

History and Principles of Rate Regulation

NARUC Energy Regulatory Partnership Program

The Public Services Regulatory Commission of Armenia
and The Iowa Utilities Board



by Joan Conrad
Chief of Staff
Iowa Utilities Board
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U.S. Electric Power System Development

1882 – 1907

- September 4, 1882 - Thomas Edison's Pearl Street electricity generating station in New York City – 85 customers – short distances
- Introduced the four key elements of a modern utility system
 - Reliable central generation
 - Efficient distribution
 - Successful end use (in 1882 – light bulb)
 - A competitive price



U.S. Electric Power System Development

1882 – 1907

- 1886 – George Westinghouse perfected a practical alternating current system that allowed electricity to be transmitted greater distances. The practical application was his hydroelectric dam built at Niagara Falls to deliver power to Buffalo, New York – 20 miles away
- Utilities owned by cities sprung up across America and were eventually consolidated into large electric power holding companies



U.S. Electric Power System Development

1907 – 1935

State Public Service Commissions

- Utility service areas began crossing city boundaries and state lines
- Many states established state public service commissions
- Iowa established a PSC in 1911 to regulate the location of electric transmission lines and rates
- Today, all 50 states have a utility commission



U.S. Electric Power System Development

1935 – 1960s

By the 1920s, 16 large holding companies controlled 75 percent of all U.S. generation.

Federal Action - 1935

- To counter abuses beyond State control – Public Utility Holding Company Act of 1935 – established federal regulation of interstate wholesale transmission and sale of electric power
- Rural Electrification Act 1936 – only 11% rural electrified



U.S. Electric Power System Development

1935 – 1960s

- To avoid redundant systems and parallel distribution lines – most states granted exclusive territory rights to utilities
- These monopolies were profit regulated and required to serve all customers in their territory
- 1950s and 1960s – post WWII stability – demand for power
- Infrastructure expansion, industry consolidation, new technologies, declining unit costs



U.S. Electric Power System Development

1970s – 2000

1970s – Social regulation

Excess capacity, consumer protection, environmental regulation (EPA), inflation, energy crisis, conservation, problems with nuclear

1980s and 1990s – Regulatory reform

Technological breakthroughs, emerging markets, vertical separation, access, introduction of competition, partial deregulation



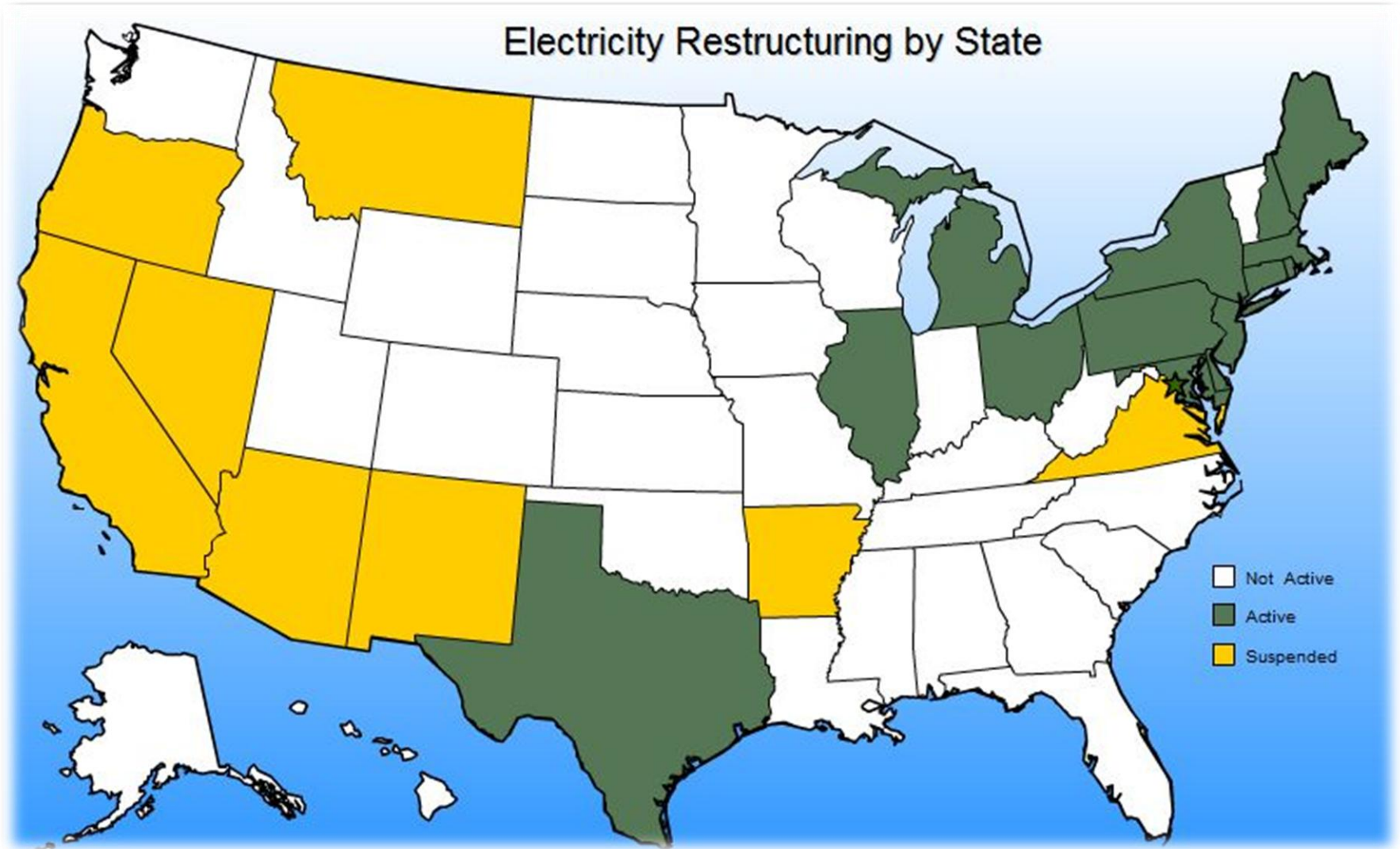
U.S. Electric Power System Development

2000 to present

Industry consolidation, jurisdictional issues, price impacts, concerns about market performance and power, infrastructure needs, environmental constraints, reconciling markets and regulation, possible reregulation in the public interest



Deregulation in the U.S.



Objectives of Economic Regulation

In the early 20th century, states granted monopoly franchises to electric utilities

State utility commissions relied on ratemaking to substitute economic regulation for competition in the market



Objectives of Economic Regulation

What stakeholders want:

- **Utilities** – Reasonable certainty and a fair return on investment to insure financial viability
- **Customers** – Safe, reliable, and nondiscriminatory service at fair, reasonable, stable, and affordable rates
- **Regulators/Society** – Utility services that promote the public interest, including price signals that encourage efficient use of resources and promote other social goals



Sectors Subject to Price Regulation in Iowa

Electricity:

Investor owned utilities

Generation/distribution – state

Transmission – federal

Rural electric cooperatives and municipals

IUB does not regulate rates



Sectors Subject to Price Regulation in Iowa

Natural Gas:

Commodity is deregulated but state sets rates for distribution and service

Telecommunications:

Retail telephone rates are deregulated

Water:

Companies with over 2,000 customers



Sectors Not Subject to Price Regulation in Iowa

Local retail telephone

Long distance telephone

Cellular rates

Fuel oil

Propane

Almost all water systems



Ratemaking Principles

Three basic elements:

1. Determination of revenue requirements for a normal base or test year.
2. Allocation of costs to customers based on usage patterns.
3. Rate design to recover costs through rates and charges (tariff).



Ratemaking Principles

Regulation focuses on four Ps:

Prudence (investment)

Profits (returns)

Prices (rate design)

Performance (service)



IUB Rate Case Steps

1. Utility notifies customers of proposed rate changes
2. At same time utility files formal petition with IUB.
Ten-month statutory deadline for decision.
3. Public input and customer comment hearings
4. Intervention by interested parties
5. Direct, rebuttal, and reply testimony pre-filed by parties
6. Evidentiary hearing for cross-examination of testimony
7. Post hearing briefs
8. IUB decision meeting
9. Order issued



Political Impact of Regulatory Decisions

Generally, in Iowa, the Governor and state legislature lets the IUB do its job. However, there are legal, public ways for them to exert pressure:

- Through the Governor's reappointment power
- Through the Senate's confirmation process
- Through the media
- Through their constituents



Acknowledgements

Sources for this presentation include:

Janice A. Beecher, Introduction to Theory, Principles, and Concepts of Public Utility Regulation, Institute of Public Utilities, August 4, 2008.

Ken Rose, Electricity: Economics, Structure, and Regulation, Institute of Public Utilities, August 4, 2008.



Questions?



Joan Conrad
Iowa Utilities Board
joan.conrad@iowa.gov

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