Electric Grids, Utilities, Regulations Not Prepared for Clean Power Plans
Regulatory and Legislative Reforms Urgently Needed

August 5, 2015

US Electricity Consumers:

This week the US Environmental Protection Agency published its final Clean Power Plan rule requiring states to reduce carbon emissions from electric generation 32% by 2030. Utilities and grids that distribute power – and the state regulations and legislation that govern them -- are woefully unprepared for the role they can play in reaching this goal. It is essential for electric customers, regulators, and legislators to understand the deficiencies of the present system and why reforms are imperative.

Outdated practices hinder customers' access to empowering technologies that decrease electricity purchases through efficiency, management, and self-generation. As utility regulation has far-reaching consequences, it is essential we understand existing deficiencies so that reform momentum grows. Three common regulatory practices — the throughput incentive, the investment incentive, and the rate case — determine utility profits and can be manipulated by distribution utilities at the expense of customers, communities, and the environment.

The Throughput Incentive. Customer bills — and distribution utility revenue and profit — are typically calculated based on the volume of electricity customers purchase. As sales volume increases, profit increases, and vice versa. The result: without regulatory reform, utilities will discourage customer adoption of technologies that reduce electricity purchases. The throughput incentive exists not only for investor-owned distributors, but for government-owned utilities as well.

Further, electric efficiency and many forms of self-generation reduce greenhouse gas emissions. Thus the throughput incentive is responsible for greater electric use, greater customer cost, and increased environmental impact.

The Investment Incentive. To encourage reliability, state regulators approve the size of a utility's profits included in rates in direct proportion to the capital the utility invests in equipment and other assets. As investments increase, utility profits — and customers' bills — increase. While most businesses strive to conserve capital, the investment incentive ensures that for-profit utilities strive to spend it.

In the past 5 decades, preying on regulators' reliability concerns, the investment incentive has encouraged utilities to over-invest in generation. In large swaths of the US, transparent markets and the law of supply and demand have now made excess capacity clear. Wholesale prices paid to generating plants for electricity and capacity (remaining available in the event needed) have plummeted, and plants are closing.

With the window to increase profits via generation investment closing, utilities have set their sights on the distribution grid. Once again preying on regulators' reliability concerns, utilities are proposing massive smart grid investments. Unfortunately, incentives exist for utilities to deny associated benefits to customers (see the throughput incentive above and the incentive to time rate cases, below). There is also a big incentive to over-invest, as was true of generation. Regulators simply don't have the resources or expertise to police the details. The result: utilities invest, but always more than they need to, and not always in capabilities that benefit customers, communities, or the environment the most.

The Rate Case (Timing). Utilities seek rate increases from their regulators in a process known as a rate case. When costs are rising, utilities request rate cases frequently to ensure the increases are covered by rate hikes. But when costs fall, utilities avoid rate cases to avoid sharing cost reductions with customers through rate reductions. This gamesmanship is called Rate Case Timing.

Many smart grid investments serve to reduce costs, but utilities withhold these savings from ratepayers (and give them to shareholders) simply by failing to request a rate adjustment. You read that right: customers are paying for smart grid investments, while shareholders make associated profits *and* keep associated cost savings. (Only a couple of state regulators have taken actions to avoid this.)

How do these incentives play out in practice? All can be seen in U.S. utilities' grid modernization game plans. A typical game plan looks like this:

- Using reliability (and, misleadingly, job creation) as rationale, get legislators to pass a law encouraging utilities to make huge grid modernization investments;
- Make the huge investments, including those that may not yet be necessary, and add fees to customer bills to cover their cost and associated utility profits;
- Refrain from implementing low cost, low capital approaches that might enable or promote customer adoption of empowering technologies;
- Fail to optimize any capability that might reduce electric sales volume;
- Avoid sharing any investment-related cost savings with customers by failing to request a rate case.

While it would be easy to blame a utility for these acts, any utility following this plan would break no laws or regulations. In fact, for-profit utility managers break federal securities laws when they fail to pursue shareholder interests within the rules.

Since we cannot (and probably should not) change utilities' profit motive, we must change the rules. Rather than rewarding utilities for selling more power, making unnecessary investments, failing to optimize investment benefits for customers, and avoiding rate reductions, let's reward them for performing in the public interest and penalize them when they do not. Rather than reward a process input like capital investment, let's reward the outputs customers value, unleashing utilities' considerable talent, expertise, and profit motive to their highest and best use.

Readers who perceive this as adding a bit of capitalism to an ill-governed monopoly system are on the right track; one potential solution is performance-based regulation.

Performance-based regulation has already been implemented in the UK. In performance-based regulation, utility incentives are aligned with the public interest, including cost, reliability, self-generation, environmental impact, efficiency, and third-party innovation. As utility performance against predetermined metrics improves, rates and profits increase; as utility performance falls, rates and profits fall. Like all monopoly governance, performance-based regulation is imperfect. It's also only part of a more comprehensive approach to state utility regulatory and governance reform. But it is an important part of such reforms.

What can you do? Utility customers must demand fundamental regulatory reform in their own states. Communities must get more involved in distribution grid and utility planning. State regulators must watch ongoing reform efforts and experiences closely, and begin reform planning. State legislators must seek and heed their experienced regulatory teams' advice when considering utility legislation; sponsor utility regulation reform efforts; and fund targeted increases in monopoly oversight. Why? Because nothing less than our society's economic and environmental sustainability are at stake. We are burning money, and we are burning precious time in the fight against disruptive climate change. State utility regulatory and governance structures must be reformed, now.

Sincerely,
Paul Alvarez, President
Wired Group