



New Regulatory Frameworks For Electric Infrastructure Investment

Investor-owned electric utilities and their customers face significant financial challenges in the years ahead. The confluence of at least three strategic factors will put increasing pressure on utility rates and finances: (1) The need to raise and invest large amounts of new capital to rebuild the nation's electricity infrastructure and maintain and improve reliability and service quality, which will require potentially doubling or even tripling the existing asset base over the next 20 years; (2) The similar need to raise and invest new capital to make non-traditional investments in energy efficiency, emerging technologies and environmental infrastructure to meet public policy goals and requirements; and (3) the need to make such investments in the face of slowing growth of energy usage, which traditionally has bolstered utility financials and acted to offset the financial impacts of regulatory lag. The combined effect of these factors will be to put new pressure on utility credit ratings in an industry whose average creditworthiness has already declined since the last major construction cycle of the 1970s and 80s. Today, many utilities find it more difficult than in the past to afford financing and construction of significant capital projects, and are concerned that further pressure on credit ratings would ultimately challenge their ability to undertake new long-term investments.

For customers, the implications could be severe. Failure to address these new challenges could result in utility underinvestment, or reduced ability to make needed new large capital investments. To the extent utilities do make such investments, there is the potential for "rate shock" as new assets are added to rate base. Under traditional cost of service regulation, large capital projects are not added to rate base until they become used and useful, which can cause significant rate impacts due to the accumulation of carrying costs on invested capital. Alternatively, given a perceived risk of under-recovery and the scale of capital requirements, utilities may be forced to choose between competing objectives in order to rein in burgeoning capital commitments. Among the potential consequences for consumers are increased exposure to fuel risk and insufficient investment in the development of the "green economy" to the degree that is needed. Ultimately, the effects of increased capital requirements and declining utility credit ratings raise the specter of escalating cost of capital, which could result in higher costs to consumers and put further access to capital at risk.

The solution to these interrelated problems, at least a big part of the solution, is to apply innovative ratemaking policies to mitigate rate shocks, preserve utility creditworthiness, and appropriately balance risk between shareholders and customers. However, there is no standard framework for doing this. Any solution must be custom designed for each utility, taking account of its existing system, investment needs and legal and regulatory environment. Nevertheless, there is a fairly standard set of ratemaking policy tools that can be combined in various ways to achieve tailored solutions¹. These tools include:

- **CWIP in Rate Base**

An accounting and ratemaking procedure that allows for the recovery of financing expenses on construction work in progress (CWIP). Construction costs are entered into rate base as they are incurred (or as adjustments to historic test years) so that investments begin to earn their allowed return without delay. This enhances cash flow to support favorable credit metrics during multiyear construction projects. The cost of capital incurred in financing new assets (e.g., cleaner power plants) is reduced, along with the rate shock that could otherwise occur when assets are placed in rate base only after becoming used and useful. To the extent financing costs are recovered through CWIP, they are not captured via Allowance For Funds Used During Construction (AFUDC).

- **Cost Trackers**

Mechanisms that expedite recovery, outside of general rate cases, for volatile and/or rapidly rising costs such as those for energy,

¹ These tools have proven successful in various jurisdictions. Nevertheless, not all are applicable in every situation.

energy efficiency, pensions, and major plant additions. These mechanisms, which may include annual budget limits, can reduce rate case frequency by surgically addressing major reasons why cost is growing more rapidly than sales. They also can incorporate performance-based incentives that allocate some risk (e.g., of cost overruns) to shareholders. Cost trackers sometimes are used in tandem with formula rates to recover costs of major plant additions.

- **Rate and Revenue Caps**

Multiyear rate plans that cap growth in a utility's rates or revenue requirement. Caps may involve index-based, "stairstep" (negotiated), or hybrid escalation formulas that allow utilities to keep up with inflation, investment programs and other cost challenges without rate cases. Plan terms typically range from three to seven years. By not being tied directly to the utility's own costs, these mechanisms give utilities increased operating flexibility and strong incentives to manage long-term productivity growth. Surplus and deficit earnings may be shared with customers via performance-based mechanisms. Supplemental benchmark incentive mechanisms can be added to define specific performance standards (e.g., target levels of SAIDI² or SAIFI³) and provide penalties and/or rewards when actual utility performance varies from the standard.

- **Revenue Decoupling**

Rate-making approaches that make base rate revenue significantly less sensitive to delivery/sales volumes. Useful when sales per customer are declining due to large energy efficiency programs, particularly state-mandated energy efficiency programs, or structural changes in the economy that lower sales growth. Decoupling ensures that utilities recover approved fixed costs and so eliminates a potential utility disincentive to promote energy efficiency goals. Three approaches are popular: 1) Revenue True Up Plans track variances between actual and allowed revenue and make true ups to future rates to keep the utility whole for allowed fixed costs. These plans also may escalate base revenue requirements between rate cases to reflect changes in business conditions that drive utility costs (e.g., inflation). 2) Lost Revenue Adjustment

Mechanisms compensate utilities periodically for base rate revenues that are estimated to be lost due to aggressive increases in energy efficiency. 3) Fixed Variable Pricing collects a high percentage of fixed costs through fixed (e.g., customer and reservation) charges.

- **Formula Rate Plans**

Mechanisms that make regularly scheduled rate adjustments outside of rate cases to help a utility's revenues track its pro forma cost of service. Utilities earn their target return on equity, and avoid over- and under-earning. Formula rates can incorporate CWIP in rate base and reduce rate shock. Performance-based provisions are sometimes added to strengthen incentives in targeted areas such as cost control, customer satisfaction and service quality.

- **Forward Test Years**

A rate case methodology that uses forecasts of utility costs and billing determinants in a test year that occurs after the filing. When unit costs are rising, forward test years mitigate regulatory lag and give utilities a better chance to earn their allowed return on equity.

Table 1 summarizes innovative rate policies that are in place today. To learn more, go to:

http://www.eei.org/whatwedo/PublicPolicyAdvocacy/StateRegulation/Documents/innovative_regulation_survey.pdf

² System average interruption duration index, a measure of the average outage duration for customers on a given utility.

³ System average interruption frequency, a measure of the average number of interruptions for customers on a given utility.

State	Capex Cost Tracker	CWIP in Rate Base ¹	Multiyear Rate Cap ²	Multiyear Revenue Cap ³	Revenue Decoupling			Retail Formula Rate Plans	Forward Test Years
					Decoupling True Up Plans	Lost Revenue Adjustment Mechanisms	Fixed Variable Retail Pricing		
Alabama							Yes	Yes	
Arizona									
Arkansas	Yes				Yes (gas only)				
California	Yes		Yes (electric only)	Yes	Yes			Yes	
Colorado	Yes (electric only)	Yes			Yes (gas only)	Yes (electric only)		Pending	
Connecticut					Yes (electric only)	Yes (electric only)	Yes (electric only)	Yes	
Delaware						Yes (gas only)	Pending		
District of Columbia					Yes (electric only)				
Florida	Yes (electric only)	Yes					Yes (gas only)	Yes	
Georgia	Yes	Yes	Yes (electric only)				Yes (gas only)	Yes	
Hawaii	Yes (electric only)			Yes (electric only)	Yes (electric only)			Yes	
Idaho					Yes (electric only)				
Illinois	Yes (gas only)						Yes (gas only)	Yes	
Indiana	Yes	Yes			Yes (gas only)	Yes (electric only)			
Iowa	Yes (electric only)								
Kansas	Yes	Pending							
Kentucky	Yes				Yes			Yes	
Louisiana	Yes (electric only)	Yes					Yes		
Maine	Yes (electric only)		Yes					Yes	
Maryland		Yes			Yes				
Massachusetts	Yes		Yes		Yes	Yes			
Michigan		Pending			Yes			Yes	

Table 1

Innovations to Reduce Regulatory Lag: An Overview of Current

Precedents

State	Capex Cost Tracker	CWIP in Rate Base ¹	Multiyear Rate Cap ²	Multiyear Revenue Cap ³	Revenue Decoupling			Retail Formula Rate Plans	Forward Test Years
					Decoupling True Up Plans	Lost Revenue Adjustment Mechanisms	Fixed Variable Retail Pricing		
Minnesota	Yes (electric only)	Yes			Yes (gas only)		Yes (electric only)	Yes	
Mississippi	Yes (electric only)	Yes					Yes	Yes	
Missouri	Yes (gas only)				Yes (electric only)		Yes (gas only)		
Montana									
Nevada					Yes (gas only)	Yes (electric only)			
New Hampshire					Yes (gas only)				
New Jersey	Yes	Pending							
New Mexico								Pending	
New York	Yes			Yes	Yes			Yes	
North Carolina		Yes			Yes (gas only)	Yes (electric only)			
North Dakota		Pending					Yes (gas only)	Yes	
Ohio	Yes		Yes (electric only)			Yes (electric only)	Yes (gas only)		
Oklahoma	Yes (electric only)	Pending				Yes (electric only)	Yes (gas only)	Yes (gas only)	
Oregon	Yes				Yes	Yes (gas only)		Yes	
Pennsylvania	Yes (electric only)								
Rhode Island					Pending			Yes	
South Carolina		Yes				Yes (electric only)	Yes (gas only)		
South Dakota		Pending							
Tennessee					Yes (gas only)			Yes	
Texas	Yes (electric only)	Yes					Yes (gas only)	Yes (gas only)	
Utah	Yes (gas only)				Yes (gas only)			Yes	
Vermont	Yes (electric only)			Yes	Yes				
Virginia	Yes (electric only)	Yes			Yes (gas only)				
Washington					Yes (gas only)				
West Virginia		Yes							
Wisconsin		Yes			Yes			Yes	
Wyoming					Yes (gas only)	Yes (electric only)		Yes (electric only)	

¹ This column pertains only to electric utilities.

² This column excludes plans involving rate freezes.

³ Revenue caps are also denoted as decoupling true up plans. However, many decoupling true up plans do not involve multiyear revenue caps because they do not have broad-based revenue adjustment mechanisms.

Table 1 (continued)