Regulating Utilities for ~~Fun~~ Policy and Profit

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Outline

- Why regulation?
- All regulation is incentive regulation
  - Traditional Cost of Service regulation
- Introducing “performance based regulation”
  - Multi-year rate plans
  - Performance incentive mechanisms
- Advancing policy with performance based regulation
  - Examples

Why do we need to regulate utilities?

- Most utilities are investor-owned utilities, whose aim is to make a profit.

- But these businesses have a **monopoly.** Without oversight, they would charge higher prices and earn "monopoly rents" (higher levels of profit than under a well-functioning competitive market).

- Commissions seek to produce results that are comparable to what a competitive market *would* produce for a successful, long-lived enterprise:
  - An opportunity to recover their costs (including a reasonable return on investment), but no more, and
  - Pursue actions (like building a power plant) that are in the public interest

Traditional Cost of Service Regulation (COSR)

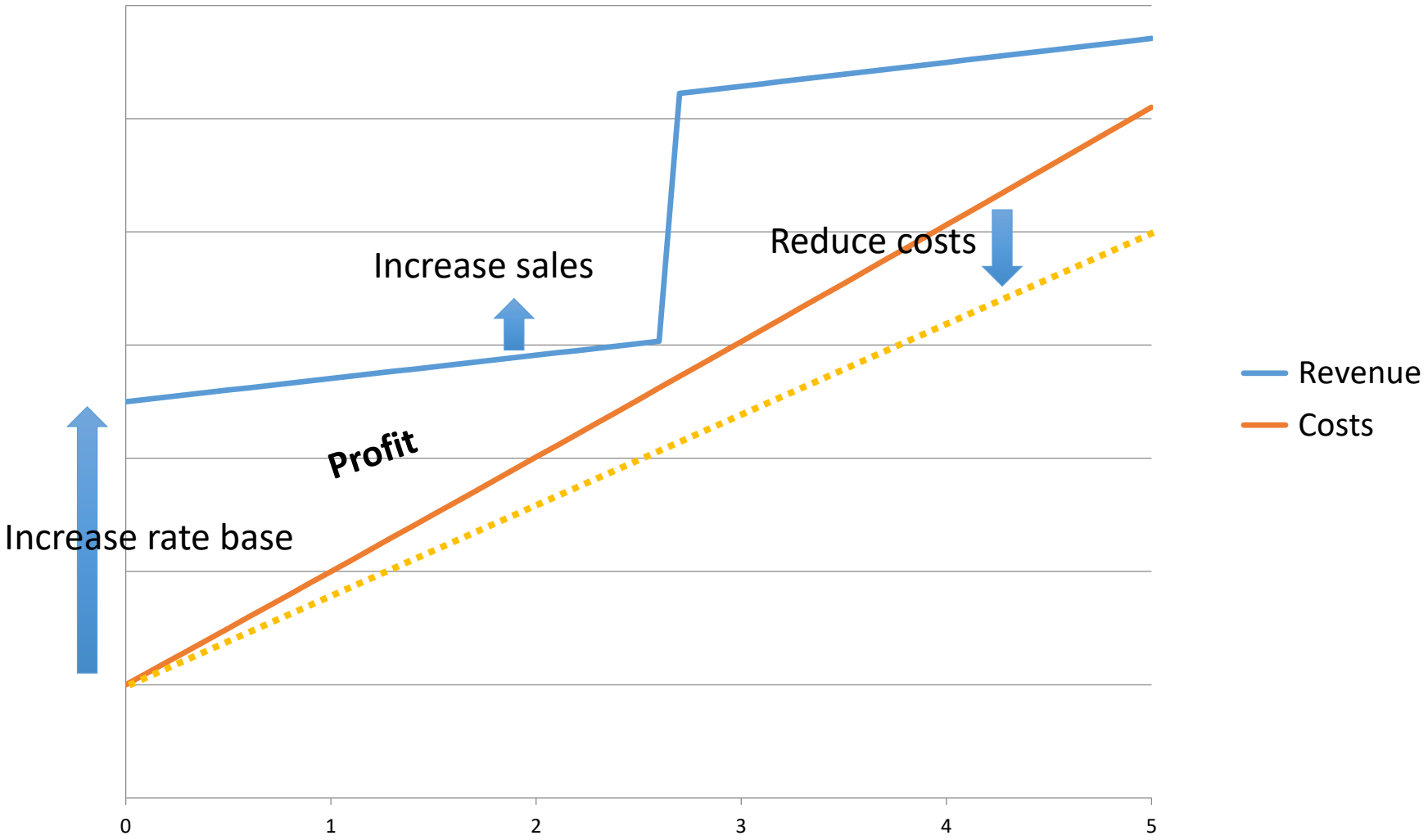
COSR Basics

- Base rates adjusted in rate cases
- Rate cases occur as needed
- Trackers for fuel and power costs

Incentive Problems

- Financial incentive to increase rate base
- Financial incentive to increase sales
- Utilities under COSR have a disincentive to accommodate distributed energy resources (DERs), even when DERs meet customer needs at lower cost.
- Rapid DER penetration, by increasing rate case frequency, can erode utility cost performance just when good performance is most needed to address competition.

Cost of service regulation



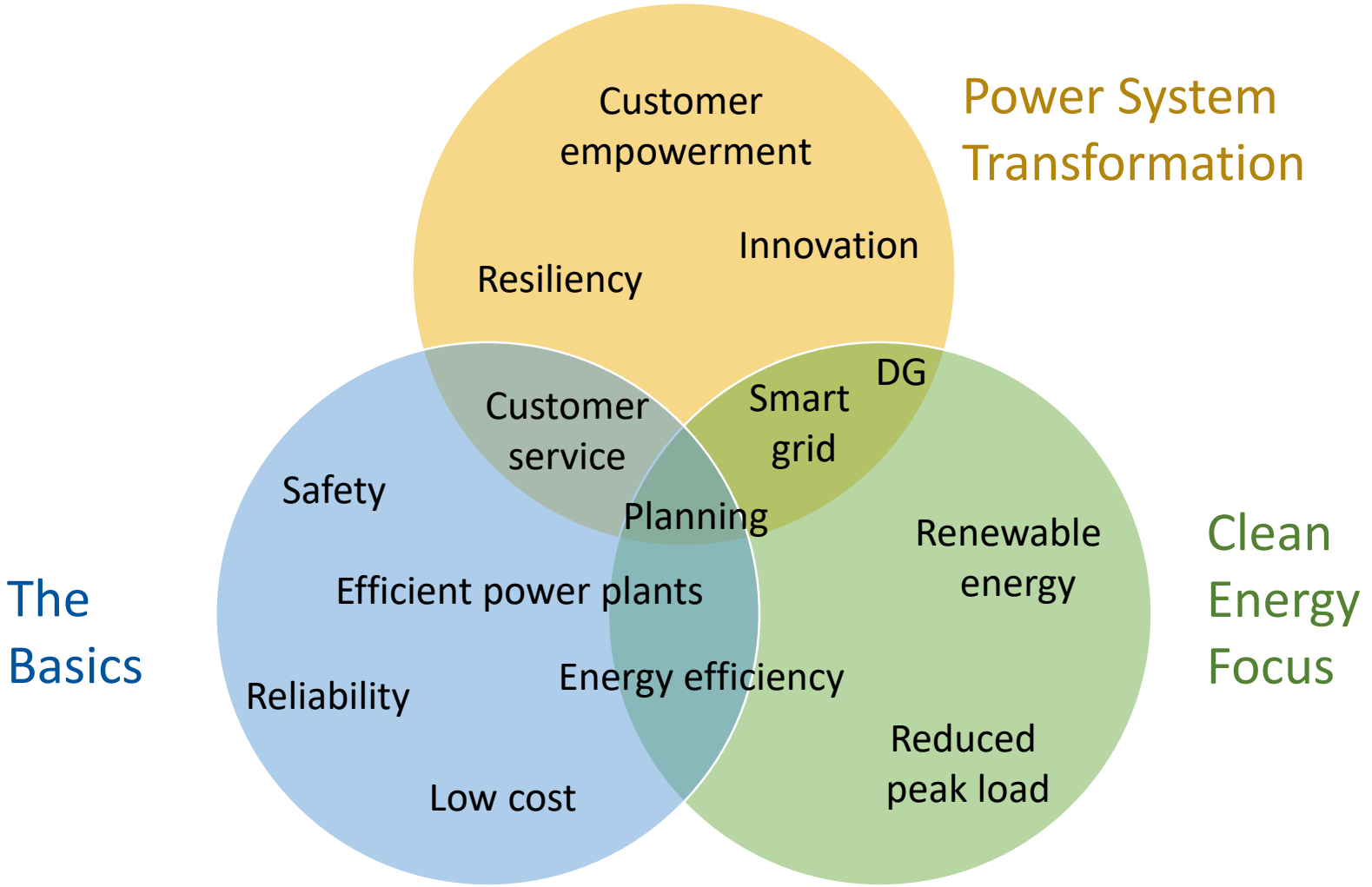
Regulatory Approach

Cost of Service Regulation		Comprehensive Performance-Based Regulation
Regulatory Involvement		
After-the-fact		Before-the-Fact
Reactive		Proactive
Large regulatory input with imprudence		Large regulatory input up-front
Specificity of Regulatory Guidance		
Little regulatory guidance		Specific targets set
Less innovation		Flexibility in methods to achieve outcomes

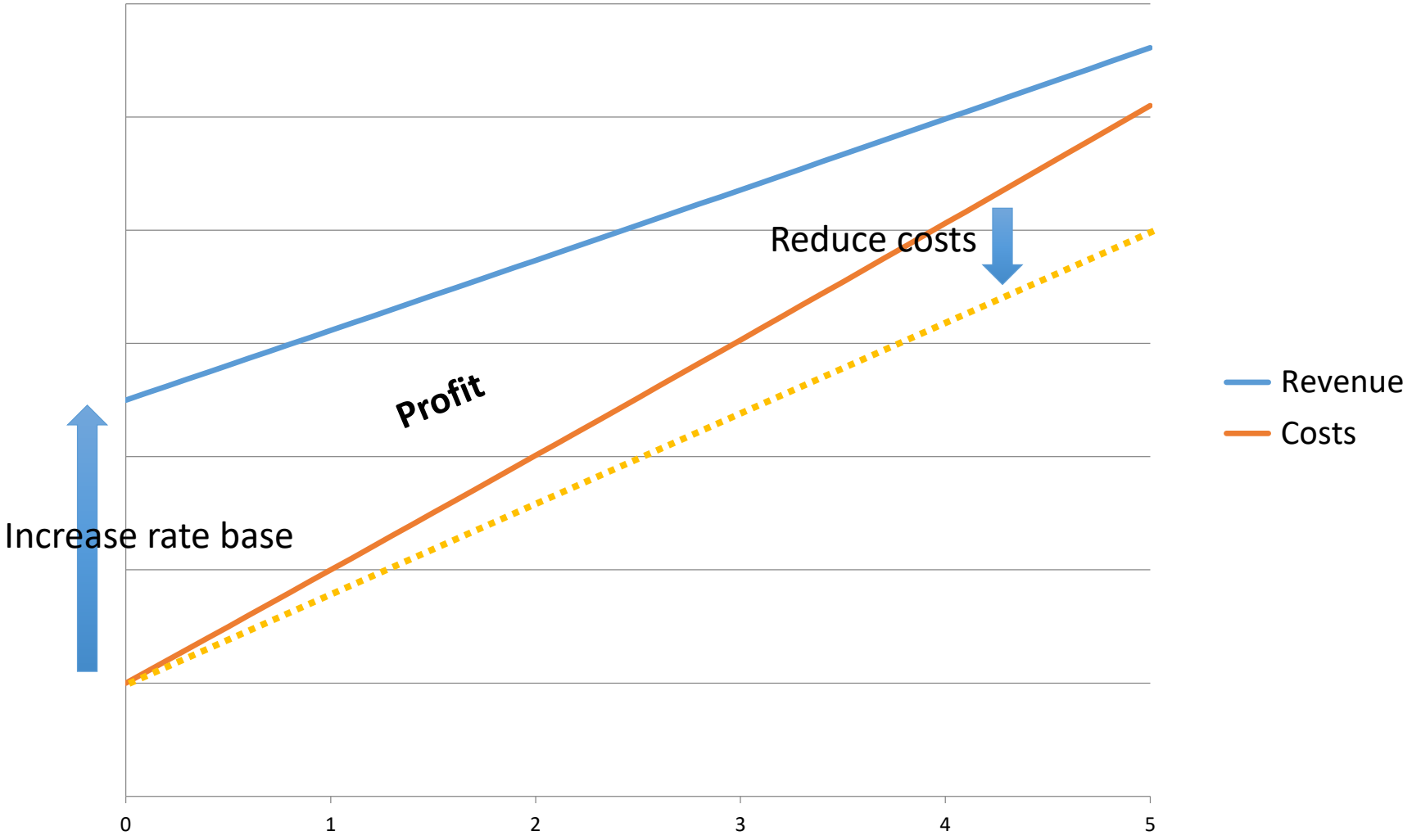
Performance-Based Regulation

- Regulation designed to improve utility performance with stronger incentives
- Two common components of PBR, which are often used together:
  - Multi-year rate plans (MRPs)
    - Provide financial incentive for utility to increase efficiency and reduce utility costs.
    - Rate case moratorium
    - Attrition relief mechanism (ARM) provides automatic relief for increasing cost pressures, but is not linked to a utility's actual costs
    - Optional components include revenue decoupling and cost trackers
  - Performance incentive mechanisms (PIMs)
    - Provide utilities with (a) guidance regarding specific performance goals and (b) financial incentives to meet regulatory targets

What are the state's energy policy goals?

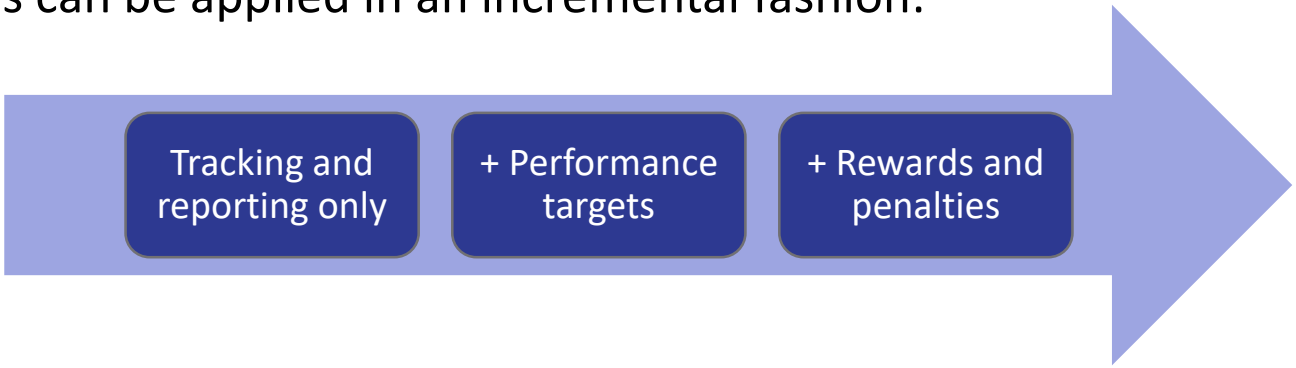


Multi-Year Rate Plans



Why Performance Incentive Mechanisms?

- Current regulation may not provide incentive for utilities to achieve specific goals (e.g., lowest cost, customer satisfaction, innovation).
- If utilities have not been successful at meeting specific goals, then PIMs can be used to articulate those goals and provide the right incentives.
- PIMs can be applied in an incremental fashion:



- PIMs allow for flexibility over time.
- PIMs represent a low-risk regulatory option.
  - Relative to other “performance-based” options.

PIMs – Three Different Types

- Outcome-based
  - Regulators define the desired outcome (e.g., reduce peak demand), but do not specify the specific programs or actions to achieve them.
  - Gives utility the incentive to be creative and innovative.
- Program-based
  - Incentives for a specific program that is overseen by regulators and stakeholders.
  - Example: EE shareholder incentives.
- Action-based
  - Specific utility actions to help lead to a desired outcome.
  - Might not include specific benefits or targets (e.g., MW, MWh, or GHG)
  - Typically used to help facilitate a transformation.

Example of an Program-Based PIM in MA

Policy Goal	**Increased energy efficiency**			
Components	Measurement	Performance Target	Financial Reward or Penalty	
Specifics	Annual reporting of claimed savings Evaluated and verified using established EM&V procedures	$5.9 billion in benefits $3.6 billon in *net* benefits	Reward starts at 75% of target Capped at 125% of target	$100 million pool achieved at target level 1.04 cents per $ of benefits; 1.07 cents per $ of *net* benefits

Proposed Outcome-Based PIM in RI

Policy Goal	**Reduce CO_2 emissions from transportation** Develop EV infrastructure and industry Ensure that benefits flow to a wide range of customers		
Components	Measurement	Performance Target	Financial Reward or Penalty
Specifics	Number of EVs sold/registered Relative to a baseline expectation of market growth	Minimum, Midpoint, and Maximum established for each year	$402/vehicle in 2019, falling to $377/vehicle in 2021

RI PUC did not accept this full proposal. Instead, they took an incremental approach:

1) direct the utility to track the metric, and
2) decide in a future year whether to attach funding to it.

Final Thoughts

- Traditional regulation does not provide incentive for utilities to innovate or to meet energy policy goals.
- Before-the-fact regulation: greater opportunities to guide utility decisions and performance.
- Specific goals? Articulate those goals and provide proper incentives.
- Multi-year rate plans
  - Reduce cost to all of frequent rate cases
  - Target overall utility efficiency as a business (cost control)
- Performance Incentive Mechanisms
  - Useful in support of comprehensive PBR, but can be applied anywhere
  - Can be applied incrementally
  - Recognize the incentives already provided by the underlying regulatory framework
  - Minimum standards where the utility might shirk its duties
  - Focused where utility is primary driver of outcomes

Contact

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About Synapse Energy Economics

- Synapse Energy Economics is a research and consulting firm specializing in energy, economic, and environmental topics. Since its inception in 1996, Synapse has grown to become a leader in providing rigorous analysis of the electric power sector for public interest and governmental clients.
- Staff of 30+ experts
- Located in Cambridge, Massachusetts

Resources

Performance-Based Regulation for a High DER Future

- https://emp.lbl.gov/publications/performance-based-regulation-high

Performance Incentives for Utilities

- http://www.synapse-energy.com/project/performance-incentives-utilities

Earnings Adjustment Mechanisms to Support New York REV Goals: Outcome-Based, Program-Based, and Action-Based Options

- http://www.synapse-energy.com/project/new-york-utility-performance-metrics-and-incentives