



**Lighthouse
Energy Institute**

American Enterprise Institute

Vertical Integration or Decentralization in the Power Sector

September 23, 2026

Who We Are

LEI is an independent, nonpartisan think tank. Our mission is to provide information that improves the quality of energy and environmental institutions and policies. LEI achieves this by conducting honest, robust research and education consistent with three principles: competitive markets, limited government, and quality institutions.

Facilitating Competition Requires Vertical Unbundling

Cost-of-service (CoS): regulation *substitutes* for competition

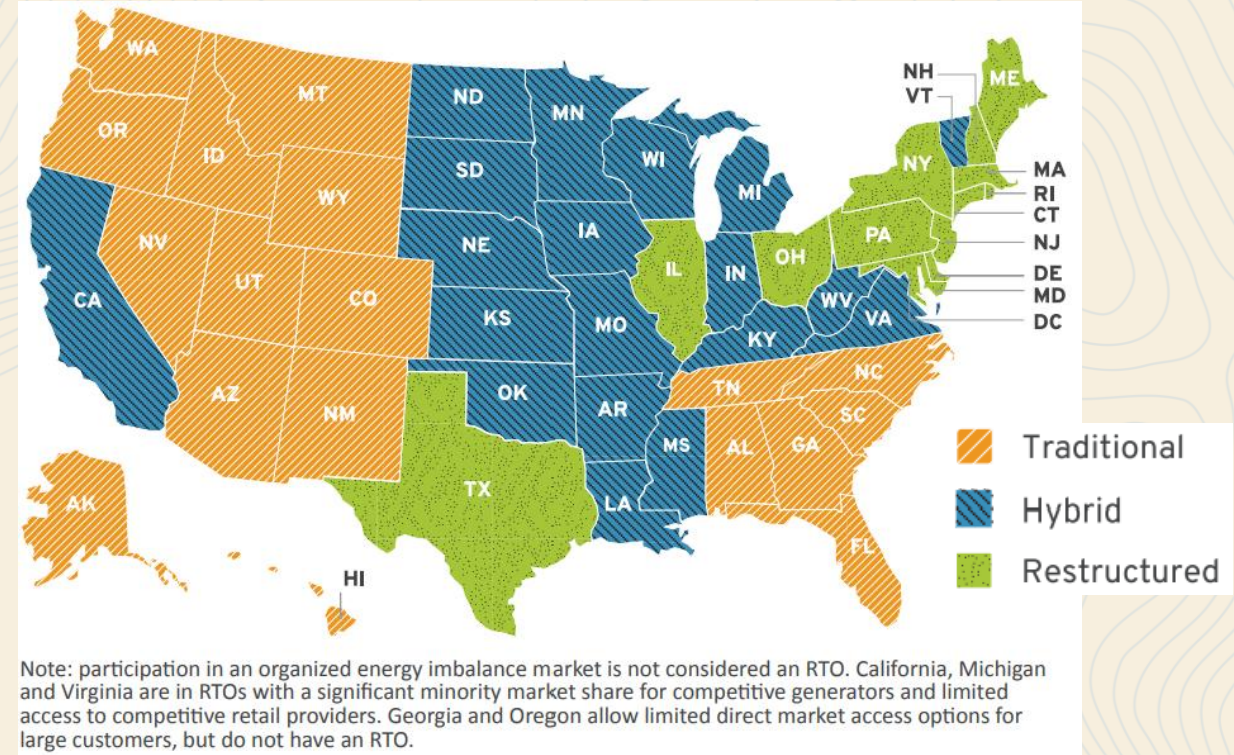
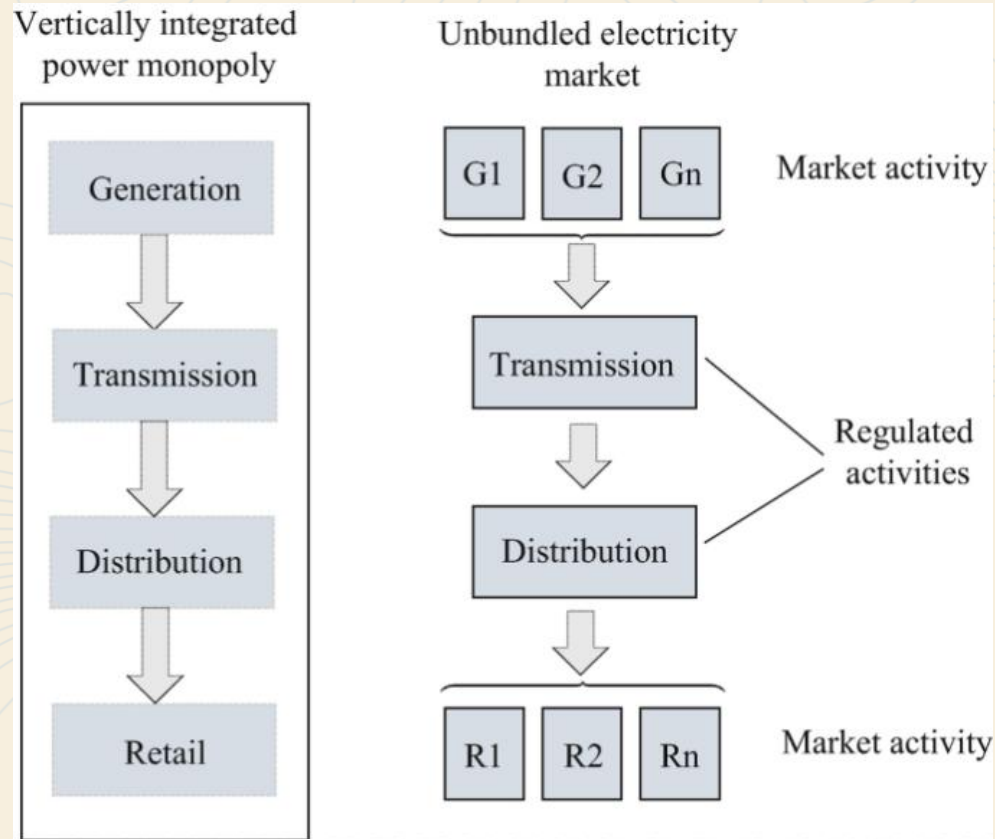
- Natural monopoly premise: supply and delivery
- Goal: correct for perverse utility incentives (boost rate base, RoR)
- Reality: major economic discipline probs
 - Moral hazard: high costs, stranded assets
- Consumers & economists call for competitive reforms

Restructured: regulation *facilitates* competition

- Necessitates vertical unbundling
- Separate competitive supply from CoS delivery
 - Lose supply-delivery synergies
- Parallels to, but more complex than, telecom, natural gas, railroad liberalization
- Supply: generation and retail components

Merits: does competitive supply > side effects of unbundling?

Structural Overview



RTO/ISOs facilitate wholesale competition

- Independent market admin required for restructuring
- Optional for integrated utilities (hybrid vs. traditional)

Restructuring Effects

<i>Supply cost</i>	<i>Supply risk</i>	<i>Demand participation</i>	<i>Innovation</i>	<i>Environment</i>
<i>Transparency</i>	<i>Transmission & Distribution</i>	<i>Interconnection</i>	<i>Reliability</i>	<i>Market power and manipulation</i>
<i>Electoral governance</i>	<i>Grid governance</i>	<i>Business customer welfare</i>	<i>Residential customer welfare</i>	<i>Customer self-supply</i>



Beneficial



Inconclusive



Harmful

Investment Supply

Core restructuring thesis, under-examined

- *Shifted incentives, locus of decisions*
- *Causal econ efficiency evidence (2025 study)*
- *CoS distorts investment decisions (2025 study)*

2000s: unrealized load growth, megaprojects

- *CoS socialized cost/risk (4 plants: \$40B excess)*
- *Competitive generators more prudent, incur own mistakes*

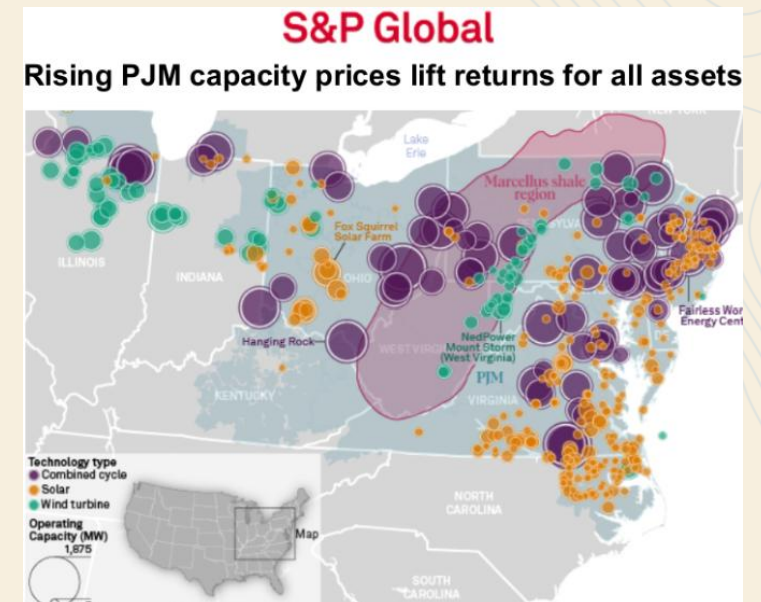
2010s: coal retrofits vs. gas builds

- *Market decisions outperform CoS*

2020s: load growth, high entry barriers, gov't interference, CoS renewables start

“wholesale competition worked as intended...easy entry and exit markets of ERCOT, California, and the Northeast, and much more slowly in the vertically integrated Midwest, West and Southeast.”

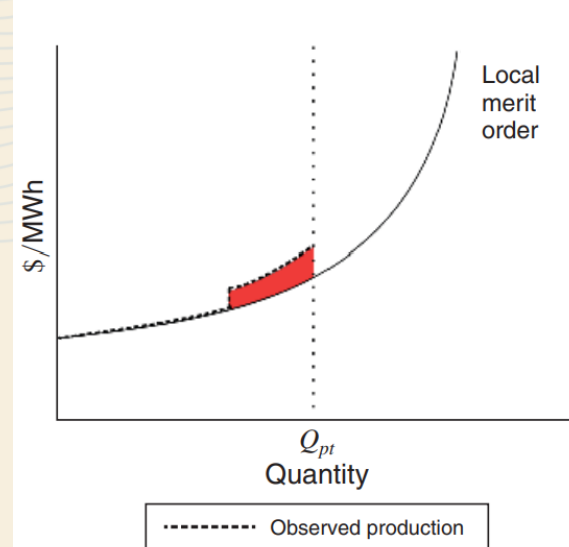
- DOE Electric Markets & Reliability Report lead (2017)



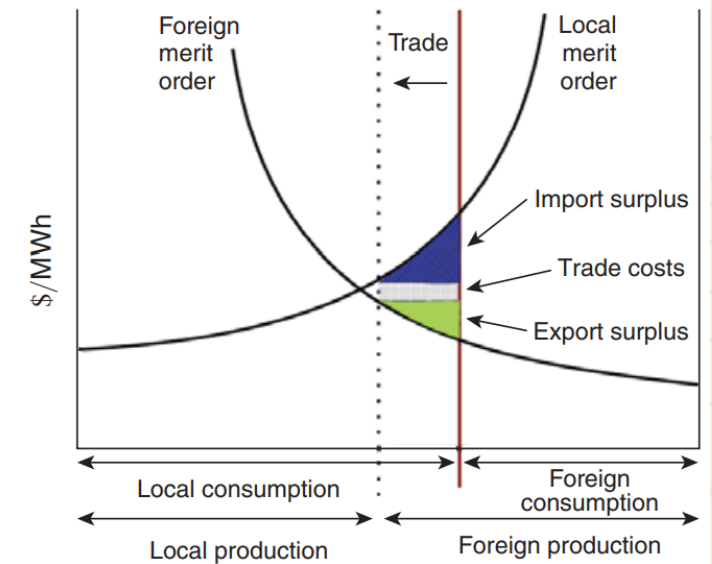
Operating Supply

- *Secondary restructuring thesis, well examined*
- *Operating costs decline under competition*
- *Substantial nuclear operating efficiencies & innovation*
- *Trade gains: cost savings & reliability*
- *Lower envir., RPS compliance costs*
- *Lower fossil fuel costs*

Panel A. Out-of-merit costs



Panel B. Gains from trade



Side Effects Unclear

Transmission & Distribution (T&D)

- Theoretical joint transmission-generation planning advantages of vertical integration
 - In practice: utility resource planning is rarely “integrated” usefully
- Vertical integration discourages efficient inter/regional transmission development
- Stronger T&D overcapitalization incentive for restructured utilities
- Transmission having stronger merchant ties

Interconnection

- Vertical integration has less coordination friction between utility-owned supply & delivery
- Utilities gatekeep third parties
- RTO interconnection problems often vestiges of vertical integration
- ERCOT (most restructured) has lowest interconnection barriers

Merits: competitive supply cost & risk benefits > side effects of unbundling

Price Effects

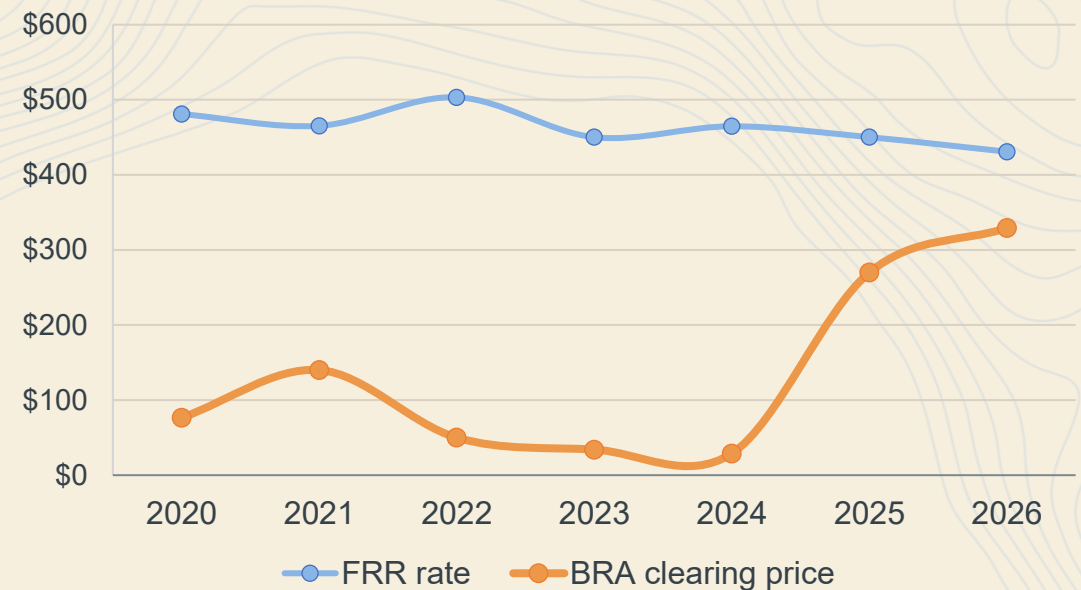
Competition: lowers cost curve, needs dynamic market power mitigation to translate into downward price pressure

- *Energy & ancillary service markets = competitive results*
- *Capacity markets = mixed results (still outperform CoS procurement)*
- *Inflated ave. costs (utility) vs. marginal costs (market)*

Exogenous factors > industry structure (e.g., SE vs. NE)

- *Exogenous costs: gas, labor, land, taxes, mandates, envir. compliance, surcharges, permitting, siting*
- *Intraregional: e.g., Midwest, Mid-Atlantic*
- *Large C&I vs. small residential differences*

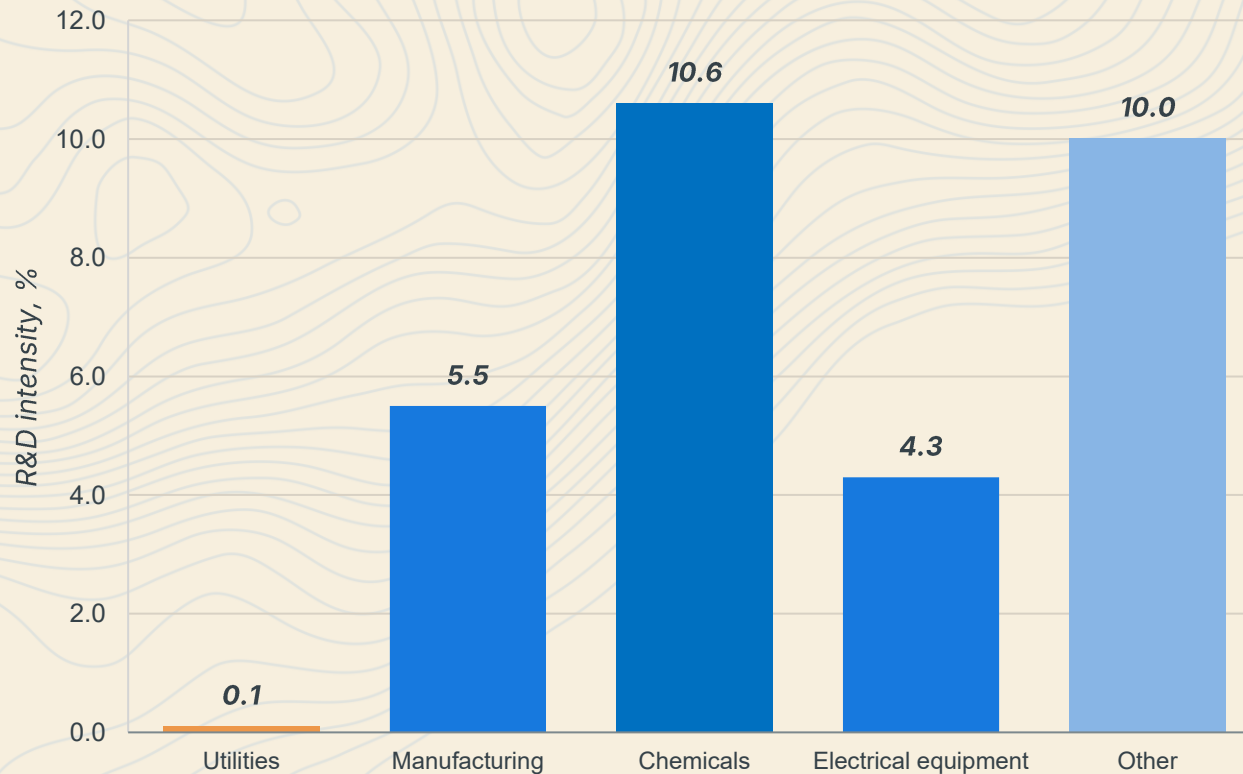
PJM Base Residual Auction (Market) vs. Fixed Resource Requirement (Utility)



Note: 2027 BRA clearing price: \$333.44/MW-day. Market price cap effects on new entry bear watching.

Innovation

Research and Development (R&D) Intensity by Industry, 2023



CoS:

- CapEx-additive innovation
- E.g., conventional nuclear, coal gasification

Markets:

- Cost-cutting or service enhancement innovation
- E.g., op efficiencies, combined cycle gas, solar+storage

Environment

Restructured markets induce emissions reductions by ...

- *Accelerating capital stock turnover*
- *Improving power plant efficiency*
- *Superior intraregional dispatch, interregional trade*
- *Lowering unconventional resource barriers (renewables, storage)*
- *Improving demand flexibility*
- *Responding more robustly to consumer envir. preferences*
- *Responding more robustly to envir. policy*
- *Innovation*

Countervailing effects (limited)

- *Nuclear retirements*
- *Isolated coal dispatch increase*

Customer Experience

Self-supply: markets lower barriers, align incentives (e.g., resi batteries, data center colocation)

Business customers: markets advantageous

- *Larger users (benefits > transaction costs)*
- *Products tailored to customer preferences*
- *Products tailored to customer configurations*
- *Off-grid, on-grid/hybrid, off-to-on grid (bridge)*
- *Far greater demand flex/response participation*
- *Commercial & industrials pushed for markets*
- *Data centers see load growth market advantage*

Residential customers: mixed evidence

- *Experience reflects implementation quality*
- *Quality → savings & customer preference matching*
- *Market failures: e.g., info deficiencies*
- *Gov't failure to "quarantine the monopoly" (e.g., monopoly-competitive market cross-subsidies)*

Ohio Case

"electricity prices have increased following retail restructuring in all service territories in Ohio, with significant favourable welfare effects observed only in the Cincinnati area, where key policy implementation stages were not circumvented." – Dormady et al., (2018)

2025: Ohio passes HB 15, eliminating cross-subsidies

Retail Competition Quality Variance

Alabama F	Alaska D	Arizona C-	Arkansas D+	California C+
Colorado C	Connecticut C+	Delaware B	District of Columbia B+	Florida D
Georgia D	Hawaii C-	Idaho D-	Illinois B+	Indiana D
Iowa D	Kansas D+	Kentucky D+	Louisiana D+	Maine B
Maryland C	Massachusetts B-	Michigan C	Minnesota D-	Mississippi D-
Missouri D	Montana C-	Nevada D+	New Hampshire B-	New Jersey B-
New Mexico D	New York C+	North Carolina C-	North Dakota D	Ohio B+
Oklahoma D	Oregon C-	Pennsylvania B+	Rhode Island B	South Carolina D+
South Dakota D	Tennessee D	Texas A-	Utah D-	Vermont C-
Virginia C+	Washington D	West Virginia D	Wisconsin D-	Wyoming D-

Governance

Electoral governance

- CoS reg: perverse political incentives
- Elevated cronyism, corruption cases
- Markets better, not immune to rent-seeking

Grid governance

- CoS reg info asymmetry growing
- Transparency: market institutions > CoS
- Market institutions → complex market & gov't failure
- RTO accountability and incumbent-influenced rules
- Wholesale-retail disconnects (e.g., PJM)
- Greater state/fed market interventions



“rent-seeking strategies and the political maladies”

– Alfred Kahn

Current Developments

Texas (ERCOT) best restructured → performance outlier

- Unmatched innovative entry, demand flex, & load growth

Rising marginal costs → market rate pressures

Huge investment/demand growth risk → market advantage

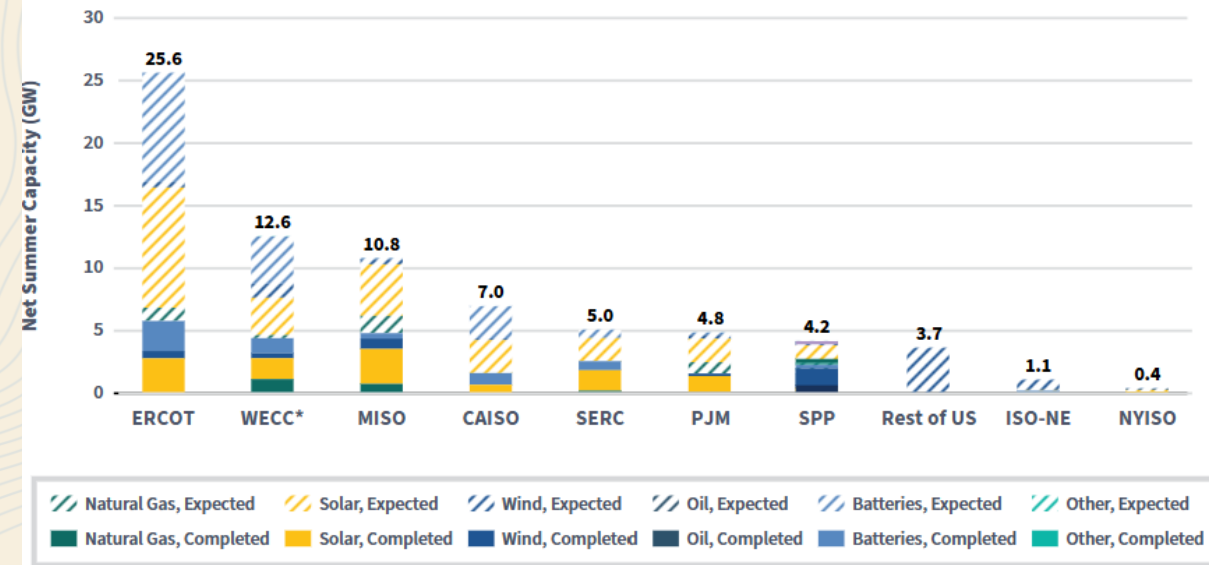
Large load responsiveness

- Large load tariff efficiency vs. cost allocation
- Interconnection: ERCOT efficient, other RTO/ISOs delayed but improving
- CoS utilities self-selectively quick, scale limits (e.g., Entergy)
 - Gatekeep consumer-third party supplier deals
- Financing constraints (CoS utilities lack balance sheet expansion)
 - Fitch downgraded utilities to 'deteriorating'

Emerging: deeper restructuring for business customers

- Benefits large loads, best insulates other customers (e.g., OK, VA, IN, WV, LA)
- Ratepayer Protection Pledge compliant: "build your own generation" (and transmission?)
- Residential remainder: restructuring vs. monopsony (i.e., gen competition, universal default service)

Figure 15: Electricity Capacity Additions (Oct 2025 - Sep 2026)



“One of the key differentiation factors for Entergy has been the up front cash received from customers that has allowed the company to only require ~15% equity financing of capex.”

– Jefferies 9/8/26

Takeaways

Restructuring outperforms CoS, when implemented well or moderately well

- *High-quality CoS regulation may outperform low-quality restructuring*

Will political economy support adequate restructuring implementation?

Electricity economics increasingly market-conducive

- *Generation diversity, customer partial self-supply configurations, storage utilization, retail in digital age, merchant transmission, "privatize" resource adequacy (differentiated reliability)*

Would vertical integration under incentive-based regulation close much of the CoS-restructuring performance gap?

- *Incentive regulation hard to implement durably*



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Thank you!

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