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Energy solutions
for a changing world

A Continuum of Formula Rates

NARUC Staff Sub-Committee on Accounting and Finance
Augusta, GA

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Introducing RAP and Rich

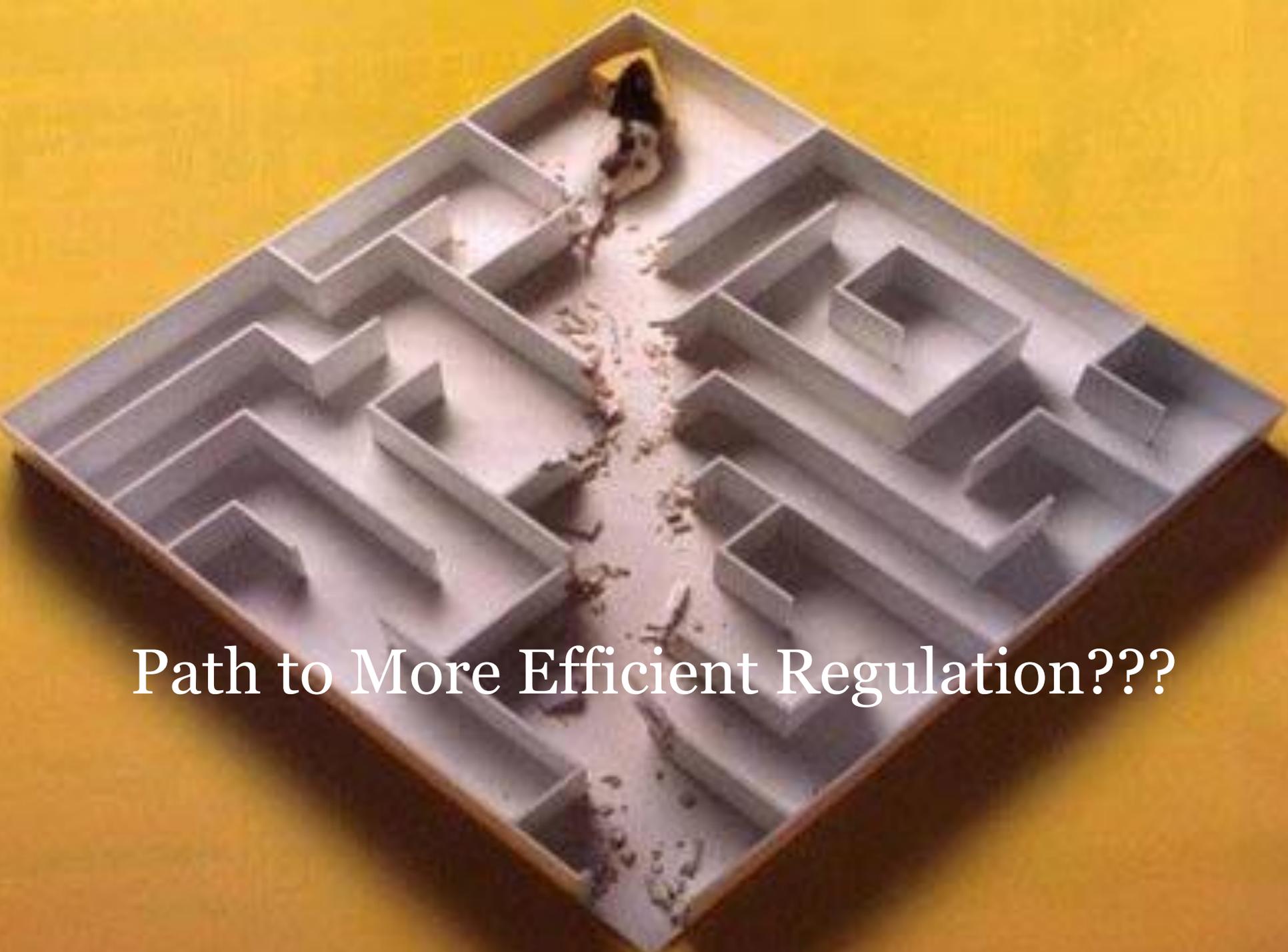
- RAP is a non-profit organization providing technical and educational assistance to government officials on energy and environmental issues. RAP staff have extensive utility regulatory experience. RAP technical assistance to states is supported by US DOE, US EPA and foundations.
 - Richard Sedano directs RAP's US Program. He was commissioner of the Vermont Department of Public Service from 1991-2001 and is an engineer.

Formula Rates

- Some formula is changing rates between rate cases

Formula Rates in Tension with Traditional Regulation

- Revenue requirement based on assessment of just and reasonable costs all at once in an investigation
- Is a comprehensive investigation needed every time rates are changed?



Path to More Efficient Regulation???

Why Formula Rates?

- Public interest to track certain cost trends or categories over time
 - Highlight certain categories
- Regulatory economy – why have more rate cases than needed? Best talent to focus on the most important things
- Reduce regulatory lag
 - Can this benefit be monetized for customers?

A range of Applications and Definitions of Formula Rates

- Alabama Power
- Entergy Louisiana, Mississippi Power
- Illinois
- Decoupling
- Trackers

Alabama Power

- Formula rate system in place since 1982 
 - Rate Stabilization and Equalization (RSE)
 - Followed a period of great unrest
 - No traditional rate case since
 - Reliance on routine information exchange between utility and PSC
 - One month turnaround from formal filing to order
 - » Public engagement: an informal meeting
 - Meetings between utility and staff all year

RATE RSE RATE STABILIZATION AND EQUALIZATION FACTOR

By orders of the Alabama Public Service Commission in Dockets #18117 and #18416.

Effective for December 1982 billings and thereafter; modified effective for July 1985 billings and thereafter; modified effective for April 1990 billings and thereafter; modified effective for April 1998 billings and thereafter; modified effective May 1, 2002 for application to March 2003 billings and thereafter; modified effective October 16, 2005 for application to January 2007 billings and thereafter; modified effective September 20, 2013 for application to January 2014 billings and thereafter

PAGE 1 of 4	EFFECTIVE DATE September 20, 2013	REVISION Sixth
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Alabama Formula Rider

- Formula is augmented by a capital rider
 - Certified new plant (CNP)
 - Designed for large projects, including environmental compliance

Examination Benefits From Two Studies

- Edison Electric Institute (2011)
 - *Case Study of Alabama Rate Stabilization and Equalization Mechanism*
- Institute for Energy Economics and Financial Analysis (2013)
 - *Public Utility Regulation without the Public*

Alabama RSE: Public Concern

- Inertia – conditions in 2016 differ from 1982 yet system continues
 - High ROE locked into 1982 era range
 - Averaged 13.3% between 2008 and 2011
- No apparent Resource plan nor Prudence review nor routine review opportunity
- Reliance on AG for public representation
- Rates: lower than national avg;
 - higher than nearby states

Formula Rate in MS and LA

- Similar to Alabama
- Opportunity for public to review information in LA (FRP-7)
 - Three months for public to review
 - Exogenous events get distinct examination
- In MS more scrutiny triggered if formula drives an increase of 2+%
- LA and MS have lowered ROE range in consideration of changed conditions

Formula Rate in Illinois

- Directed by statute (2011)
 - Directed \$2.6B in smart grid by ComEd
 - Directed \$625M by Ameren Ill.
- Annual review (test year and future year)
- Associated with smart grid investment
- Accompanied by a service quality plan
 - 10 year improvement trajectory, penalty only
 - Many more metrics tracked for info only

Statutory Directives

- (1) **Provide for the recovery of the utility's actual costs of delivery services** that are prudently incurred and reasonable in amount consistent with Commission practice and law. The sole fact that a cost differs from that incurred in a prior calendar year or that an investment is different from that made in a prior calendar year shall not imply the imprudence or unreasonableness of that cost or investment.
- (2) **Reflect the utility's actual capital structure** for the applicable calendar year, excluding goodwill, subject to a determination of prudence and reasonableness consistent with Commission practice and law.
- (3) **Include a cost of equity**, which shall be calculated as the sum of the following: ****
- (4) Permit and set forth protocols, subject to a determination of prudence and reasonableness consistent with Commission practice and law, for the following:
 - (A) **recovery of incentive compensation expense that is based on the achievement of operational metrics**, including metrics related to budget controls, outage duration and frequency, safety, customer service, efficiency and productivity, and environmental compliance. Incentive compensation expense that is based on net income or an affiliate's earnings per share shall not be recoverable under the performance-based formula rate;
 - (B) **recovery of pension and other post-employment benefits expense**, provided that such costs are supported by an actuarial study;
 - (C) **recovery of severance costs**, provided that if the amount is over \$3,700,000 for a participating utility that is a combination utility or \$10,000,000 for a participating utility that serves more than 3 million retail customers, then the full amount shall be amortized consistent with subparagraph (F) of this paragraph (4);
 - (D) **investment return on pension assets net of deferred tax benefits** equal to the utility's long-term debt cost of capital as of the end of the applicable calendar year;
 - (E) **recovery of the expenses related to the Commission proceeding** under this subsection (c) to approve this performance-based formula rate and initial rates or to subsequent proceedings related to the formula, provided that the recovery shall be amortized over a 3-year period; recovery of expenses related to the annual Commission proceedings under subsection (d) of this Section to review the inputs to the performance-based formula rate shall be expensed and recovered through the performance-based formula rate;
 - (F) amortization over a 5-year period of the full amount of each charge or credit that exceeds \$3,700,000 for a participating utility that is a combination utility or \$10,000,000 for a participating utility that serves more than 3 million retail customers in the applicable calendar year and that relates to a workforce reduction program's severance costs, changes in accounting rules, changes in law, compliance with any Commission-initiated audit, or a single storm or other similar expense, provided that any unamortized balance shall be reflected in rate base. ****
 - (G) **recovery of existing regulatory assets** over the periods previously authorized by the Commission;
 - (H) **historical weather normalized billing determinants**; and
 - (I) **allocation methods for common costs**.
- (5) **** [Detailed earnings collar provision relating to the utility's earned rate of return on common equity for the rate year.]
- (6) **Provide for an annual reconciliation, with interest** as described in subsection (d) of this Section, of the revenue requirement reflected in rates for each calendar year, beginning with the calendar year in which the utility files its performance-based formula rate tariff pursuant to subsection (c) of this Section, with what the revenue requirement would have been had the actual cost information for the applicable calendar year been available at the filing date.
- **The utility shall file**, together with its tariff, **final data based on its most recently filed FERC Form 1, plus projected plant additions and correspondingly updated depreciation reserve and expense for the calendar year** in which the tariff and data are filed, that shall populate the performance-based formula rate and set the initial delivery services rates under the formula. . . . **Nothing in this Section is intended to allow costs that are not otherwise recoverable to be recoverable by virtue of inclusion in FERC Form 1.**

Statutory Directives

- **(1) Provide for the recovery of the utility's actual costs of delivery**
- **(2) Reflect the utility's actual capital**
- **(3) Include a cost of equity**
- **(4) Permit and set forth protocols, subject to a determination of prudence and reasonableness consistent with Commission practice and law, for the following:**
 - **(A) recovery of incentive compensation expense that is based on the achievement of operational metrics**
 - **(B) recovery of pension and other post-employment benefits expense**
 - **(C) recovery of severance costs**
 - **(D) investment return on pension assets net of deferred tax**
 - **(E) recovery of the expenses related to the Commission**
 - **(G) recovery of existing regulatory assets**
 - **(H) historical weather normalized billing determinants; and**
 - **(I) allocation methods for common costs.**
- **(5) [earnings collar provision relating to the utility's earned rate of return on common equity for the rate year.]**
- **(6) Provide for an annual reconciliation, with interest**

Nothing in this Section is intended to allow costs that are not otherwise recoverable to be recoverable by virtue of inclusion in FERC Form 1.

How is Illinois Formula Rate Plan Going?

- Annual cases take 6-7 months
- Appeals of original ICC actions
 - Formula allows for differing interpretations on accounting issues
 - Smart grid deployment going gangbusters
 - Regulators giveth, regulators taketh
- Formula has settled, still refereeing to do
- Mandate ends in 2019

Arguments about ...

- Starting balances
- Monthly average vs. year end balances
- Full range of accounting issues
- Affiliate and incentive compensation issues
- Discretionary cost categories
- Level of evidence needed to support costs
 - And other information access issues
- Whether the formula adds stability

Return on Equity

- 580 pt premium above 30 year T Bill
 - Set by legislature (no more disagreements)
 - Earnings may vary by +/- 50 bp.
 - Earnings may be reduced by penalties from the performance metrics
- But, argument about capital structure
 - Blowout trigger if rates go up > 2.5% per year over first three years of the formula

The Metrics (for ComEd)

- Ten year stepped improvement:
 - 20% improvement in SAIDI
 - 15% improvement in CAIDI
 - 20% improvement in SAIFI
 - Improvement in total number of customers who exceed service reliability targets by 75%
 - 90% reduction in estimated bills
 - 90% reduction in consumption on inactive meters
 - 50% reduction in unaccounted for energy
 - \$30 million reduction in uncollectible expense
- 5 bp penalty for missing an annual step
- 60+ metrics being tracked

Observation on IL Orders

- Focus is on resolving disputes, as one would expect (but did we expect so many?)
 - Disputes primarily about accounting matters
 - Not much debate about operation costs or rate base amounts
- Attention to smart grid deployment is elsewhere

Decoupling

- Also a formula to reconcile revenue requirement and rates
 - Remove the effect of sales on revenue
 - Simple (Revenue cap, RPC, % attrition, productivity)
 - Complex (attrition case, changes in demographics, distinct trackers, distinct treatments of customer classes, layering in performance and multi-year rate plans)

Reflection on Decoupling and Formula

- Striking a balance
 - Focus on revenue requirement
 - Public engagement
 - Regulatory efficiency **Focus on the most important**
 - Add in focus on performance
- Do not affect underlying cost allocation or rate design

Trackers

- May ride on top of traditional rates
- May ride on top of a formula rate or decoupling plan, essentially adding another variable
- May have elements of a formula

Formula Rates – More Common Than You Might Think

- Adding states that have formula rates and decoupling, roughly half the states fall into this category

Continuum of formulas



Considerations

- What's in the formula
- Degree of inquiry in periodic adjustment
 - Historic or forward or both?
- Frequent potentially smaller (capped?) adjustments vs. infrequent potentially larger ones
 - How frequent is optimal?
- Assurance or Opportunity to hit target ROE?
- Informal reporting of information
- Public engagement
- Accept single issue/non-comprehensive ratemaking



About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power sector. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

Learn more about RAP at www.raonline.org

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