

New Utility Business Models

Description:

Utility regulation varies, to some extent, by state utilities commission. Most Commissioners and commission staff, however, still adhere to the regulatory principles outlined by James Bonbright in his seminal text, *Principles in Public Utility Rates* (1961). At the time, most utility companies were vertically integrated, were experiencing increases in load, and had the ability to capitalize on economies of scale for new generation. These “natural monopolies” warranted a state regulatory body that could balance the tradeoff between efficiency (in the form of least cost production) and equity (consumer protection). Many have argued recently that the regulated utility industry needs a new set of principles that are more sophisticated, forward-planning, and incentive-based.

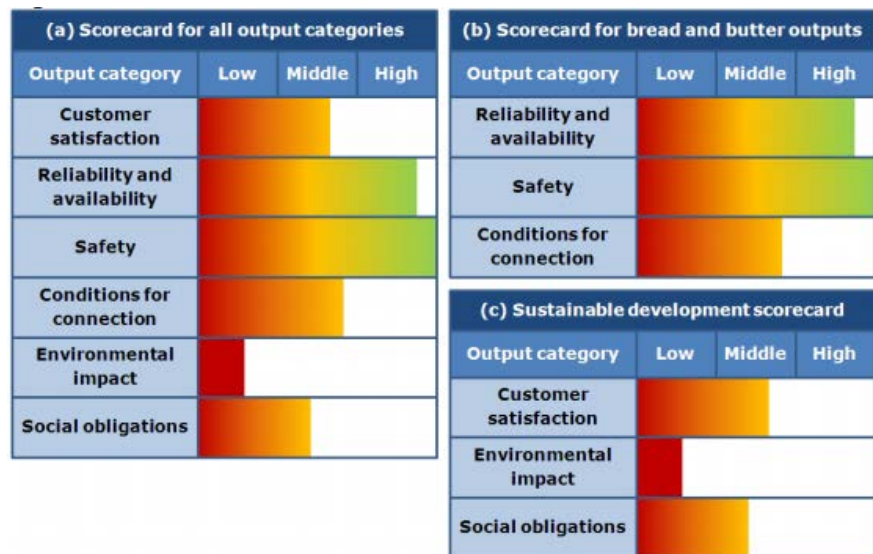
In a conversation about the role of state government in 21st century utility regulation, it is helpful to define the boundaries of energy policy. Energy “policy” and “regulation” often tend to focus on investor-owned utilities (IOUs), which provide the majority of the energy market’s supply. Most public power entities (municipals, cooperatives, and subdivisions) are typically exempt from Public Utility Commission (PUC) jurisdiction, yet these utilities are heavily influenced by the market structure established for the regulating electricity; therefore, many legislative policies are equally applicable to all utilities regardless of their governing body.

Discussion of the Policy:

Some policy makers believe that modernizing the public policy compact with electric and gas utilities is THE barrier to greater clean energy adoption. State efforts to reform the current regulatory construct have taken many forms, the most high profile of which are discussed below. In terms of the actual policy changes being proposed, some of the concepts that have emerged are focused on regulating and rewarding utilities based on their performance against certain metrics, rather than the traditional rate of return based on spending.

Performance Based Regulation

Performance Based Regulation (PBR) was developed by the utility regulator in the UK - the Office of Gas and Electricity Markets (Ofgem). Ofgem has implemented the [RIIO Model](#) (Revenue = Incentives + Innovation + Outputs) for the regulated utilities in the UK. Many states are looking at how to adapt this model for the US. RIIO is unique in that the utility rate of return is a function of performance against key, pre-determined, performance metrics rather than a regulated rate of return on capital invested. A snapshot of a balanced metric “scorecard” (above) lists typical performance criteria.



Source: Ofgem

Risk Aware Regulation

A recent analysis on "[Practicing Risk Aware Regulation](#)" explores the risk inherent in utility and regulator asset decisions. The figure below depicts one outcome of this approach with various utility generation options plotted in relation to their levelized cost of energy (LCOE) and relative risk. The report states that: "Utilities must endorse regulatory efforts to minimize investment risks on behalf of consumers and utility shareholders. This means promoting an inclusive and transparent planning process, diversifying resource portfolios, supporting forward-looking regulatory policies, continually reevaluating their strategies and shaking off "we've always done it that way" thinking."



Source: Ceres

Example State Programs:

A concise summary of 2014 state utility business model initiatives was compiled by Advanced Energy Economy and can be found [here](#). The summaries below borrow heavily from this blog post.

Hawaii: Initiated by a [white paper issued by the PUC](#), Hawaiian Electric Company (HECO) has been directed in four decisions to implement changes to solar interconnection, demand response, renewable integration, and cost reduction strategies. Their plan, submitted in August of 2014, would triple the amount of distributed solar by 2030. The state legislature proceeded to [allocate \\$1.2 million](#) in the 2016-2017 budget for the study of alternative business models. After regulatory review of HECO's resource plan, the PUC decided further action regarding revenue design was needed, and the State Energy Office [submitted an RFP](#) for the study of alternative utility business models in September 2016. The PUC eventually [accepted](#) HECO's updated resource plan in July 2017, which included provisions for the focus on consumer choice, for system integration and optimization of distributed energy resources (DERs), and for a long-term goal of 100% renewable energy. Because of Hawaii's high electricity rates, the cost curves of decreasing renewable and storage technologies and increasing grid electricity costs have crossed much earlier than other states. However, the inevitability of this dynamic reaching the rest of the country prompted Hermina Morita, former chair of the Hawaiian PUC, to refer to the state's experience as a "post card from the future."

New York: The New York Public Service Commission (PSC) has initiated a [Reforming the Energy Vision \(REV\) proceeding](#). In the PSC's words: "This initiative will lead to regulatory changes that promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar, wider deployment of "distributed" energy resources, such as micro grids, on-site power supplies, and storage. It will also

promote greater use of advanced energy management products to enhance demand elasticity and efficiencies. These changes, in turn, will empower customers by allowing them more choice in how they manage and consume electric energy.”

Massachusetts: In June of 2014, the Department of Public Utilities (DPU) [issued an order](#) requiring all utilities to submit 10-year grid modernization plans, which are to include advanced metering deployment plans for the first five years. Major utilities [have submitted](#) grid modernization plans and are awaiting the Department’s approval. The DPU has also opened proceedings on [electric vehicle charging](#) and [time varying rates](#).

Key Components:

Because utilities commissions generally fulfill state statutory directives, legislatures may want to use policy to direct the commission to open an investigatory docket with the purpose of examining potential new utility business models. The legislation should identify the public objectives that would be incentivized through a new business model for utilities and direct the commission to identify ways in which to align the utilities’ financial incentives with public policy objectives.

- Establishment of key performance objectives to be valued by the utilities commission.
- Authorization for the commission to develop an alternative mechanism for determining return on equity based on achievement of performance outcomes.
- Directive to utilities commission to conduct an investigatory hearing to collect input from a variety of stakeholders regarding potential new utility business models.

More Information:

- AEE, Top 10 Utility Commission Actions of 2016:
<http://blog.aee.net/year-in-review-top-10-utility-commission-actions-of-2016>
- America’s Power Plan - Ratemaking and Utility Business Models:
<http://americaspowerplan.com/power-transformation-solutions/ratemaking-and-utility-business-models/>
- Ron Binz and Dan Mullen, Risk-Aware Planning and a New Model for the Utility-Regulator Relationship
www.rbinz.com/Binz%20Marritz%20Paper%20071812.pdf
- Ofgem, Handbook for Implementing the RIIO Model:
<https://www.ofgem.gov.uk/ofgem-publications/51871/riiohandbook.pdf>
- Minnesota’s E21 Initiative, Working Paper:
http://www.betterenergy.org/sites/www.betterenergy.org/files/e21_Current_UTILITY_Business_Model_MN.pdf

For additional information on this topic, please review Chapter 2.7: New Policy Frontiers - New Utility Business Models in the *Clean Energy Policy Guide for State Legislatures* available at:
<http://cnee.colostate.edu/cleanenergypolicyguide/>

This information is also available on the Clean Energy Legislative Academy Resources page at:
<http://cnee.colostate.edu/academyresources/>