Altreg and the Challenge of Regulatory Lag: An Industry Perspective

Eric Ackerman
Director, Alternative Regulation
(eackerman@eei.org)

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Overview
By 2030, the electric utility industry will need to make infrastructure investments of $1,830 Billion. This level of investment is nearly triple the US Shareholder—Owned Electric Utilities’ current net plant value of roughly $650 billion.

Source: Transforming America’s Power Industry, The Brattle Group, November 2008
The Recovery Challenge –
Electricity Growth Continues to Slow

Even with out the effects of the recession, sales growth was sliding.
The Department of Energy’s latest assessment incorporates new assumptions on efficiencies and conservation that constrain long-term growth to less than one percent.

<table>
<thead>
<tr>
<th>Period</th>
<th>U.S. Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>50’s</td>
<td>9.0%</td>
</tr>
<tr>
<td>60’s</td>
<td>7.3%</td>
</tr>
<tr>
<td>70’s</td>
<td>4.7%</td>
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<tr>
<td>80’s</td>
<td>2.9%</td>
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<tr>
<td>90’s</td>
<td>2.4%</td>
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<tr>
<td>00-10(p)</td>
<td>1.1%</td>
</tr>
<tr>
<td>10-30(p)</td>
<td>0.9%</td>
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US Electric IOUs Rating History
1970 – 2010

S&P Credit Ratings Distribution, U.S. Shareholder-Owned Electric Utilities

Source: Standard & Poor’s, Macquarie Capital
A Paradigm Shift

**THEN...** large periodic projects to support strong load growth required infrequent, but major, rate cases

**NOW...** Ongoing investment well above depreciation and slower sales growth requires ongoing rate cases
Implications Under BAU Regulation

- **For Commissions**
  - Pan caked rate filings
  - Rate pressures - increasingly stressful, contentious relations

- **For Consumers**
  - Rate shock

- **For utilities**
  - Increased exposure to regulatory lag
  - Downward pressure on credit ratings
  - Administrative cost of recurring rate cases
Cost Trends
The analysis of Proxy Revenue Requirements spanned two decades and covered a period of tremendous change in the industry.
Customer-related O&M costs have increased 82%, a CAGR of 3.2%.
General & Intangible, not a major portion of net plant, increased 109% over the past two decades, a CAGR of 4.0%.
Prior to 2000, sales growth outpaced costs increases. During the last decade, that trend reversed. In the past five years, costs increases have dramatically outpaced sales.

<table>
<thead>
<tr>
<th>Year</th>
<th>Rev. Req.</th>
<th>CPI</th>
<th>GDP</th>
<th>Sales</th>
<th>Generation</th>
<th>Transmission</th>
<th>Distribution</th>
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</thead>
<tbody>
<tr>
<td>1996</td>
<td>9.5%</td>
<td>13.4%</td>
<td>10.4%</td>
<td>10.7%</td>
<td>8.6%</td>
<td>10.3%</td>
<td>6.6%</td>
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<tr>
<td>1997</td>
<td>2.5%</td>
<td>9.3%</td>
<td>18.5%</td>
<td>9.7%</td>
<td>5.5%</td>
<td>4.3%</td>
<td>2.3%</td>
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<tr>
<td>1998</td>
<td>9.9%</td>
<td>9.7%</td>
<td>9.2%</td>
<td>3.5%</td>
<td>13.0%</td>
<td>13.1%</td>
<td>14.0%</td>
</tr>
<tr>
<td>1999</td>
<td>23.1%</td>
<td>9.8%</td>
<td>1.9%</td>
<td>-1.9%</td>
<td>-1.9%</td>
<td>25.0%</td>
<td>39.4%</td>
</tr>
</tbody>
</table>

CAGR:
- 90-99: 1.7%
- 00-09: 3.9%
- Sales: 2.6%
- Distribution: 0.4%
The result is growing pressure on rates and utility performance. Earned returns have declined while the gap between allowed returns and earned returns have widened.
Regulatory Strategy
Emphasize Collaborative Approaches

- Up-front customer engagement is key!
  - Educate customers about needs, constraints, trade-offs
  - It’s not “us” vs “them,” we’re in this together

- One approach - co-host meetings with consumer group(s)
  - Define consensus principles & an accepted framework within which to discuss/negotiate new regulatory approaches & policies
New Regulatory Frameworks

- Develop multi-year rate strategies:
  - Meet investment needs (EPA, state mandates, reliability)
  - Smooth rate trajectories
  - New tools for customers to control their costs
  - Rebalance risk
    - Increase regulatory oversight
    - Create explicit incentives for efficiency
    - Provide for recovery outside of rate cases
    - Maintain favorable credit metrics
Smooth Rate Trajectories

3.5% Annual Increase
Historical Rates %
“You’re just asking us to put rates on automatic pilot.”

Alabama Power Co., formula rate plan (RSE)

- **Before** – costs reviewed as part of rate cases (maybe not for many years)

- **After** – annual ROE forecast based on expected costs, written analysis of needed rate adjustments; > 20 monthly reports on expenses by function; annual peer assessment for major cost items (e.g., transmission); full day update to staff every quarter

Create Efficiency Incentives

Example – construction cost tracker

- Cost tracker authorized up to annual budget
- Adjust budget for input inflation
- Annual project review
- True-up at end of project
- Sharing bands, defined up-front, for overages or savings
Example – SG benchmark incentives

- Identify key benefits characterized in business case; e.g.,
  - Unit metering cost
  - No. of bill inquiries, average time to resolve
  - Average deviation in voltage
  - DR persistence

- For each parameter define a standard of performance
  - Construct a deadband (e.g., +/- 10% within which there is no sharing)
  - Above / below the deadband agree up front on sharing ration (e.g., 50/50)
Recovery Outside Rate Cases

Mechanisms to avoid the cost and delay of litigated rate cases:
- Construction cost trackers
- Formula rate plans
- Rate and revenue caps
- Revenue decoupling
Favorable Credit Metrics

- “Cash is King” – credit worthiness = f(cash flow)$^1$
  - Debt / total capital
  - FFO / average total debt
  - FFO / interest expense

- Tools that enhance cash flow
  - CWIP
  - Cost trackers
  - Formula rate plans

$^1$ S&P, Corporate Ratings Criteria 2007
The regulatory compact balances the needs of consumers and investors.

Historically, changes in the market have disturbed the balance and required new policies to rebalance it:
- 1970's OPEC drives up the price of oil
- 1980's nuclear cost overruns and declining sales growth
- 1990's market and corporate restructuring
- 2000’s – Enron and CA meltdown, loss of investor confidence

Today we face new changes, requiring new policies...
Appendix
Could Energy Efficiency Reduce the Electricity Sales Growth Rate Even Further?

- Realistically Achievable Programs Could Reduce Annual Sales Growth Rate by 0.15 – 0.21 Percentage Points Below Baseline
- Maximally Achievable Programs Could Reduce Annual Sales Growth Rate by 0.29 – 0.39 Percentage Points Below Baseline

Capital related costs are approximately 60% of total revenue requirements. Capital expenditures, a key driver of capital related cost is assumed to continue at its current pace of about 2.5 times depreciation, resulting in a 24% increase in capital related costs.
What’s Happening To Residential Customers?

- Effects of long-term unemployment?
  - Average = 9 months unemployed
  - 4 million workers have been out for a year + (benefits expiring)

- Effects of the mortgage crisis?
  - Customer counts – annual growth rates slowing:
    - 1.7%/yr - ’97 to ’07
    - .8% - ’08
    - .2% -’09
    - February 2011 - may be negative (EIA)

- Long-term effect of tighter building codes and appliance standards?