will be subjected to the plan and the time period in which formal rate cases are not allowed.

Alternative Regulation: Framework for Allowed Rate Changes

Alternative regulation plans allow revenues/prices to grow by a pre-defined formula during the program duration.

Traditional formula:

Allowed Revenue (or Price) Increase =

(Change in Inflation) less (Productivity Offset) plus ("Exogenous" Factor)

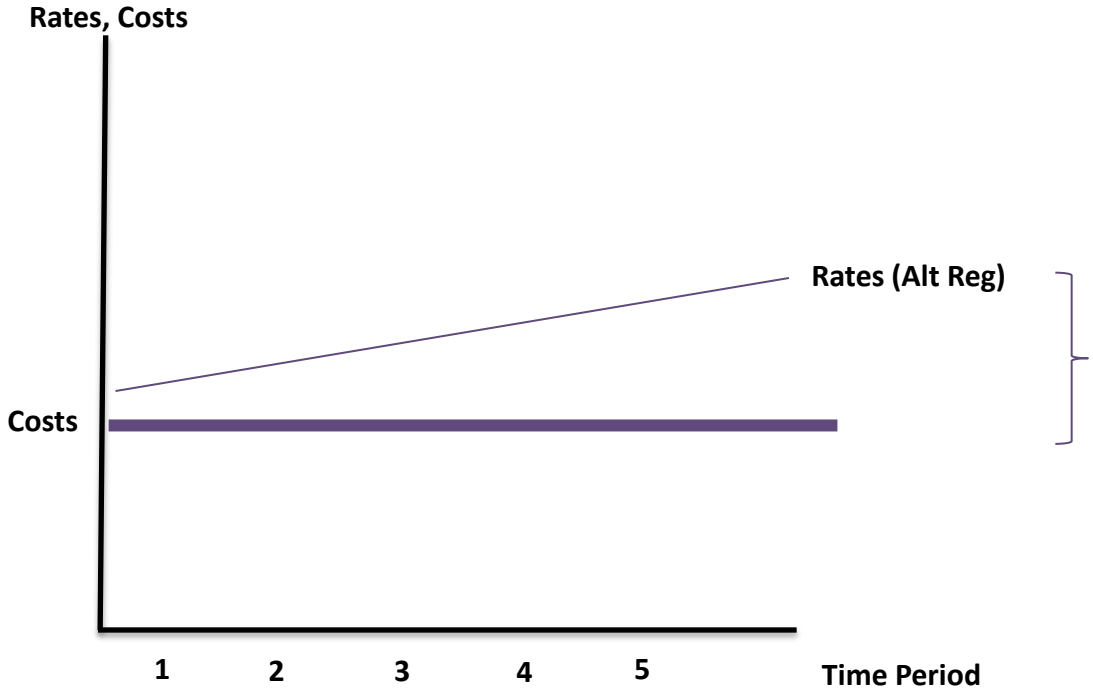
Revenues/prices allowed to increase by the rate of inflation as measured by standard government indices like the CPI.

Revenues/prices are reduced by a fixed measure of industry productivity. This adjustment forces some cost discipline on utility since it reduces the magnitude of the overall inflation adjustment.

Utilities are often allowed to increase revenues/prices for unexpected ("exogenous") changes in costs like unexpected tax changes or costs associated with severe weather events.

Trade-offs: A low productivity offset, and a generous exogenous factor adjustment, will reduce utility risk by providing for a relatively stable, undiscounted increase in rates. High productivity offsets and narrow exogenous adjustment allowances will tend to reduce risks for ratepayers.

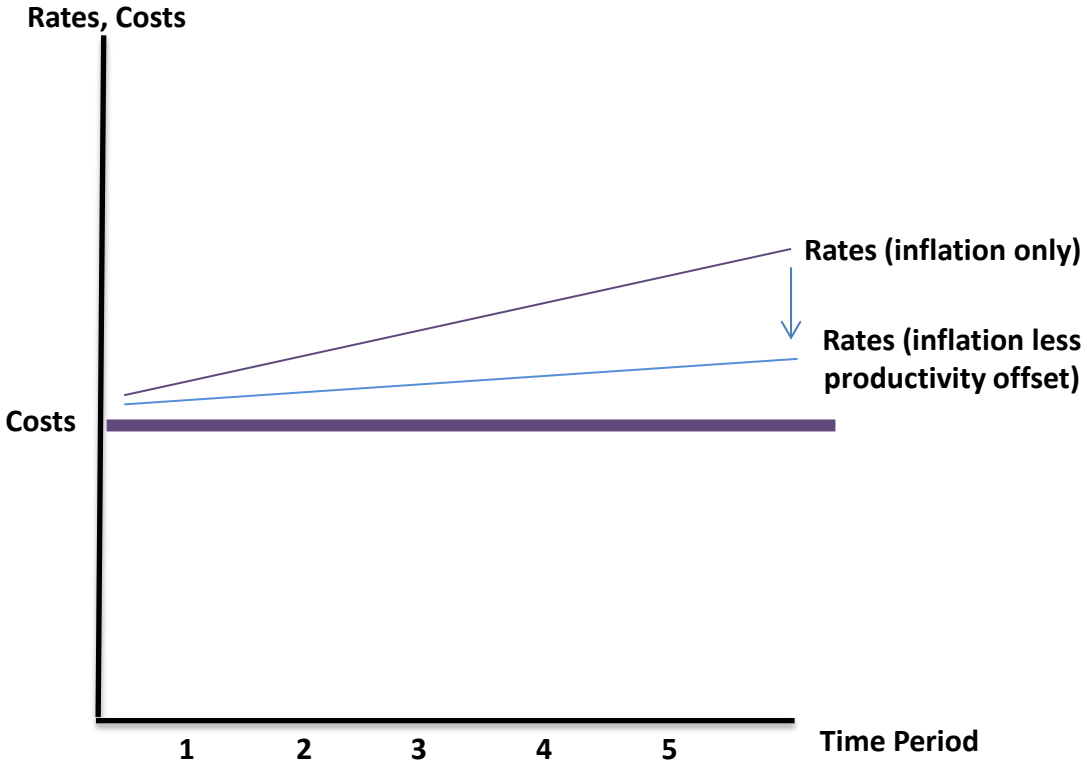
Alternative Regulation: Why Allow Rate Changes Without a Rate Case?



Annual rate changes allowed under alternative regulation is thought to facilitate a utility's ability to continue to invest in its system and to explore cost efficiency opportunities including cost efficiency investments such as automation and equipment upgrades.

The regulatory emphasis on determining the potential cost of service is reduced in favor or monitoring performance outcomes. Utilities are allowed to increase rates and must live within the means allowed by the price change formula. **Alternative regulation was originally developed to facilitate capital investment by allowing rates to change without rate cases**. This approach differs from "trackers" which allow explicit costs to be flowed-through rates on a dollar-for-dollar basis.

Alternative Regulation: Productivity Offsets (Illustration)



Time Period	Inflation Increase (%)	Productivity Offset (%)	Net Allowed Rate Change (%)
1	3.0%	1.0%	2.0%
2	2.8%	1.0%	1.8%
3	4.2%	1.0%	3.2%
4	2.5%	1.0%	1.5%
5	3.0%	1.0%	2.0%

The productivity offset works to adjust allowed inflation increase. The offset is fixed (does not vary like inflation) to account for industry-wide productivity that would normally be passed along to customers if the industry were competitive. **The larger the productivity offset, the smaller the allowed annual rate change** (holding inflation constant).

Alternative Regulation: Exogenous Shocks

Most alternative regulation plans recognize the possibility that **"outside" (exogenous) factors** can influence utility costs like an unexpected change in taxes or the costs of unexpected weather events.

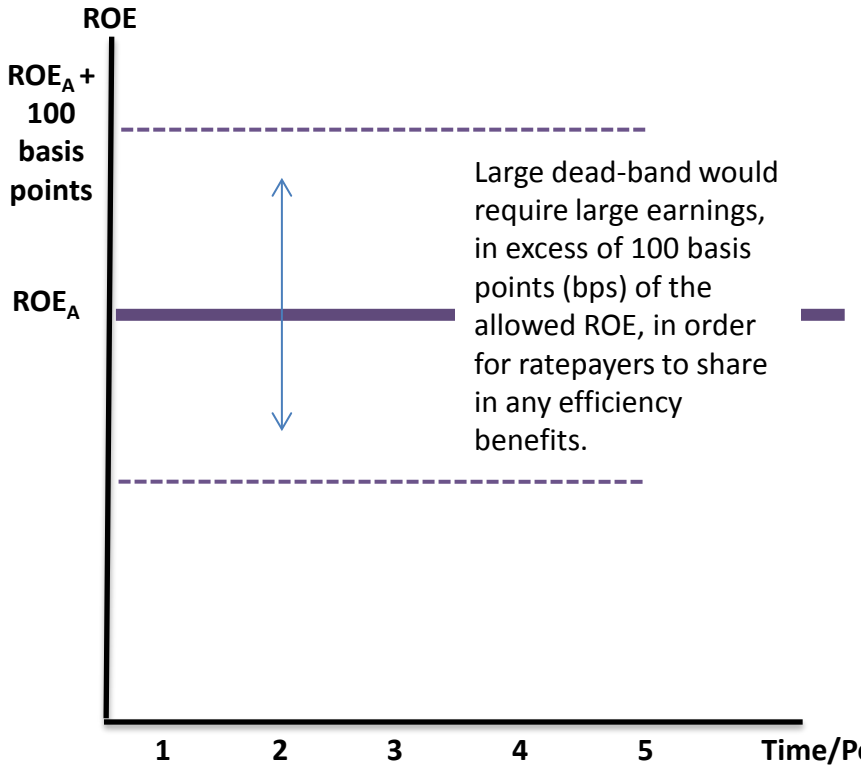
Exogenous adjustments in most alternative regulation plans are designed to address changes in costs that are infrequent in nature and associated with events **outside utility control**.

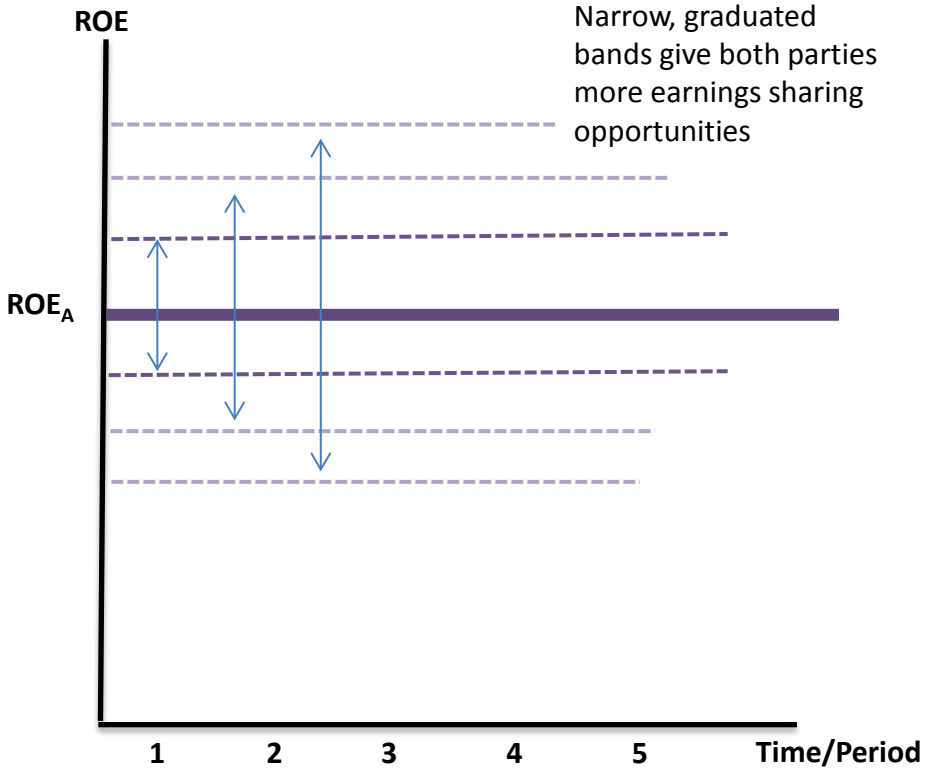
Exogenous adjustments **should not be used** to facilitate cost recovery **for known and measureable costs (like new asset development)** that are entirely within a utility's control or large enough to justify a traditional rate case. **Unfortunately, both Vermont alternative regulation plans allow rates to be increased for exactly these kind of known and controllable costs**.

Passing through large, known costs within a utility's control, and with little active regulatory oversight, **incorporates one of the worst aspects of cost-plus regulation** into alternative regulation.

Alternative Regulation: Risks & Earnings Sharing Mechanisms -- Bands

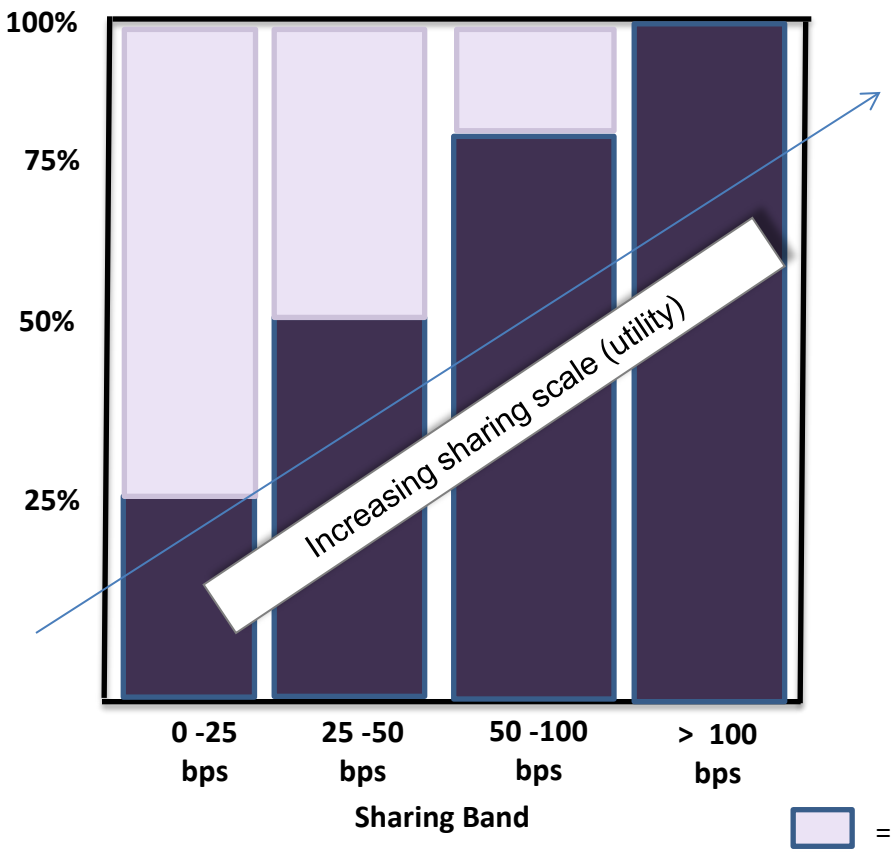
A large number of narrow sharing bands creates more graduated opportunities for sharing. Broad bands reduce those opportunities – increased sharing opportunities will require exceptionally large excess earnings.

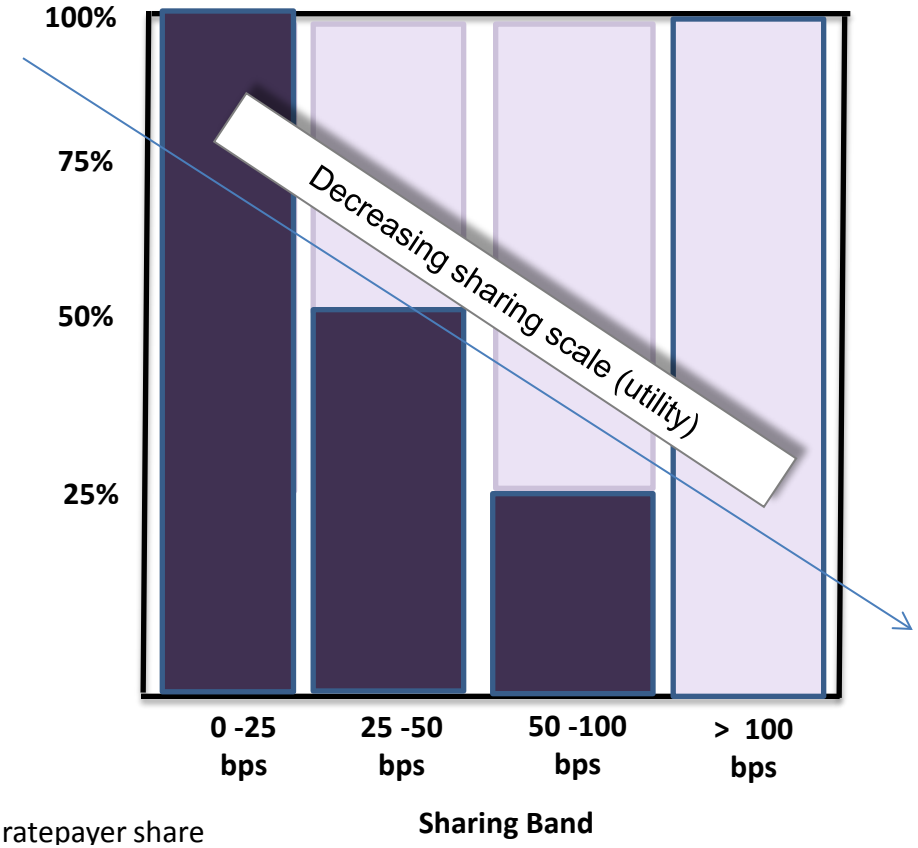




Alternative Regulation: Risks & Earnings Sharing Mechanisms – Sharing Percentages

Increasing sharing percentages require utilities to work harder in order to share in excess earnings whereas a declining sharing percentage scale gives utilities first claim to excess earnings.





= ratepayer share
= utility share

Alternative Regulation: Risks & Program Durations

Alternative regulation plans are commonly set in **three to five year range**, although some are set for much longer periods that can include up to one decade.

Length is often part of the regulatory bargain between utilities and regulators and likely determinant on other program components (like earnings sharing bands).

Longer stay-out periods are thought to give utilities the opportunity for making **longer-run investments** that will yield **efficiency gains** (and returns) over a period of time. Longer stay out periods help to create opportunity to attain the **full return from the investments**.

Shorter stay-out periods, however, can help to reduce any long periods of time unanticipated **disconnects that can arise between rates and costs** without rate recalibration.

Summary of Alternative Regulation Design Characteristics - Risks

Alternative Regulation Plan Component	Risk Characteristics
Formula for Allowed Rate Change	Less risky provision of an alt regulation plan since price changes will occur in any given year and only vary by the degree to which inflation in the economy varies. These rate increases could be used to facilitate efficiency investments that pay dividends (through excess earnings) over time.
Earnings Sharing Mechanism	More risky component of alt regulation plan since earnings outcomes (excess earnings) are entirely dependent upon utility performance. Programs that allow relatively larger initial rate increases should provide some later concessions for those funding the investments (i.e., ratepayers) through inclining sharing blocks.
Program Duration	Moderately risky component of alt regulation plan since it is defined early in the process. Utility does bear risk that the gains of its efficiency efforts could be expropriated by a future rate case if duration is set too short.

Conclusions

Conclusions

Interesting time for the consideration of alternative gas/electric regulation given **other policy agendas** (reliability, resiliency, replacement) and their corresponding ratemaking mechanisms (trackers).

(Most) **trackers are the antithesis to PBR** since they are not tied to performance, are periodic, and cost-plus based.

PBR should be thought of as a substitute, not compliment to tracker-based regulation and may be an **alternative for "tracker-fatigued" commissions.**

While PBR/incentive regulation "decouples" rates and costs, it **"recouples" performance** not found in tracker-based approaches.

Conclusions

Do utilities want PBR and rewards for efficiency or do they want insulate themselves from cost-recovery risk?

Utilities in today's environment **may not be supportive of performance based approaches** since it requires them to bear performance risk of their investments.

Utilities may not preference PBRs since they are **uncertain about the likely performance effectiveness** of these reliability, resiliency, and replacement investments. If this is the case, it raises new set of issues related to cost-recovery, prudence, and performance.

Conclusions

Regulatory lag is not "bad" -- Primary incentive mechanism included in regulation that should **increase utility efficiency incentives** in a manner **similar to competitive markets** (efficiency leads to increased profitability).

Alternative regulation is a **modification** of, not a **substitute** for, traditional regulation by taking a little of the "old" (cost of service ratemaking and regulatory lag) and combining this with a little of the "new" (formulaic increases in rates and fixed regulatory review periods) to **increase the effectiveness** of the regulatory process for both parties (utilities and ratepayers).

Alternative regulation **changes the regulatory emphasis** from focusing on **"inputs"** (i.e., the cost of service) to one that emphasizes **"outputs"** (i.e., efficiency and profitability): this is why **alternative regulation is often referred to as performance-based regulation**, because its underlying goal is encourage efficient **performance**.

A good alternative regulation program ensures that the **risks and rewards** between ratepayers and utilities are **balanced**.

Take-Aways

Interesting time for the consideration of alternative gas/electric regulation given **other policy agendas**.

Regulatory lag is not "bad" -- Primary incentive mechanism included in regulation that should **increase utility efficiency incentives** in a manner **similar to competitive markets** (efficiency leads to increased profitability).

(Most) trackers are the antithesis to PBR since they are not tied to performance, are periodic, and cost-plus based.

Do utilities want PBR and rewards for efficiency or do they want insulate themselves from cost-recovery risk? Utilities in today's environment **may not be supportive of performance based approaches** since it requires them to bear performance risk of their investments.

Alternative regulation is a **modification** of, not a **substitute** for, traditional regulation

A good alternative regulation program ensures that the **risks and rewards** between ratepayers and utilities are **balanced**.

Questions, Comments and Discussion

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