



### Celebrating 40 years!

Since its founding, PURC has grown from a small group hosting one meeting to an internationally recognized research center with expanded training and interdisciplinary development programs.



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# *Alternative Regulation for the Electric Industry*

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# What should be regulators' priorities?

1. **Low prices**
2. **Managing political pressures**
3. **High quality service**
4. **High amount of utility investment**
5. **High utility operating efficiency**
6. **Cleaner environment**
7. **Other**



# Standard & Poor's View

- **Another era of**
  - increasing and unstable costs
  - some semblance of traditional utility regulation
- **Therefore, quality of regulation is at the forefront**
- **Concerned with stability, adequacy, politics, cash flow**



# Is electricity regulation broken?

## Unprecedented Confluence

- *Technology change (smart grid, advanced metering, and big data)*
- *Shell gas (impacts competition and coal)*
- *Distributed generation (customer voice)*
- *Cyber security (not well understood)*

## New Models Needed

- *Business (role and strategy)*
- *Regulatory (incentives and adaptability)*
- *Customer (roles and differentiation)*



# Navigant's Five Metatrends

- **Democratization of energy**
- **Changing role of government innovation funding**
- **Converging technologies**
- **Southern African Power Pool becoming new BRIC**
- **Changing role of utilities**



# What Regulation is About

## *What is a public utility?*

- *Monopoly*
- *Enduring monopoly*
- *Necessity*
- *Franchise or equivalent*

## *Why regulate the utility?*

- *Control market power*
- *Apply expertise*
- *Control political power*
- *Interest groups seek economic benefits*
- *Taxation by regulation – Utility as a government credit card*



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# Fit or Misfit?

- How does “What Regulation is About” fit with what you are about?



# Quality of Regulatory Reset

- **Of what made us successful in the past...**
  - What must we hang onto?
  - What must we let go of?
- **A DNA metaphor**





# Regulatory DNA

## Context

- *What aspects of utility service*
  - Still enduring monopoly?
  - Still essentially a necessity
- *What potential for political opportunism?*
- *What interest groups want regulation?*
- *Where is utility still a good credit card?*

## Features

- *Cost recovery*
- *Rate averaging*
- *Expert agency*
- *Independence*
- *Transparency*
- *Due process (quasi-judicial)*
- *Acts on own motion (quasi-legislative)*
- *Dual jurisdiction*



# Regulatory Trends

- **Expanding federal jurisdiction**
- **More control of how business is done**
  - Environment. Security. Industry structure.
- **Instrument of government**
- **Greater political pressure**
- **Alternative cost recovery tools**
- **Less historical context**



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# How can we...

- **Allow cash inflow to better cover cash outflow?**
- **Allow flexibility to try new business and customer models?**
- **Increase, or at least keep, incentives for efficiency?**



# Tools Being Tried

- **Cost trackers**
- **CWIP**
- **Decoupling**
- **Forward test years**
- **Multiyear rate plans**
- **Formula rates**

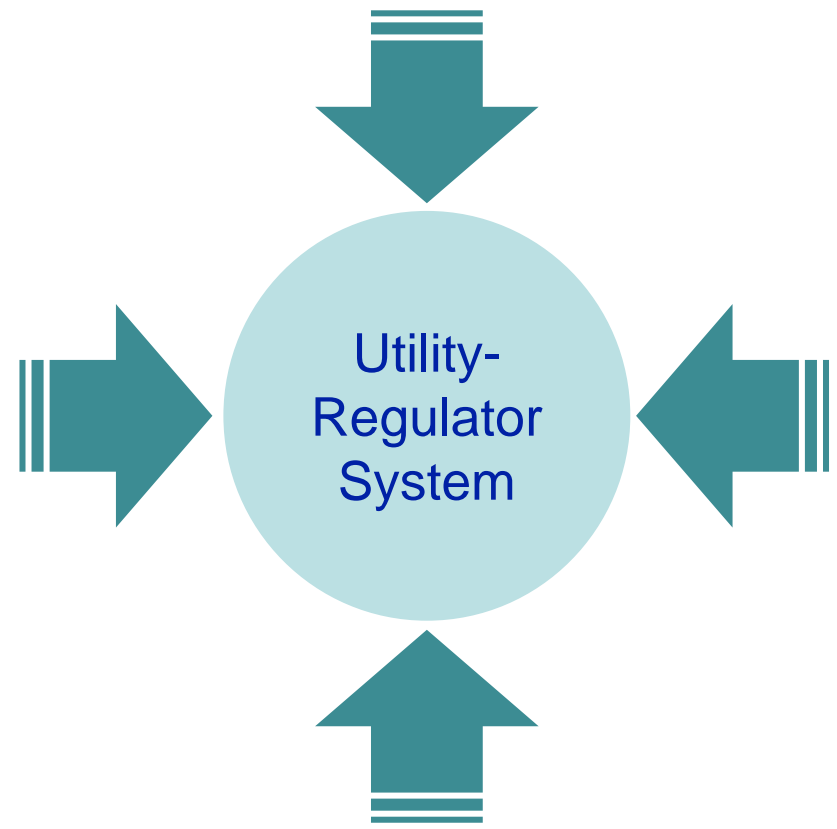


# Which works best?

	Improve Investment	Facilitate Innovation	Incent Efficiency
Cost trackers			
CWIP			
Decoupling			
Forward test years			
Multiyear plans			
Formula rates			

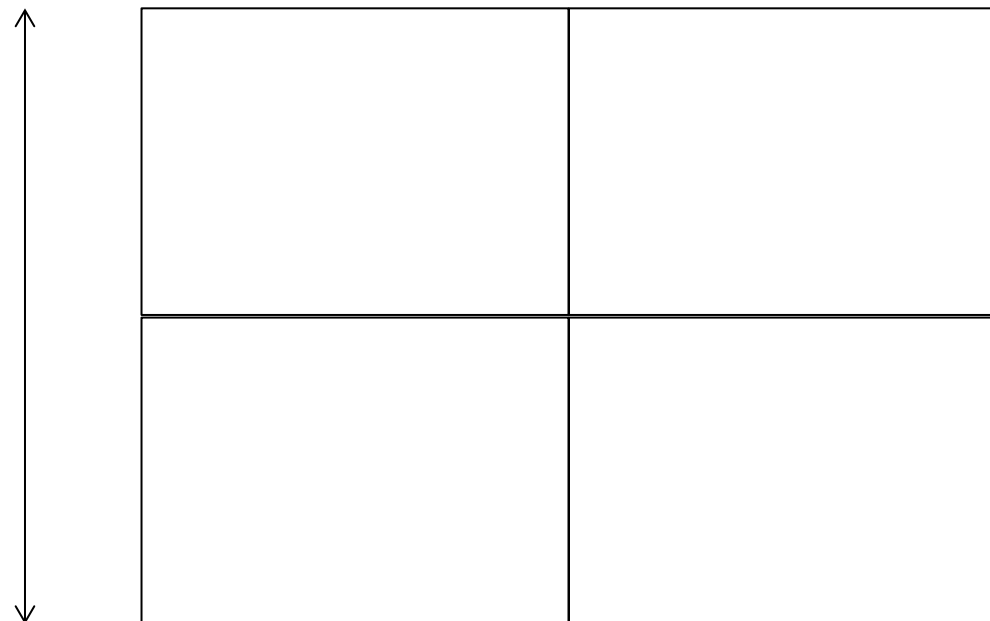
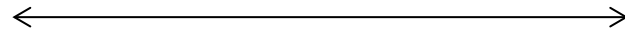


# What are the main pressures?





# What emerges?





# Conclusion

- **Change is a continuing condition: The future holds more unknowns than it does certainties. “Reset” means that we develop fresh perspectives and knowledge about the future, while holding in trust the wisdom of the past.**
  1. Focus on *Next* practices, not **Best** practices.
  2. Focus on *Why* rather than on **What**.
  3. Focus on *Leadership*, not on **Leading**.

Mark Jamison and Araceli Castañeda, 2009





# Conclusion (cont.)

## 1. *Next* practices, not best practices

Best practice is about imitation (following in someone else's footsteps). A focus on next practice is needed when we are going into areas where no one has gone before.

What *Next* practice do you want to try?

Heifetz, Grashow, and Linsky. 2009. "Leadership in a (Permanent) Crisis." [Harvard Business Review](#)



# Conclusion (cont.)

## 2. Focus on *Why* rather than on *What*

When we ask ourselves “What should we do next?” we emphasize practice. But the practice needs a foundation, basic principles, and values.

Ask “*Why* have certain practices or why have experiments been successful or unsuccessful?” so that we analyze our underlying priorities and our context. We learn, keep what is important, and discard what holds us back.

What are you learning from what you are trying?

Collins, 2009. [How the Mighty Fall and Why Some Companies Never Give in](#)



# Conclusion (cont.)

## 3. *Leadership vs. Leading*

A leader provides direction (when the right direction is already known).

*Leadership* mobilizes people to tackle difficult and often ambiguous problems and circumstances.

How will you mobilize people for change?

Heifetz, Ronald A. 1994. Leadership Without Easy Answers, p. 15



# Appendix 1:

## What is Good Regulation?

- **Five Relevant Benchmarks**
  - 1. The legislative mandate (targeting objectives)
  - 2. Accountability to or control by legislature/courts
  - 3. Due process (fair, consistent, accessible, open)
  - 4. Expertise (easy to assess?)
  - 5. Efficiency (in both process and outcomes)
- Robert Baldwin & Martin Cave, *Understanding Regulation: Theory, Strategy, and Practice*, 1999 Oxford U.



# Cost Trackers

- **Examples**
  - Fuel adjustment clauses
  - Government mandated costs (franchise fees, taxes)
  - O&M (health care, DSM)



# Cost Trackers (cont.)

- **Improve cash flow**
- **Lower efficiency incentives unless expenses are beyond utilities' control**
  - In general, incentives are for controllable costs. Trackers are for non-controllable costs. (Z-factors)
  - Jamaica adjusts fuel costs according to efficiency standards



# Cost Trackers (cont.)

- **If coupled with inflation index, ensure that tracker items are unique to utility**
  - Otherwise, costs are already in inflation index
- **Impact on flexibility uncertain**
  - Depends on nature of controllability



# CWIP

- **CAPEX added to rate base annually**
- **Possible benefits**
  - Decreases risk
  - Improves cash flow
  - Decreases rate shock
  - Diminishes cash cow and capitalized interest





# CWIP (cont.)

- **Challenges**
  - Used and useful violation
  - Intertemporal subsidies
  - Unclear efficiency incentives relative to AFUDC (AJ effect)
  - Crystal River
    - Plant renovation will not be completed



# Decoupling's Components

- **Revenue decoupling mechanism (RDM)**
  - True ups for variances between actual and allowed revenue
  - Rate level adjustments; Rate baskets
- **Revenue adjustment mechanism (RAM)**
  - Adjusts allowed revenue between rate cases
  - Revenue caps; Revenue per customer cap



# Some Decoupling Properties

- **Rate design flexibility improves adaptability**
- **Revenue caps**
  - provide efficiency incentives
  - assume costs do not vary with output
    - output changes without corresponding cost changes appear as productivity improvements
- **Cash flow impact depends on design**



# Forward Test Years

- **Essentially adjusted historic test years**
- **Relative to historic**
  - should improve cash flow
  - same incentive properties
  - no particular impact on adaptability



# Multiyear Plans

- **Most common approach internationally**
- **Fixes number of years between rate reviews**
- **Generally applies price and/or revenue caps between reviews**



# Multiyear Plans (cont.)

- **Impact on cash flow depends on revenue/rate adjustment mechanism**
- **Impact on innovation depends on rate flexibility**
- **Impact on efficiency depends on length of interval, price review instruments, etc.**
- **Allows for systematic review of utility's operations and context**





# Formula Rate Plans

- **Adjust rates to align earned and allowed ROE**
- **Should improve cash flow**
- **Impact on adaptability depends on rate design processes**
- **Decreases efficiency incentives if adjustments are frequent**



# Conflict Resolution Matrix

<b>Addressed By Research</b> 	<b>Technical Work</b>	<b>Adaptive Work</b>	<b>Addressed by Engaging People with Adaptive Challenges in Research And Dialogue</b>
	<b>Conflict Over Facts</b>	<b>Conflict Over What is important</b>	
<b>Addressed By Research</b> 	<b>Conflict Over Distribution of Gains &amp; Costs</b>	<b>Conflict Over Jurisdiction or Authority</b>	
<b>And Negotiation</b>			





# Leadership Role

- **Stirring and Steering**
  - Stirring – Surfacing problems that others might think the regulator should leave alone
  - Steering – Helping government and stakeholders see the direction they want
- **Finding the nexus of what is possible, what is important, and how things work**

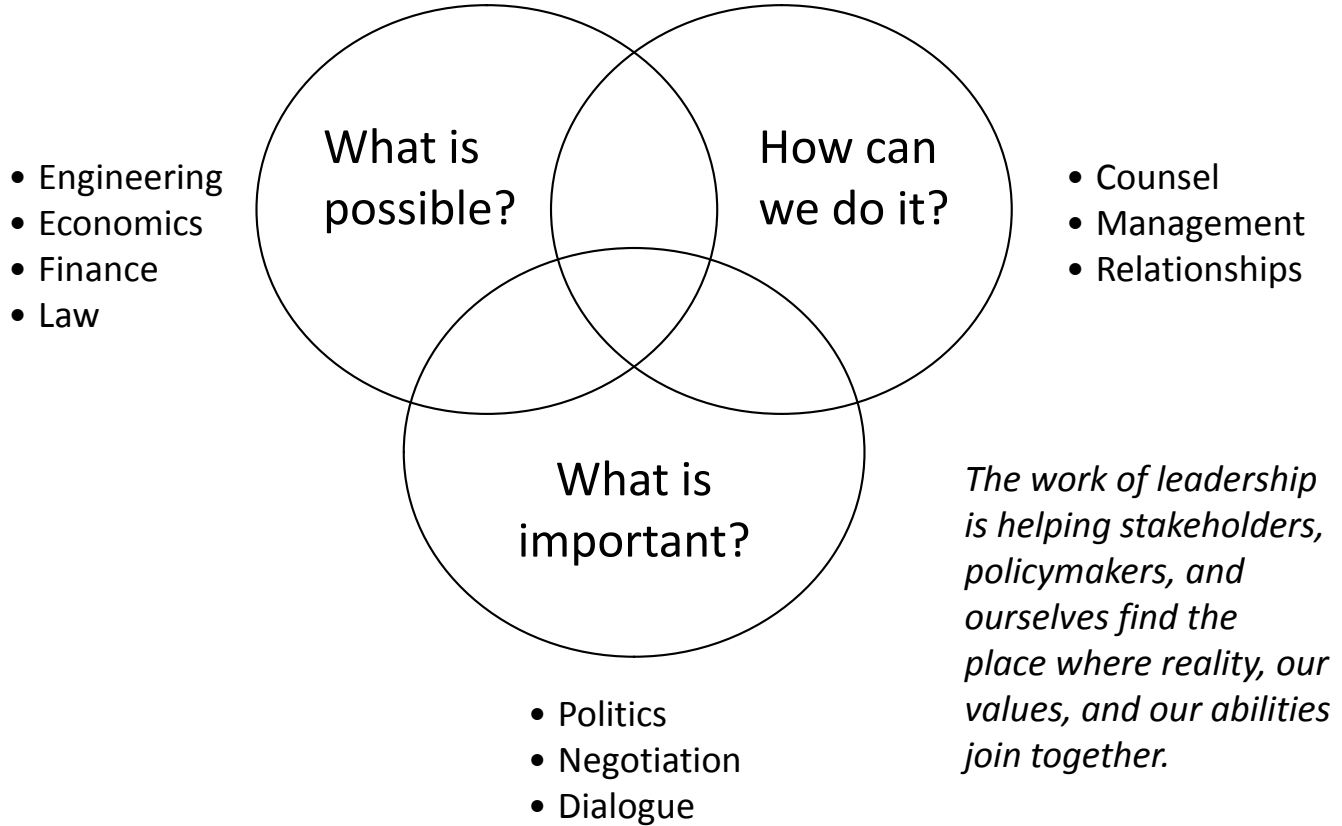


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# The Regulatory Practice





# Politician' s world

- **Sent to fight bad guys**
  - But must work with bad guys
- **Ambition is expected and respected by peers**
  - But not constituents
- **Flat authority structure**
  - No one sanctions the work
- **Balances many relationships**



# Regulation is Dangerous Work



North Carolina, 1771

- *Independence limits some political power*
- *Perturbing system exceeds regulator's formal authority*
- *Regulator may be scapegoat*