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The Capacity of a Public Utility Commission to Steward Power Sector Transformation

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What do I mean by Power Sector Transformation?

- Overhaul of resource types, grid function
- New expectations, behaviors by citizens
- Adaptation of regulation to climate science
- Changed utilities role and culture
- Changed utility regulators
Alternate Titles

• Why is progress so hard?
• Why does progress take so long?
• Despite obstacles, why is progress inevitable?
Sections

- Trends
- The PUC
- Utility Performance
- How Transformation Happens
- Risk
- A Menu of Options
- Examples
1 Trends

Foundation to the rest
## Forcers

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<th>Climate Science</th>
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<td>Active participants in energy system</td>
<td>Policy imperative (to some) overlaying on existing system</td>
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Regulatory Assistance Project (RAP)®
A walk through time and trends

- **60s**: Growth, growth pays for growth
- **70s**: Oil crisis, growth slows
- **80s**: Responses, a wide range
- **90s**: Competition (dissatisfaction with utilities)
- **00s**: digesting competition, slowing continues
- **10s**: clean energy costs plummet, smart tech and the Internet, climate science (electrification)
Reflection on PUC task from one RAP staff member

• **00s** about perfecting a relatively static system
  - Fix incentives
  - Illuminate value of planning, energy efficiency
• **10s** about keeping up with raging progress outside the PUC
• PUCs with a few exceptions react to utility ideas, avoid pro-active initiative
  - Exceptions of a few states, decoupling, choice
Emerging Power of Customers (not just choice of supplier)

- More service options outside utility
  - Efficiency
  - Generation and Resilience
  - Free-standing
  - Sounds like competitive substitutes
- Is a new relationship between utility and energy consumer is emerging?
Where is the utility in the trends?

- Astute assessments of trends
- Guarded about leading
  - “No good deed goes unpunished”
  - Astute assessment of risks to cash flow, return
- Will follow government lead to solutions
- Will protect itself with vigor
- May rise to the occasion as a solutions provider
The Public Utility Commission
The place to resolve Power Sector Transformation details
The Public Utility Commission: What is it?

- \(\frac{3}{4}\) of states+, commissioners are appointed by the governor
- \(\frac{1}{4}\) of states, commissioners are elected in varying ways

- Many learn want to be reappointed
  - Some don’t care
The Public Utility Commission: What is it?

- Authority over monopolies
- Authority comes from statutes
  - Statutes leave varying openings for implementation judgment
- Expert staff
- Quasi-judicial
  - What is this “quasi” thing?
PUC staffs: Very important

- Staff composed of administrative lawyers, economists, power system engineers
  - Influential esp. with non-expert commissioners
  - Well composed for routine work
The Public Utility Commission: What does it do?

- Routine work
  - Sets revenue requirement and rates
  - Evaluates large investments and plans
  - Siting (many, not all)
  - Rules
- Exceptional work
  - Generic investigations
The PUC Exists in a Context (it is not all-powerful)

- An expert administrative agency, deference
- Nested in a political environment
- Statutes only begin to describe limits of PUC authority
- Latitude varies by state
  - “Leash” can be pulled by governor, legislature
  - Acting on behalf of stakeholders to “nudge” the PUC to do/not do
Stakeholders: A Rainbow of Interests

- Utility
  - What it specifically does
  - How it makes money (allowed return on equity)
  - How it raises money*** (investment grade debt)
- Consumers (all sizes, types, groups)
- Other interests (eco devo, environment, innovator)
- The Public Interest: some states have an office that advocates in the broad public interest
Regulatory Capture

- When the PUC is more interested in one group of stakeholders’ interests than the public interest
  - Not always easy to determine that this has happened until time passes
- Indicators of regulatory capture
  - Uneconomic behavior permitted, approved
  - Utility business protected against innovation
PUC staffs: Very important, possibly miscast for the future

- Staff composed of administrative lawyers, economists, power system engineers
  - Influential esp. with non-expert commissioners
  - Well composed for an earlier time
  - New challenges (cyber-security, climate)
  - New opportunities (behavioral science, digital, population statistics, distribution engineering)
  - Transition (process capabilities)
Comments on Existing PUC Process

- Rigid: evidence-based and legalistic, apart
- Routine: designed for typical types of litigation
- Expert: arcane jargon speaks to regulars

- Think of a Victorian Era dance with all the rules and repetition and the bowing
  - Except these partners are trying to win
Why is the PUC process the way it is? Protection

- Regulation is basically about protecting citizens from monopoly power of the utility
  - And in doing that, clarifying for the utility its job and how it will earn money
- “Sunshine” thought to avoid corruption
  - Public deliberations become theater, inhibit honest engagement by decision-makers
Manifestations of Protection

• Access to service for all
  • especially Hard to Reach Customers
• Fair dealing on
  • Connecting
  • Pricing
• Many other actions we rely on
  • Increasingly, barriers to entry
Protocols if Utility gets Competitive

- Complicated, but PUC has tools
- Create **Affiliate** to compete
  - With Affiliate Transaction Rules
- Codes of Conduct for **competitive activity within the utility company**
- Harder to oversee than a pure bright line test
  - Accept this burden if there is a public interest
One way to think about Power Sector Transformation:

• Reset the balance between Regulation and Markets
As the power sector transforms, how do we know how we are doing?

Utility Performance
4 How Transformation Happens
Pressure for Transformation has been building (this is global)

- A visit to a home store will discover many ways the utility business is under siege
  - Citizen/consumers/communities taking more agency in their energy choices
    - Saving or electrifying
    - Managing
    - Producing
    - Storing

Pressure for Transformation has been building (this is global)
What triggers transformation as government policy?

- Leadership
- Crisis
Nature of Innovation Applied to Power Sector

• Sources and Effects of innovation need space and dialogue, need perspectives of market actors
  • Many of these voices are unfamiliar with the PUC
Innovation and PUC process

- Safest path for utility is what got approved before
- Innovation is in opposition to routine
- Other vested interests use PUC process to block innovation

- If PUC only responds to utility proposals, transformation is far less likely
Once transformation is policy, what now?

- Process innovation is key
- Innovation not compatible with a hearing room
- Innovation is about new ideas, new voices
  - Many not comfortable with rigid PUC process
- Engagement in informal settings
- Dialogue, best if facilitated with direction based on state priorities
Process Innovation > actual innovation

Hint: Think ADR methods

- Open it up
  - Diversify from Evidence-based hearings
- Deploy workshops and informal opportunities
  - Dialogue, engagement, synthesis
- Build community of problem-solvers
- Tee up solutions for required decision hearings
- Process Innovation for Actual Innovation
A new dance: Policy Adoption Iterates with PUC Implementation

• Informal process engages community
• Informal process must lead to action at the PUC
• Action at the PUC leads to new questions suited for informal process
• And back and forth

• Informal process may need to be led by executive branch if PUC can’t/won’t
As many ways forward as there are states

- Common qualities for progress
  - Recognition by leaders of opportunity
  - A problem solving culture
  - Engagement of anyone
  - A dedicated website
A+ efforts

• Integrated state interests, redefining scope of the utility
• State leadership in command of issues, taking initiative in an orderly, stable manner
• Regional awareness
  • Including effects on wholesale markets
5 Risk
With all this complexity, the way forward can seem foggy.

Good news, there are solutions.
How to approach this big honking issue of PST? Prioritize

- **Money** issues
  - How we pay? (time sensitive pricing, others)
  - How utilities earn? (return on performance)

- **Engineering**
  - Push technology out (smart grid, smart meters, data management and analytics)

- **Planning**
  - Open up distribution system
How to approach this big honking issue of PST?

- **Resources** Overhaul Options
  - Which ones are rising/falling in cost/risk?
  - More **efficient** devices, processes, enterprises
  - Drive **renewables** faster (portfolio standards)
  - Keep the **nuclear** we have (ditto)
- **Procurement** (esp at distribution level)
- **Aggregation** (consumer choice aggregation)
- **Pricing** as a resource (big data and behavior)
How to approach this big honking issue of PST?

• Role of delivery utility could be quite different
  • Utility as a **Platform**
  • A business environment matching sellers and buyers of energy products and services
  • All consistent with managing the system with baseline reliability and protections
    • Utility compensated in ways consistent
Process Innovation

• Stable problem solving
• With political leadership
  • Inter-agency collaboration
• With clarity, vision from PUC
• With increasingly capable community of interests

• Don’t fail to take advantage of a crisis
What if climate science were as important as protection?

- Greening grid, electrification
- Social Cost of Carbon would factor into all utility investment and operating decisions
- Barriers to entry for clean energy resources would be minimized
- Customers free to choose more clean energy, causing additional investment
- Utility earnings connected to reducing carbon
State to State Competitiveness

- Race to the Top
  - In innovation
  - In spreading innovation to hard to reach places
  - In cost/carbon management
Experiences of Some Note
New York

- Ambition to change everything
- Minimal use of traditional regulatory methods
  - Staff white papers
  - Workshops and working groups
  - Comments and Reply Comments
  - Public Hearings (outside the state capitol)
California

- Approaching topics serially
  - Meanwhile, fires are disrupting everything
- Rate design
- Smart grid deployment
- Aggressive reform of wholesale markets
Most states don’t relate to NY and CA – others to watch

- Rhode Island – Power Sector Transformation
- Minnesota – e21
- Michigan – Power Grid
- Maryland – Empower, PC44
- Arkansas – DER and Grid Mod
- Illinois – Future Energy Jobs Act
- Nevada, Oregon, Carolinas, Washington, Texas
Suddenly, knowing a lot about the U.S. power grid became sexy at cocktail parties.
Resources: Transformation Websites

- New York Reforming the Energy Vision
- Transforming Maryland’s Electric Grid PC44
- Rhode Island Power Sector Transformation
- Michigan Power Grid
- Minnesota e21
- North Carolina Clean Energy Plan
About RAP

The Regulatory Assistance Project (RAP)® is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

Learn more about our work at raponline.org