A Thrill Packed Introduction To State Public Utility Commissions

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NARUC & Grants & Research

- NARUC members are the State PUCs
- G&R Dept. addresses research and facilitates dialogue on key questions facing Commissions
- 17 current projects covering infrastructure, environment, regulatory design, finance, security and other issues for the gas, water, electric, telecom sectors
- Demand-side & Clean Energy plays some role in about 1/2 of our projects

Partnerships with FCC, NCS, FERC, private sector, non-governmentals
Disclaimer

- These are opinions, not NARUC policy, nor policy of its members.

- There are 50 states + DC, with over 200 Commissioners. So there are at least 201 perspectives on everything, so I’ve had to be general.

- Everything will apply to some state, but there are exceptions to everything in here in some state too.
What is a Public Utility Commission?

- A quasi-judicial panel that sets the rates, terms, and conditions for the provision of essential services in the regulated utility sectors
  - (electric, gas, water, telephone, and sometimes transportation, ports, banks, petroleum, etc etc.)
- A commission has 3-7 members, staggered terms, bipartisan representation, appointed by Governors, Legislatures, or directly elected
- Focus on transparency, accountability, public participation, due process
## IOUs, Coops, and Munis

<table>
<thead>
<tr>
<th></th>
<th>Investor-Owned</th>
<th>Publicly Owned</th>
<th>Cooperatives</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Organizations</td>
<td>220</td>
<td>2,000</td>
<td>930</td>
<td>3,150</td>
</tr>
<tr>
<td>Number of Total Customers</td>
<td>102 m</td>
<td>20 m</td>
<td>17 m</td>
<td>140 m</td>
</tr>
<tr>
<td>Size (median number of customers)</td>
<td>400,000</td>
<td>2,000</td>
<td>12,500</td>
<td></td>
</tr>
<tr>
<td>Customers, % of total</td>
<td>73%</td>
<td>15%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Revenues, % of total</td>
<td>76%</td>
<td>14%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>kWh sales, % of total</td>
<td>74%</td>
<td>16%</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>
Who needs a mnemonic?
FERC jurisdiction is over “sale for resale”*

* Who doesn’t know what a mnemonic is?
Status of Electricity Restructuring

Source: Energy Information Administration, status as of April 2007
RTOs

Alberta Electric System Operator (AESO)

Ontario Independent Electricity System Operator

New England ISO

PJM Interconnection

ERCOT ISO

SPP RTO

California ISO

MISO RTO

April 2010
Commission Activities in Electricity

- Set the rates, terms, and conditions of monopoly utility services
- Ensure reliable, affordable, clean electricity
- Specific activities:
  - Planning
  - Siting
  - Cost allocation and cost recovery
  - Other stuff
Reliable:


*Electricity demand projections based on expected growth between 2006-2030
Reliability

- Standard setting
  - Technical: NERC
  - Resource adequacy
  - Safety & security

- Review and approve plans

- Regular updates (annual or otherwise)

- Penalties for non performance; incentives for high achievement
Affordable:
Estimated Cost of New Generation

- Nuclear
- Conventional Coal
- IGCC Coal
- Combined Cycle
- Combustion Turbine
- Wind
- Geothermal
- Concentrated Solar

Source: Compiled by FERC Staff from various sources. Cost estimates exclude carbon capture and sequestration costs.

2003-04
2008
$/kW

Per Eric Holdsworth, EEI

April 2010
Resource Planning

- IRP evaluates scenarios and chooses resource mix that has best reliability, affordability, and other desired attributes
- Even without IRP, portfolio management is gaining ground
Transmission Planning

- Western Interconnection
- Eastern Interconnection
- Texas Interconnection

- 230,000 volts
- 345,000 volts
- 500,000 volts
- 765,000 volts
- High-voltage direct current

April 2010
Infrastructure Siting

- Several Commissions have specific Siting Boards
- All commissions have some role in siting, even if indirect
  - Generation
  - Transmission
  - Inside the “city gates” gas infrastructure
  - Demand-side programs
- Local role in some states
- Quasi-judicial proceedings
  - Evidentiary hearings, site visits, conditional approvals
- Coordination among states
- Backstop interstate siting authority
Multiple agencies share oversight of siting (7)

Non-PUC agency has primary siting authority (2)

Multi-agency siting board (8)

PUC has primary siting authority (28)

No regularized oversight of siting (6)

Source: EEI, Transmission Line Siting Regulations 2001, updated by J. McGarvey
Cost recovery

- The regulatory compact is that a utility will have a monopoly and will have a hard time going broke because the rates are set to cover cost of service and revenue requirement.
- A description of a rate case.
- Warren Buffet: “This should be a good business to be in, but not a Great business.”
- Cost recovery as a balance between regulatory certainty and a risk-based incentive for innovation.
- Efficiency and decoupling and revenue, oh my!
Administer other programs

- Gas
- Managing RPS
- Managing efficiency programs
- Managing climate- and enviro-related programs (RGGI, loading orders, etc.)
- Overseeing public benefits funds
- Emergency preparedness & interdependencies
- Coordinate with other agencies
Renewable Portfolio Standards

www.dsireusa.org / April 2010

29 states + DC have an RPS (6 states have goals)

State renewable portfolio standard
State renewable portfolio goal
Solar water heating eligible
Minimum solar or customer-sited requirement
Extra credit for solar or customer-sited renewables
Includes non-renewable alternative resources
States with System Benefits Funds

Source: Pew Center on Global Climate Change
Climate Policy by State

Regional Initiatives

Source: Pew Center on Global Climate Change
Challenging Reliable, Affordable, Clean

- Regulators care about resource adequacy first and foremost, demand is growing and new supply is tough to get.
- The “golden era” of declining prices is probably over, and some big bills are coming due.
- Climate seen as a revolution-sized challenge facing the sector. Is it a trumping constraint or a third, equal factor in review?

“We cannot solve the most serious problems using the same thinking that created them.”

- Albert Einstein
Climate Legislation

Illustration of Economy-wide Emission Reduction Targets
Legislative Proposals Introduced in the 110th Congress as of December 1, 2008

- Business-as-usual projection
- McCain-Lieberman (S.280)
- Sanders-Boxer (S.309)/Waxman (HR.1590)
- Kerry-Snowe (S.485)
- Olver-Gilchrest (H.R.620)
- Bingaman-Specter (S.1766 without “safety valve”)
- Bingaman-Specter (S.1766 optional goal)
- Boxer-Lieberman-Warner (S.3036)
- Markey (H.R.6186)
- Doggett (H.R.6316)
The Many Charms Of Efficiency

Costs less than a power plant!

Pays you back – now with local benefits!

NIMBY-proof!

Terrorist-proof!

Hurricane-proof!

Hugo Chavez-proof!

Easy to install: no wires or pipes!

100% NOx and SOx-free!

Legal everywhere, and Yucca-free!

Bird / Bat-friendly!

Good-looking!

More Popular Every Day!
Conclusions

- State regulators play a broad role with wide-ranging responsibilities
- Regulatory policy has been an important driver for choices made about the electric system we have today
- The electricity system is changing and regulatory policy may need to change with it
- All supply choices are important to consider
- Energy efficiency appears to be the “no regrets” choice no matter what supply choices we make
I Will Now Confront Your Most Challenging Questions!

Or! Later if you prefer!

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