New and Emerging Issues Affecting Rate Cases

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Declining Demand is Stressing the Electric Utility Industry

U.S. Electricity Demand Growth
(Annual and Moving Average in %)

Sources: *EIA, Annual Energy Outlook 2013; EIA, Monthly Energy Review* (Dec. 2013); ScottMadden analysis
The Backdrop...

Distributed Energy Resources: The New Imperative

Utilities face the challenge of managing both the traditional supply portfolio and the new paradigm of distributed energy resources to optimize the enterprise.

Central Station Utility Model

Distributed Energy Resources (DER)

Resource Options

- Nuclear
- Gas
- Pumped Storage
- Coal
- Hydro
- Market Supply
- Demand Response
- Distributed Generation
- Energy Efficiency
- Grid Modernization
- Rate Design
- Economic Development
The Backdrop...

The Times, They Are A Changin’…

- Renewables costs continue to decline
- The final rules on comprehensive greenhouse gas emissions (Clean Power Plan) have now been defined
- The current grid transformation is breaking down traditional boundaries between customers and producers
- The lines between supply resources and demand resources are becoming blurred
- The expanding natural gas supply is forcing coal plant retirements; in some regions market economics are also forcing nuclear plant retirements
- Utility investment levels are growing due to aging infrastructure and demands for improved safety and system resiliency
- Traditional utility revenue recovery approaches are becoming increasingly inadequate
- Regulators are rethinking the hundred-year-old rate-of-return paradigm
- …and fundamental aspects of the vertically integrated utility model are being questioned

Unprecedented change…and unprecedented opportunity
## The Utility Business Model

### What Drives Our Current Business Model?

**What’s a business model?**

A business model is a system of activities that determines how a company:

- Does business
- Creates value
- Sustains advantage

**Obligation to serve**
- Universal service
- Least cost
- Exclusive franchise territory
- Natural monopoly

**Rate-Based Cost-of-Service Recovery Utility Earnings**

- Return on rate base assets – cost of debt plus a reasonable return on equity, commensurate with risk
- Recovery of prudently incurred operating costs, depreciation and taxes
- Pass-through of fuel costs
- “Below-the-line” revenues from business activities:
  - In which utility shareholders bear the primary risk
  - Do not leverage ratepayer assets without compensation or, where applicable, fair opportunity provided to non-affiliates

**Utility Role**

- The system of activities that determine how a company:
  - Does business
  - Creates value
  - Sustains advantage

**Technical Competencies**

- The skills, practices, processes, and innovations that are essential to serve customers and markets, perform the activity system well, and animate the business model

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*Bonbright*

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## Regulatory Model Innovations

### Differing Regulatory And Incentive Constructs Matter

<table>
<thead>
<tr>
<th>Central Planning</th>
<th>Technology Focus</th>
<th>Incentive Subsidies</th>
<th>Infrastructure Incentives</th>
<th>Market-Based</th>
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</thead>
<tbody>
<tr>
<td>Regulators establish comprehensive regulatory framework and compact that defines utility roles, responsibilities, and financial incentives</td>
<td>Legal or regulatory requirements are established that put a “finger on the scale” for certain technologies</td>
<td>Special tariffs or other subsidies (incl. tax credits) are established to encourage certain types of resources or utility behaviors</td>
<td>Programs and mechanisms to promote development of certain kinds of energy infrastructure are established</td>
<td>Market and competitive forces are relied upon to allocate resources, select technologies, and compensate market participants</td>
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</table>

### What It Is

| Some Examples (States) | Utilities as platforms for technology (NY) | Demonstration projects (NY) | Fundamental redesign of ratemaking process (NY) | Distribution-level demand response programs (NY) | Community choice aggregation (NY) | Aggressive renewable portfolio standards (CA) | Solar carve-out in RPS (MN, NJ) | Smart grid requirement (CA) | Storage requirement (CA) | Tariff for customer-sited generation (CA) | Value of solar tariff (MN, TN) | Applicable retail rates for solar gardens (MN) | Federal subsidies (tax and other)/loan guarantees | Net metering (various) | Voluntary RPS cost recovery and potential increased rate of return (VA) | Energy-tech venture fund (IL, NY) | Performance-based formula rates (IL) | Special (IL) or accelerated (MA) infrastructure cost recovery programs | Grants for projects to increase resiliency (MD) | Time-varying rates (MA) | Electric vehicles (CA, WA, et al.) | Highly market-driven environment (TX, GA) | Few permitting requirements (TX) | Minimal subsidies and mandates (TX, GA) | Direct access/retail choice for industrial customers (TX) |
|-----------------------|---------------------------------------------|-----------------------------|-----------------------------------------------|-----------------------------------------------|---------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|

### Some Examples (States)

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One Example: CA vs. NY – Background and Objectives

- To promote the increased deployment of DER in support of achieving California’s 2020 and 2050 GHG reduction targets
- To modernize the electric distribution system to accommodate two-way flows of energy and energy services
- To enable customer choice of new technologies
- To animate opportunities for DER to realize benefits through the provision of grid services

- To enhance customer knowledge and tools and support effective management of their total energy bill
- To animate markets and leverage ratepayer contributions
- To enhance system wide efficiency
- To promote fuel and resource diversity
- To enhance system reliability and resiliency
- To reduce carbon emissions

Though the stated goals are similar, the implementations differ; California is not establishing a distribution-level market in this proceeding

* Impacted utilities are required to file Distribution Resources Plans (DRP) in CA and Distributed System Implementation Plans (DSIP) in NY.
## Regulatory Model Innovations

### What is Needed as Business Models Evolve?

<table>
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<tr>
<th>Some Key Issues With Adjustment of Regulatory Paradigms from Cost-Based Regulation to Other Models</th>
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<tr>
<td><strong>Behavioral Shifts and Customer Acceptance</strong></td>
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<tr>
<td>While regulatory and financial incentives can play a significant role in behavior, conservation and efficiency require longer-term shifts in those incentives</td>
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<td>Incentives must be transparent and linked temporarily and directly to desired actions</td>
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<td>Customers may have difficulty with paying as much or more on their utility bill while consuming less</td>
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<td>Customers’ stated preferences (e.g., efficiency) may be belied by actual responses</td>
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<tr>
<td><strong>Stranded Investment</strong></td>
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<td>Switching regulatory models will undoubtedly lead to some stranded investment, which will require debate over what losses should be compensable, how much should be awarded, and how to recover those costs</td>
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<td><strong>Time Horizon</strong></td>
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<td>Current system and regulatory framework were developed over decades; unwinding or transitioning will likewise take time</td>
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<td><strong>Proving the Counterfactual</strong></td>
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<td>Performance-based regulation (PBR) frequently involves judging utility performance versus what it would have been without PBR, which invites contentious interpretations if costs are not what advocates believe they “should” be</td>
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<tr>
<td><strong>Free Riders</strong></td>
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<td>In isolation, one could have some incentives under a new model, while possibly leaning on adjacent systems still under the traditional model for reliability, supply adequacy, and cost containment—this will be more difficult if widespread regulatory changes occur</td>
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<tr>
<td><strong>Accountability</strong></td>
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<td>Unclear whether and how common concepts applicable to regulated utilities—obligation to serve, used and useful, just and reasonable rates, prudence, etc.—translate equitably to all players in some new regulatory models</td>
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<td><strong>Level Playing Field</strong></td>
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<td>Depending upon the regulatory model (i.e., degree of third party vs. utility service competition) utility may have incumbency, affiliate, and brand advantages that need to be accounted for</td>
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Ratemaking solutions will be key to support this industry evolution
Necessary Changes to the Regulatory Construct

Russ Feingold of Black & Veatch said recently:

- A proper “Regulatory Construct” is required for the right change to occur (to successfully address the changing industry dynamics)
- The technological, market, and commercial changes driving the utility industry transformation defined by the “Utility of the Future” require a proper regulatory construct for effective implementation
- An utility’s business future will be directly impacted by the regulatory environment in which it operates
  - The business roles and responsibilities of a utility
  - Allowable infrastructure investments and adoption of new technologies
  - Establishment of financial expectations (revenues, net income, ROE) and the ability to achieve those metrics
  - Degree of participation in new and evolving markets
  - Interactions/transactions with customers
  - Pricing of existing and new services
  - Accommodation of societal objectives

Source: “Utility Ratemaking Solutions During a Time of Transition”, Russell A. Feingold, Black & Veatch; AGA State Affairs Committee Meeting, San Diego, CA, October 7, 2015
Rate Case Trends

Drivers of Rate Case Activity

- Remediating aging infrastructure
  - Need to expand the transmission system to alleviate congestion and facilitate regional planning
- Reliability and storm restoration costs
  - Focus has been intensified after recent safety issues and in the aftermath of recent major storms
- Renewable resource requirements
  - Necessary to connect the generation resources with population centers
  - Deployment of advance technologies to facilitate competition
  - Effective energy conservation and customer response programs
- Environmental compliance
  - Meet regulations from the Clean Power Plan (CPP)
- New generation needs
  - Meet demand and/or replace facilities that are to be retired

Net Operating Income Considerations

- Rising employee costs
  - Costs toward healthcare and post-employment benefits
- Reliability—system hardening
  - As well as costs to improve protection against physical and cyber threats to the utility system
- Economic impacts
  - Weakness in (or lack of) sales growth
After the recent peak in 2010 the level of activity has moderated somewhat but remains substantial.

As of February 2016, four rate cases had been decided, and another 68 were pending, all of which should be decided by year-end.

It appears that the rate case tally for 2016 will be in the 75-80 case range, assuming the additional cases filed in the first quarter of 2016 are resolved by year end.

Source: RRA, SNL Financial, As of December 31, 2015
Addressing Regulatory Lag

There has been an increasing reliance on more innovative approaches to address regulatory lag, such as rider mechanisms, alternative regulatory plans, and rate design innovations.

1. Rider Mechanisms
   - Riders allow the company to adjust rates between rate cases for certain limited-issue items.
   - Recently, the use of these mechanisms was further expanded to reflect new capital investment and to address revenue volatility associated with weather variations, customer participation in conservation programs, and broader economic impacts.

2. Alternative Regulatory Plans
   - These plans can be broad-based or narrowly-focused.
   - Broad-based plans include formula ratemaking plans where authorized return parameters are set at the inception of the plans, and rates are permitted to adjust automatically on an annual basis within a certain range.
   - Narrowly-focused plans provide for innovative treatment of a specific asset or class of assets, or provide earnings enhancement opportunities for performance with respect to plant operations, fuel procurement, off-system sales and achieving energy efficiency targets.

3. Rate Design Innovations
   - Industry stakeholders have begun to re-examine traditional rate design practices to address inter- and intra-class subsidization, declining sales and the issues raised by new resources.
   - Two “rate design” solutions to these problems include decoupling mechanisms and straight-fixed variable rate design:
     - Revenue decoupling – allows the utility to defer fixed distribution costs that the utility fails to recoup through its volumetric charges due to customer participation in conservation programs.
     - Straight-fixed variable rate design – the utility’s fixed costs are recovered through the fixed monthly customer charge, and therefore, sales fluctuations caused by weather, customer participation in DSM programs, and economic conditions do not impact the recovery of fixed costs.
**Multi-Year Rate Plans (MYRPs)**

### Characteristics
- Originally utilized in the railroad, telecomm, and oil pipeline industries
- Typically designed for a 3 to 5-year period
- Attrition relief mechanisms (ARM) define annual rate escalations but are usually capped
- Typical ARM designs include:
  - Stair-steps – predetermined increases in rates or revenues based on cost growth forecasts
  - Indexing – variable increases tied to an index like CPI
  - Hybrids – indexing for O&M and stair-steps for CapEx

- Additional provisions sometimes included in the MYRP structure include cost trackers, earnings sharing mechanisms, and “off-ramps” or “reopeners” to allow for plan suspension in the event of unusually high or low earnings

### Benefits
- Produces more predictable revenue stream and certainty for utility to make investments (may reduce cost of capital)
- Reduces regulatory costs
- Incents utility to manage costs
- Enables utility to allocate resources to running the business rather than rate case administration
Additional Scrutiny

- MYRPs involve setting rates based on planned capital expenditures rather than reimbursing investments already made. Therefore, utilities must be prepared to provide more detailed information than what has been required in the past.

Budgeting and Project Management Skills

- Utilities must be able to show that investments were made according to the plan submitted at the time of the filing. Failure to adhere to the plan may result in refunds or other costly regulatory issues. Ability to budget properly and execute projects to plan is critical with MYRPs.

Project Selection

- Determining which projects to include in the plan can be challenging. Utilities should consider:
  - Size of projects (impact on revenue requirement)
  - Execution risk associated with projects (scope, schedule, and budget)

Compliance

- Compliance mechanisms will play a significant role in whether a MYRP is the best solution for a utility.
- Some specific issues that must be addressed include:
  - Threshold for determining rate refunds
  - Aggregate versus project-by-project approach for true-ups
  - Internal surveillance
  - Reporting mechanisms
Questions?

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