

The Historical Context

100 Years of Regulated Utilities

The Vertically **Integrated Utility**

- Serves a defined region
- Controls generation, transmission, distribution
- Protected from competition

1990s: Deregulation &

Competition Introduced

Rates approved by regulators



Players in the Power Market

Government

Utility Commission & Legislature

Oversight

Market Monitor

Looks for economic efficiency

Market Operator

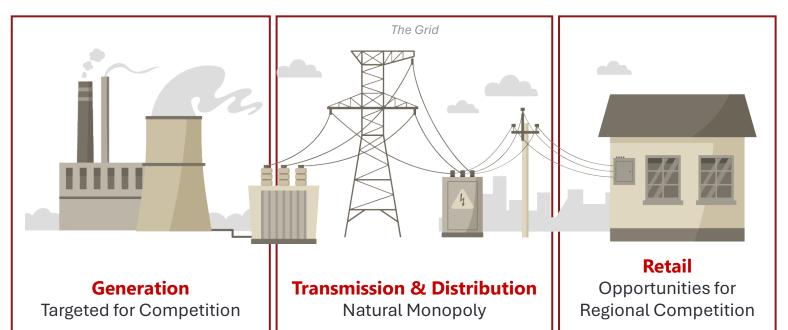
Independent System Operator (ISO)

Power Marketers

- Buy fuel, sell power
- Buy power, resell power

Operations & Settlement

Vertically Integrated Utility





The Grid as a Natural Monopoly

1

High Barriers to Entry

land & capital

2

Minimum Efficient Scale

capacity: customers

3

Competition Raises Costs

& infrastructure



Competitive Power Generation Emerges

- Market-based returns
- Strategic decisions = profit or loss
- Ratepayers shielded from risk

Regulated Utility	Competitive Generator
Fixed return via rates	Market-driven returns
Franchise rights	Compete on price/efficiency
Can own generation	Must choose wisely (fuel/site/etc.)
Must act "reasonable & prudent"	Risk is on investor, not customer



New Pressures, New Questions



Explosive Load Growth

data centers, EVs, electrification



Strategic Generation

timely and cost-effective



Challenge to Serve Demand

without exposing ratepayers to speculative risk



Introducing Today's Panel















High Electricity Growth Forecasts

