State Policy Strategies to Advance Energy Competition

Conservative Energy Network Conclave
12-16-20

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Overview

I. Historical view
II. Regulated monopoly model
III. Competition (restructuring)
   – Generation
   – Consumer choice
IV. Outlook & Policy Implications
Historical View

- Electricity produced and consumed instantaneously
  - Ultra non-durable good (minimal economic storage/shelf life)
  - Physical constraints → hard to balance
- Heavy scale economies, barriers to entry, lack demand participation
- Transmission and distribution (T&D) as shared infrastructure
  - Expensive duplicative investment, T&D and generation planning synergies
- Viewed as “natural monopoly”
  - Least-cost service from single provider → vertically integrated utility
Regulated Monopoly Mechanics

• Regulatory compact
  – Utilities granted exclusive service territories (monopolies)
  – Strict regulatory oversight of rates \( \rightarrow \) cost of service regulation
    • Project pre-approval, “used and useful” test, rate cases
    • Revenue requirement: amount utility must collect to cover all costs and RoR

Revenue Requirement = (Rate base x RoR) + Operating Costs + Depreciation + Taxes

• Monopoly regulation works well if:
  – Regulator fully informed
  – Regulator truly independent (and motivated)
  – i.e., works under “benevolent dictator” conditions
Regulated Monopoly Incentives

• Cost-of-service regulation
  – Socializes risk → severe lack of economic discipline
  – Disciplining agent: staying in regulator’s good graces
    • Avoiding “gross mismanagement” isn’t a high bar

• Industrial organization
  – Private monopolies free to seek profit
  – Regulated monopolies’ rent set by regulator
    → temptation to sway regulator

• Economic incentives
  – Indifferent to operating costs
  – Perverse capital cost incentive: the business of building rate base!

• Takeaway: Perverse economic and political incentives
Historic Monopoly Outcomes

• Mid-1900s
  – Economies of scale drove ave. electric cost declines
  – High demand growth masked investment mistakes & inefficiencies (e.g., overbuild, poor tech choice, misc. gold plating, foregone innovation)

• 1980s:
  – Demand and returns to scale declined → new investment inc. average costs
  – Monopolies saddled with unwanted assets and high costs
    • “Mega-project” cost overruns = worst outcome of perverse incentives
  – Calls for monopoly improvements → integrated resource planning (IRP)
  – Questioning “natural monopoly” of power generation
    • Economies of scale point downward
    • Reaganomics
    • Concepts emerge to liberalize electricity (like natural gas), e.g., spot pricing
  – Calls for market reform (fed and state)
Restructuring Emerges

- Competitive generation (i.e., wholesale)
- Competitive retail markets (i.e., retail choice)
- T&D remains regulated monopoly
ONLY Texas Fully Restructured

Fully Restructured
- Competitive Parent
  - Competitive Retailer
  - Competitive GenCo
- Utility Holding Co.
  - Distribution Monopoly

Quasi-Restructured
- Utility Holding Co.
  - Competitive GenCo
  - Competitive Retailer
  - Distribution Monopoly & Default Retailer
Competitive Generation Benefits

• Generation retirement
  – Merchants retiring unprofitable legacy plants
  – Monopolies retain uneconomic plants
• Generation construction
  – Merchants investing in lower-cost/risk new entry
  – Monopolies pursue highest-acceptable rate base entry → mega-project déjà vu
  – ROEs lower for merchants

Former SCANA executive pleads guilty to fraud

Source: O’Connor (2017)
Consumer Choice Benefits

- Match products to consumer preferences (e.g., risk exposure, clean energy)
- Product innovation
- Customer service

Percent Load Switch in Restructured States

Source: O’Connor (2017)

J.D. Power and Associates Reports: Deregulation of Texas Retail Electric Market Leads to Increasingly Satisfied Customers. Texas Electric Customers Are Now More Satisfied With Electric Retailers than With Regulated Utilities

Champion Energy Services Ranks Highest in Customer Satisfaction with Texas Residential Retail Electric Service Providers for a Third Consecutive Year

Aug 15, 2012, 09:00 ET from J.D. Power and Associates

Share of Sales from Retailers (2014)

Envir. Benefits of Elec. Competition

Structural Reform: Monopoly → Markets

• Rapid platform change
  – Innovative new entry drives emissions cuts long-term
• Plant efficiency gains → reduce fossil burn
• Trading optimization → better renewables integration
• Lower envir compliance costs
• Consumer choice allocates “green premium” efficiently, fairly
• Distributed resource participation

“Innovation thrives in a competitive environment; it’s an indulgent luxury in a regulated monopoly.”
- Lynne Kiesling & Dick Munson
Outlook: Case for Competition Grows

• Historical conditions: markets advantageous
  – Simple technology choice (e.g., gas vs. coal)

• Future conditions: market advantage grows
  – Heterogeneous supply
  – Dynamic supply-demand
  – Distributed tech
  – Decentralized decisions
  – Digitization
    • Consumer empowerment
  – Granular prices
CAUTION: Rent Seeking

• Quasi-restructured risk
  – Ohio case: Duke divested vs. entangled monopolies

• Monopoly reg: information asymmetry grows

• Stock turnover → incumbent displacement

• Synergy with climate & green industrial policy
Key Takeaways

1. Power generation is NOT a natural monopoly

   “Quarantining the monopoly appears to be the single most effective approach to bringing about robust retail competition. It may be the only effective approach.”

   - Giberson & Kiesling, Cato Regulation Magazine

2. Retail choice excels when implemented properly
Policy Implications

1. Restructure properly.
   A. Thorough generation divestiture.
   B. Remove monopoly default service.
   C. PUCs rectify cross-subsidies and vestigial relations.

2. Discipline: let markets work!

3. New frontier: T&D competition (even Texas!)