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# State Policy Strategies to Advance Energy Competition

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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  $\rightarrow$  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  $\rightarrow$  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  $\rightarrow$  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
    - $\rightarrow$  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



Regulator was 'dear

friend' of Edison

alifornia Public Utilities Commissio

resident and utility executives were more

### **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  $\rightarrow$  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  $\rightarrow$  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





### **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 20%
  - ROEs lower for merchants

### The Post and Courier

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



- Switched Total/Eligible Total Percent

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)



Source: O'Connor (2017)

Source: Borenstein & Bushnell http://www.nber.org/papers/w21113.pdf

# Envir. Benefits of Elec. Competition

### <u>Structural Reform: Monopoly $\rightarrow$ Markets</u>

- Rapid platform change
  - Innovative new entry drives emissions cuts <u>long-term</u>
- 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  $\rightarrow$  incumbent displacement
- Synergy with climate & green industrial policy

Vs.

How Utilities Team Up With Greens Against Consumers WSJ | OPINION

Oregonians are learning that electric companies like renewables because costlier systems increase profits.

Putting Consumers & Climate First

Governor Pritzker's Eight Principles for a Clean & Renewable Illinois Economy

### Key Takeaways

### 1. Power generation is NOT a natural monopoly



# 2. Retail choice excels when implemented properly

"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



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R STREET POLICY STUDY NO. 205 September 2020

#### ELECTRIC COMPETITION: THE ANTIDOTE FOR BAD BEHAVIOR

By Devin Hartman and Mike Haugh

### **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!)



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