Industry Consolidation and Corporate Complication:
Forty Years of Regulatory Deference

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Context: For mergers and acquisitions, where are the conflicts between private interest and public interest?

M&A transactions: Sales of control of public franchises for private gain, undisciplined by competition producing a concentrated, complicated industry no one intended

The potential harms and risks: Economic waste, misallocation of gain, competitive distortion, customer risks

The regulatory lapses: Visionlessness, reactivity, deference

Institutional and attitudinal solutions: Regulatory posture, practices and infrastructure

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This presentation contains my views only. They are not necessarily the views of the Federal Energy Regulatory Commission, its Chair, or any of the Commissioners.

I. Context: For mergers and acquisitions, where are the conflicts between private interest and public interest?

A. Over the past 40 years, nearly a hundred transactions have transformed the electric industry.

1. As of the early 1980s, electric customers were served by several hundred retail utility monopolies, most of them independent companies with no affiliates, serving customers in a single state-granted service territory.

2. As of 2024, most of those utilities are now subsidiaries of conglomerates—multistate, sometimes multinational.

3. Each of those formerly individual utilities was a starting point for, but now a minor member of, these multibillion-dollar organizations.

B. These transactions change market structure, sales relationships, and corporate structure.

1. On the positive side is the potential to realize economies of scale and scope, to strengthen a company financially, to make the company perform better.

2. On the negative side is the potential for damage to competition arising from unearned advantage and anticompetitive conduct.

3. Also on the negative side are the risks of complication:

   a. Will the **risks** of non-utility businesses affect the cost of capital to the utility businesses?

   b. Will assets created with ratepayer dollars for utility purposes **subsidize** the utility's non-utility activities?

   c. Will management be **distracted** from its core purpose of delivering essential services to the public?

C. Always in regulation, the central question: Where are the conflicts between private interest and public interest?

1. There is inherent tension between the private interests of the merging companies, and the public interest that regulators have a duty to promote.

2. In the M&A contact, what are those tensions?

3. What regulation is necessary to align the private interest with the public interest, cost-effectively?

4. What regulation is necessary to ensure that these transactions make an efficient contribution to customer welfare?

II. M&A transactions: Sales of control of public franchises for private gain, undisciplined by competition producing a concentrated, complicated industry no one intended

A. Terminology: Acquirer, target, merger, acquisition

1. The acquirer is the corporate purchaser of the utility, from its current owners. The current owners would normally be individual and corporate stockholders of the to-be-acquired utility or its holding company owner. These current owners are the ones who receive the gain discussed below.

2. The target is the corporation being purchased from its current owners. The target is the individual utility or the holding company that owns the utility.

3. Merger, acquisition: Among lay speakers, these two terms have become near-synonyms, but technically they are different. A merger technically produces one company out of two, with the owners of each of those individual companies become owners of the merged company. An acquisition is, technically, a buyout. The acquirer replaces the target's current owners as the target's new owners. So in a merger, both sets of original owners remain owners; in an acquisition, the owners of the target depart.

4. My writings, and this presentation, address both types because what is common is the consolidation of multiple companies from different families into a single family.

B. Diverse strategies, common purpose: Selling public franchises for private gain

1. The transaction's essence: Transfer control of a government-protected, monopoly franchise from current diverse shareholders to a single corporate owner

    a. Utility merger strategists **buy and sell market position**.

b. **In effectively competitive markets**, market position comes from competitive success—**merit**.

c. In **utility monopoly** markets, market position comes from the **government**—when it grants an exclusive franchise to provide an essential service.[2] That exclusive franchise provides the target with a stream of government-established, predictable earnings. That stream of predictable earnings—from customers of a monopoly service—is attractive to the acquirer.

2. The acquirer's and target's dual purpose: Monetize the government-granted franchise

a. **The target's goal**

(1) The target seeks to sell control of the franchise to the highest bidder for the **highest possible price**. How do we know? The target is required to file proxy statements with the SEC. In these proxy statements, the target company's management seeks to prove to shareholders that management is maximizing their wealth.

(2) These proxy statements reveal that the target's CEO acts as an auctioneer—working the phones, seeking bids, then pushing bidders to raise their bids until all but one drop out.

b. **The acquirer's goals**

(1) The acquirer wants **control of the utility's predictable earnings.** The utility wants to **buy customers**—customers made captive by the state government's decision to protect the target from competition. (As discussed in Ch.2)

(2) The acquirer then can use the target's monopoly position as a **platform** from which to increase its earnings. Consider the multiple paths:

(a) Increase the value of generation assets

[2] For more on the subject of exclusive franchises, see Chapter 2 my book *Regulating Public Utility Performance: The Law of Market Structure, Pricing and Jurisdiction* (2d edition American Bar Association 2021).

(b) Increase the acquired utility's rate base

(c) Gain advantages in competitive markets

(d) Balance business portfolios, diversify regulatory risk

c. **The mutual goal**: Monetize the target utility's market position.

3. Missing from the transaction's private purposes: Customer benefits

How do we know this?

a. Acquirers compete for the target's favor on **price**, not on **performance**

b. When a transaction's primary purpose is monetizing a monopoly position—when the target seeks the **highest price rather than the best performance**—customer benefits, if any, become incidental.

c. In fact: The higher the price paid by acquirer, the fewer benefits for the target's customers. Why? Because paying a high price increases the acquirer's debt, reducing its ability to invest in improving the utility.

d. When the two companies bring their transactions to commissions for approval, they talk of customer benefits. But those benefits were not the reason for the transaction. Claims of customer benefits serve **regulatory strategy**, not **transactional purpose**. They are post-hoc justifications..

e. Proxy statements make no mention of customer benefits.

C. Missing from utility merger markets: Competitive discipline

1. In **competitive markets**, the target's desire for highest price, and the acquirer's desire for new earnings, are disciplined by this simple fact: the **merged entity's customers can shop elsewhere**. So **competition among product sellers for the target's customers disciplines competition among acquirers for the target's shareholders**. Because customers have freedom, competitive market pressures align all three interests: acquirer, target shareholders and customers.

2. But in mergers involving regulated monopolies, competitive market pressure is missing because customer freedom is missing.

3. This absence of competitive pressure means that prospective merging partners need not create customer benefits. They can subordinate customer benefits to shareholder gains, yet suffer no loss of earnings.

4. **Upshot**: Mergers in competitive markets have no choice but to **create new value** for customers. Monopoly market mergers, by leaving the acquirer in debt and reducing competition, are more likely divert value from customers.

D. The structural result: Concentration and complication no one intended

1. **Concentration:** chronological and geographical

   a. Before the 1980s, most electric utilities were **standalone**, local, pure-play companies, each serving a single territory. Today most are **minor members of multi-state, multi-billion-dollar, multi-product, multi-market holding company systems**.

   b. Nearly 100 mergers in 40 years have concentrated control, in fewer and fewer hands, of assets whose value was created by customers. These assets are the utilities' monopoly franchises, along with their generation, transmission and distribution assets, and their financing. Now only about 14 electric utilities remain uncoupled with some other franchised utility. See Appendix.

   c. **Chronological view**: From the 1986 merger of Cleveland Electric Illuminating and Toledo Edison to the 2018 acquisition of South Carolina Electric & Gas by Dominion Energy, mergers have been continuous. See Appendix.

   d. The **ten most active acquirers** now own what used to be **sixty-four independent utilities**—over half the U.S. total. See Appendix.

   e. **Eighty-three** formerly independent utilities are now owned by **thirteen** holding companies. See Appendix.

   f. **Geographical view**: intra-regional, inter-regional, international: The early mergers were intra-regional. They involved either adjacent utilities, or non-adjacent utilities sufficiently proximate to allow generation-and-transmission sharing. With Congress's 2005 repeal of the Public Utility Holding Company Act of t1935, remote utilities have merged with no pretense of integration.

g. **Acceleration**: Mergers of the previously merged. See Appendix.

2. **Complication:** business activities, corporate structure, financial structure

a. Business activities

(1) Diverse subsidiaries in different industries involving different risks

(2) Geographic complication

(3) Type-of-business complication

b. Corporate structure

(1) Multiple corporate layers with executive power residing atop the pyramid

(2) The utility's relationship to its shareholders is now indirect and complex.

(3) The types of ultimate shareholders has changed. Fewer widows and orphans, more hedge funds.

c. Financial structure: More debt located at more layers

3. Compare Baltimore Gas & Electric and Madison Gas & Electric. <u>Before the 1980s, BG&E looked like MG&E</u>. So did most electric utilities—each one a stand-alone company serving a single local territory, with a few minor affiliates created mostly to support its primary operations. Today, most electric utilities look like BG&E—one subsidiary among many, a minor part of a multi-state, multi-billion dollar, multi-product, multi-market holding company system. See Appendix.

III. The potential harms and risks: Economic waste, misallocation of gain, competitive distortion, customer risks

A. Suboptimal couplings cause economic waste

1. In choosing acquirers, target companies elevate price over performance. Because a monopoly market lacks a competitive market's discipline, the highest-price acquirer won't necessarily be the best performer. Suboptimality results from:

   a. Opportunity cost

   b. Portfolio risk

   c. When the target utility selects its acquirer based on price rather than performance, **does the utility violate its legal duty to its customers?** What about when the Commission approves the transaction?

2. Commissions either overlook this misplaced priority, or they accept it as normal. Most commissions focus on **avoiding harm**, instead of insisting on the **most cost-effective couplings**.

3. "No harm": Is it the correct benefit-cost ratio?

   a. The investors' standard: Highest possible return for a given risk level

   b. The commissions' typical standard: no harm, with some minor variations

      (1) No harm

      (2) No harm plus a defined benefit

      (3) No harm plus an undefined benefit

      (4) Harm is permissible if outweighed by benefit

   c. **No-harm conflicts with classic prudence analysis.** Suppose a utility has a worn-out widget. Say its operating cost is $10/hour. As replacement, the utility buys a new $10/hour widget though an $8/hour widget of equal quality is available. If the utility CEO said, "We were prudent because we caused no harm," she'd be laughed out of the hearing room. But that's the merger standard most commissions apply when judging mergers.

4. **A competitive market would not tolerate this result**. If corporate targets chose acquirers based on performance, the highest price offer would come from the most cost-effective company.

5. Also: Commissions count customer benefits incorrectly

   a. Benefits truly dependent on the merger: Appropriate when verified

      (1) Difficulties quantifying and verifying benefits

      (2) Common benefit claims and their challenges

         (a) diversifying load, coordinating generation

         (b) economies of scale

         (c) bringing "best practices"

         (d) improving financial condition

         (e) combining purchasing power to get better input prices

      (3) Aspirations vs. commitments

      (4) Do regulators impose consequences for non-achievement of the benefits?

      (5) Appropriate criteria for counting benefits: Certainty, commitment and consequences

   b. "Benefits" achievable without the merger: Not appropriate, based on logic and law: merger strategy rather than merger reality

      (1) "Best practices"

      (2) Cash payments

      (3) Offers unrelated to the merger

6. Judge Posner: "I wish someone would give me some examples of mergers that have improved efficiency. There must be some."

B. Merging parties divert franchise value from the customers who created the value

1. The acquisition premium: two possible definitions

   a. Excess of purchase price over market price

   b. Excess of purchase price over book value

2. The **control premium** is the price paid for control.

   a. When an individual investor buys stock, she buys only a <u>sliver</u> of the company. Her sliver gives her no influence, so <u>she pays only</u> **the market price**.

   b. But in a utility monopoly merger, the acquirer buys more than stock; the acquirer also buys **control**. So the acquirer pays more than the market price. That excess of purchase price over market price is the value of control—the **control premium**.

   c. So again: The control premium is **the price paid for control.** The control premium represents the value to the acquirer of controlling the target's exclusive, government-protected franchise.

3. Typical allocation of the control premium: 100% to target shareholders

4. The sources of the control premium's value are mostly unconnected to the target utility's merit. Those sources include:

   a. Captive ratepayers' support of the target's government-granted franchise

   b. Acquirer's expectations—

      (1) that regulators will set the target's rates above the target's reasonable costs

      (2) that regulators will authorize equity-level returns on acquisition debt

(3) that regulators will set authorized returns exceeding the acquirer's "required" return

(4) that regulators will base rates based on commission-approved cost projections that exceed the acquirers own projections

c. Maybe: The target's performance merit

d. Bottom line: The value of control derives largely from the **customers' captivity** rather than the **target's performance merit**. Yet the gain from selling control goes largely to the target's shareholders.

5. The law: Shareholders have no automatic right to the entire control premium

a. The utility franchise is a conditional privilege; it is not a private asset.

b. Ownership of the target's stock ownership includes no automatic legal entitlement to the control premium.

c. Target shareholders receive their **constitutional just compensation** through the commission-authorized return on equity.

d. The control premium is not "capital embarked in the [utility] enterprise," so it is not entitled to recovery or return.

e. The control premium exceeds the target shareholders' legally required compensation

f. **Constitutional summary**

(1) Target shareholders have no statutory or constitutional claim to the control premium. Their legitimate profit expectation is satisfied when regulators set rates reflecting a reasonable return on the utility's investment. That return is constitutional compensation; the control premium is <u>overcompensation</u>.

(2) Under principles of regulation and competition, the control premium should go to those who created its underlying

value, whether shareholders or customers, in proportion to their contribution.

6. The correction: Allocate the control premium's value to the **value-creators** and **burden-bearers**. Those are nearly always the customers.

C. Mergers can distort competition through market power, anticompetitive conduct and unearned advantage

1. By changing market structure, mergers affect industry performance

   a. A market's structure affects its sellers' conduct.

   b. Sellers' conduct affects the market's performance for customers.

   c. Mergers change market structures. **Horizontal** mergers reduce the number of competitors. **Vertical** mergers give the merged company control of important inputs.

   d. Since regulation's purpose is performance, policymakers must understand how mergers affect performance.

   e. Current contradictions: We are seeking to decentralize and demonopolize of supply, but at the same time allowing incumbents to consolidate control.

2. Electricity monopoly mergers create risks to competition on the merits

   a. Horizontal mergers reduce the number of competitors.

      (1) Horizontal merger defined

      (2) Harm analysis: Structural concentration

         (a) Relevant product markets

         (b) Relevant geographic markets

         (c) Measuring and assessing market concentration

         (d) What about product markets that don't yet exist?

      (3) Harm analysis: Mavericks and potential competitors

(4) **Special concern:** Horizontal mergers of adjacent companies cause us to lose—

(a) head-to-head competition

(b) yardstick competition

(c) franchise competition

b. Vertical mergers enable merging entities to control key inputs.

(1) Damage to the downstream market: Input foreclosure

(2) Damage to the upstream market: Customer foreclosure

c. Mergers affect innovation bidirectionally.

3. Regulatory actions are necessary to protect competition on the merits

a. Too often, regulators ignore a merger's effects on competition, because they assume that antitrust enforcers will act.

b. Antitrust enforcement is reactive. And it focuses only on anticompetitive action rather than preexisting market defects..

c. On competitive effects, regulators must act affirmatively. They should encourage mergers that enhance competition while rejecting mergers that entrench incumbents.

d. Actions aimed at horizontal market power: The tools include structural remedies, like actual and virtual divestiture; and behavioral remedies, like price caps and competitive bidding.

e. Actions aimed at vertical market power

(1) Nondiscriminatory transmission or distribution tariff

(2) Independent oversight of transmission availability

(3) Membership in regional transmission organization

(4) Other conduct remedies

f. Actions aimed at corporate structure: Separating monopoly activities from competitive activities

(1) Unbundling: divisional and corporate

(2) Limits on non-utility investments

(a) Dollar and percentage limits

(b) Type-of-business limits

(3) Divestiture of all competitive activities

(4) Periodic competition for the right to provide the monopoly service

g. Interaffiliate pricing: enforcing the arms-length principle to prevent cross-subsidization

(1) Four scenarios

(a) Sale by the utility to the non-utility affiliate, of utility services

(b) Sale by the utility to the non-utility affiliate, of non-utility services

(c) Sale by the non-utility affiliate to the utility, of utility services

(d) Sale by the non-utility affiliate to the utility, of non-utility services

(2) Financial transactions

(3) Employee transfers

(4) Transfers of intangibles: the royalty solution

D. Hierarchical conflict: A separate source of customer harm

1. At the top of the merged company is a holding company. A holding company has **no statutory obligation to utility customers**. So its private,

for-profit aspirations can conflict with its utility subsidiaries' public service obligations.

2. Parent-utility conflict: business differences, hierarchical control

    a. Holding company and utility subsidiary: Differing objectives

    b. Hierarchical control: Subordinating utility needs to holding company aims

    c. Pressure for growth: Adding to parent-utility conflict

    d. Substantive conflicts: Generation, transmission, renewable energy, distributed energy

3. Merger overcharge risks

    a. Utility devices for overcharging

        (1) Regulatory lag: A path to excess returns

            (a) Who gets the merger savings—ratepayers or shareholders?

            (b) Who decides—commission or company?

        (2) Double-leveraging: Another path to excess returns

    b. Regulatory actions to prevent overcharges

        (1) Aligning rates with costs post-merger: Traditional techniques

            (a) Freezing pre-merger rates

            (b) Rate credits

            (c) Trackers

            (d) Hybrids

            (e) Most-favored-nation clauses

(2) Missing: Principles and procedures

(a) Principle: Allocate merger savings based on relative contribution

(b) Procedure: Combine merger case with rate case

4. Acquisition debt risks

a. To acquire a target—to pay that acquisition premium, the acquirer has to borrow money. Acquisition lenders are nervous. They want assurance of repayment. So they want the acquirer to control the target utility's financial resources.

b. Acquisition debt creates financial risk for the target utility.

c. If the acquirer defaults, its creditors can become the target utility's owners. Not what the regulators had in mind.

d. Acquisition debt can limit the commission's ability to ensure performance and attract new performers.

5. Non-utility business risks

a. Contagion

b. Weakened utility finances

c. Quality of service slippage

d. Reduced regulatory accountability

e. Loss of regulatory control over future acquisitions

6. Regulatory solutions

a. Merger rules: Indirect authority over holding companies

b. Ring-fencing: Necessary but not sufficient

c. Patching ring-fencing's holes: Six measures

(1) Limit the holding company’s business risks

(2) Separate the utility business from its non-utility affiliates

(3) Prohibit the holding company from interfering with utility management

(4) Prohibit the utility from providing financial support to non-utility businesses

(5) Establish service quality metrics

(6) Prevent opportunistic sale of the utility

d. Enforcement: Financial and structural sanctions

(1) Financial penalties on shareholders

(2) Financial penalties on specific individuals

(3) Disaffiliation and franchise revocation

(4) Enforcement resources

e. **Independent directors** on the utility board? They are not independent of the holding company

IV. The regulatory lapses: Reactivity and deference

A. Regulators' unreadiness: Checklists instead of visions

1. The public interest: a statutory standard in search of a commission policy

a. Statutes require mergers to be "consistent with the public interest," but few merger regulators have defined the public interest.

b. **Vision**: Enforceable expectations for types of services, business mixes, inter-corporate relationships and financial structures.

c. Instead of visions: Most state statutes and commission orders have only **checklists**: effect on rates, reliability, competition, shareholders, customers environment, jobs.

d. When commissions have only checklists instead of public purposes, merger applicants can check off the boxes while pursuing their own private purposes.

2. Example of a vision: PUHCA 1935's the single "integrated public-utility system"

   a. 1930s: 13 holding companies controlled 100s of utilities. They used monopoly customers to subsidize competitive customers.

   b. Congress passed the Public Utility Holding Company Act of 1935.

   c. 1935 Act's central principle: integrated-public utility system: local, subject to alert state regulation, interconnected parts, conservatively financed, locally governed.

   d. limits on nonutility businesses

   e. prohibitions on improper financing

   f. acquisitions were permitted only if they "tend toward the economical and efficient development of a single integrated public-utility system"

   g. prohibition on concentration of control

   h. prohibition on excess debt leveraging

   i. Sum: Congress established a <u>public-interest vision</u> for market structure and corporate structure; then created a set of prohibitions and permissions that aligned private corporate decisions with that public interest vision

3. PUHCA repeal (2005): followed by mostly, regulatory silence and deference

4. Some regulators worry that establishing expectations upfront will reduce flexibility later. The reality is the opposite. Once the merging entities agree on the transaction's terms—merger partner, merger price, merger financing—and once the acquirer incurs acquisition debt, the deal becomes brittle. Commissions that impose standards after the fact get labeled as deal-breakers.

5. In contrast, by stating expectations ahead, the regulator can align investor expectations with public interest visions—increasing the chance that what gets proposed deserves to be approved.

B. Promoters' regulatory strategy: Frame mergers as simple, positive, inevitable

1. They frame their transaction as natural, normal and public-spirited; emphasizing simplicity and compatibility while deemphasizing complexity and conflict.

2. They talk of what the transaction brings, not what it removes.

3. They describe their merger as inevitable and necessary—"Everyone else is merging, so we have to merge."

4. They distract attention from the merger's pecuniary purposes by making short-term offers:

    a. Savings attributable to the merger

    b. Offers redundant of the utility's obligations

    c. Offers unrelated to the merger

    d. Offers that enhance the applicant's profitability and market position

    e. Solemn promises to comply with commission rules

    f. Applicant expectations accompanying the offers

5. They frame merger opponents as anti-benefit and anti-business—obstacles to the "natural industry evolution."

6. And they maintain time pressure, presenting the transaction as a <u>take-it-or-leave-it</u> deal whose imminent expiration requires rapid approval to avoid losing the benefits. It's not "take the time you need to get the right answer"; it's "Don't let regulatory delays kill the deal."

C. How do regulators respond? By ceding leadership, underestimating negatives and accepting minor positives

1. Underestimating the negatives

    a. Private-public conflict

    b. Constraints on future regulatory decisions

    c. Regulatory costs

    d. **Missing the transaction's essence—franchise control and parent-utility conflict:** No merger application says: "The acquirer wants to buy control of a government-protected franchise; the target wants to sell that control for the highest possible price." No merger application says: "This transaction brings a formerly pure-play utility into a holding company system with multiple risks and conflicts." Those sentences accurately describe most mergers, but no merger application say so, and no commission order says so. Missing the transaction's essence means asking no questions about that essence.

    e. **Tragedy of the commons:** By focusing only on minor in-state benefits, each state commission contributes to a tragedy of the commons: the cumulative effect of dozens of states approving mergers separately: That cumulative effect is a concentrated, complicated industry that no one commission sought, an industry whose suboptimal performance causes opportunity costs for all consumers.

2. Cementing the applicants' frame with reactive procedures

    a. The merger application: generic and self-serving

        (1) Because commissions don't define the public interest, they don't require applicants to explain how their transactions satisfy the public interest.

        (2) The term "public interest" becomes a <u>label</u> that applicants place on their application, rather than a <u>standard</u> they satisfy with their transaction.

(3) Again—Because commissions have checklists instead of standards, merger applicants fill in the blanks with generic language.

b. The commission's hearing order: Does it reframe the questions?

(1) A hearing order sets out the issues. A muscular, assertive hearing order would list questions that test the proposed transaction against that policy.

(2) Like these 10 questions:

(a) Why did the target decide to seek an acquirer? Why did the target select this acquirer over others?

(b) Which claimed benefits are real and which are aspirational?

(c) What are the direct costs and the opportunity costs?

(d) What is the benefit-cost ratio for customers?

(e) What are the risks that actual benefits and costs will vary from the predicted? Who bears those risks?

(f) Will the merged company's acquisition debt constrain future commission decisions?

(g) What transactions are precluded by this one?

(h) What markets will be made less competitive, or will lose opportunities to be made more competitive—and at whose expense?

(i) What acquisitions will the acquirer make after this one? How small will our utility become?

(j) Does the commission have the resources to ensure that merged company will obey all rules? the resources to hold the company accountable for performance? the resources to protect customers from harm?

(3) Instead of asking those 10 questions, commissions tend to ask only: Does the transaction cause "no harm," and maybe somewhat improve on, the status quo?

(4) Commission focus on what the applicants propose—modest improvement on the status quo—rather than what the applicants should have proposed—the performance that effective competition would have required.

c. The final order: It describes the transaction as a simple transfer of ownership rather than as a sale of public franchise for private gain.

3. Accepting minor positives

a. Unrelated offers distract intervenors and commissioners from the merger's merits

b. Discrimination: Litigating parties get favors unavailable to others

(1) Allowing non-merger benefits means tolerating discrimination. The merger applicants accept conditions sought by intervenors but ignore the needs of non-intervenors. Microgrid intervenors get microgrids, renewable energy intervenors get renewable energy and low-income housing intervenors get aid for low-income housing.

(2) But unless they intervene, the blind don't get their bills in Braille, Ethiopian immigrants don't get customer service reps who speak Amharic, paraplegics don't get ramps at bill-paying locations and school orchestra leaders don't get free cellos.

c. Granting the utility non-franchise roles denies those roles to more efficient competitors

4. <u>Sum:</u> The applicants' goals become the proceeding's focus; their deadlines determine the procedural schedule. Commissions describe the transaction the way applicants do—a simple transfer of ownership—rather than call the transaction what it is—a sale of public franchise for private gain.

D. Explanations: Passion gaps and mental shortcuts

1. Passion gaps lead to deference

   a. Merger applicants have a singular purpose: **increase shareholder value by maximizing return on investment**. They act affirmatively: by framing, by winning supporters with minor benefits, by putting time pressure on regulators.

   b. Merger regulators, in contrast, don't act affirmatively. **Lacking a vision for public interest performance, they don't insist that mergers produce that performance.** They wait for merger proposals—proposals that inevitably have purposes other than performance for the customer.

   c. So whereas merger **applicants seek to maximize benefits, regulators seek to avoid harm**.

2. This differential—in purposefulness, posture and passion—leads to deference.

   a. That deference risks what psychologists describe as a **decrease in analytical alertness**—a mental state that makes one prone to committing a host of systematic mental errors. Among those mental errors:

      (1) viewing proposals in isolation rather than making comparisons;

      (2) basing judgments on irrelevant "anchors" rather than relevant facts; and

      (3) becoming susceptible to vividness bias, denominator neglect, optimism bias, halo effect, confirmation bias and desirability bias.

   b. **Why do these tactics work?** Why do regulators accept the story over the facts? Possible answers lie in the field behavioral economics: Daniel Kahneman, Amos Tversky, Richard Thaler.

3. Mental shortcuts lead to systematic errors: behavioral economists discoveries

   a. Two modes of thinking: System 1 vs. System 2, automatic vs. effortful

      (1) Kahneman describes two "modes of thinking"—System 1 and System 2. System 1 "operates automatically and quickly, with little or no effort and no sense of voluntary control." 2 + 2 = ?

      (2) System 2 is the "effortful system." It "allocates attention to the effortful mental activities that demand it, including complex computations: 17 x 25

      (3) System 1 has an offspring—"What you see is all there is" (WYSIATI). It is our tendency to ignore the possibility that critical evidence is missing; to treat the information we have "as if it were all there is to know."

   b. Applicants' strategy: Keep regulators' System 1 in control

      (1) **Merger applicants construct a simple, positive story:** the transaction will reduce overhead costs, when we buy inputs we will get volume discounts, spread best practices, improve access to capital, preserve local management and continue charitable contributions. Everyone else is merging. No harm, $100 refunds for all.

      (2) **The regulators' System 1 adopts the coherent story. "What you see is all there is."** But that simple story omits the real facts:

   c. The real facts:

      (1) The target company selected the acquirer because it offered the highest acquisition price, not because it offered the best performance.

      (2) Indeed, the target insisted on a contractual right to sell to any acquirer that offered a higher price.

      (3) The target shareholders are receiving a premium over market price, though they did little to create its value.

(4) Because the target shareholders are cashing out, they have no interest in the merged company's future health or quality of service.

(5) The premium reflects the acquirer's expectation of increasing the target utility's earnings above the commission-authorized level.

(6) The acquirer, its board and its CEO will have legal power to dictate the acquired utility's decisions—spending, rate increases, capital structure, board membership, executive leadership, everything.

(7) **The acquirer has no limit on, and makes no promises about, its future acquisitions and business risks**. It is free to acquire any company, in any industry anywhere in the world, without the commission's approval.

d. System 1's power: twelve systematic errors

(1) Framing is everything

(2) Availability

(3) Representativeness

(4) Isolated option vs. comparison

(5) Evaluation vs. prediction

(6) Anchoring and adjustment

(7) Reference point

(8) Vividness bias

(9) Optimism bias

(10) Halo effect

(11) Confirmation bias and desirability bias

(12) Loss aversion, endowment effect

4. Contrast: seven commissions that said no

   a. California (1991): Southern California Edison, San Diego Gas & Electric

   b. Arizona (2005): Tucson Electric, UniSource, KKR, J.P. Morgan, Wachovia

   c. Montana (2007): NorthWestern Corp., Babcock & Brown Infrastructure

   d. Hawaii (2016): NextEra, Hawaiian Electric

   e. Texas (2017): NextEra, Oncor

   f. Washington State (2019): Hydro One, Avista

   g. New Mexico (2021): Public Service of New Mexico, Iberdrola

V. Institutional and attitudinal solutions: Regulatory posture, practices and infrastructure

A. Regulatory posture and practice: Less instinct, more analysis; less reactivity, more preparation

1. To make private-interest mergers serve public-interest goals, **regulators need to replace deference with action.**

2. **Start with vision: Expectations for performance**

   a. Identify the mix and quality of services that utility customers need and want

   b. Describe the types of companies most able to provide those services cost effectively

   c. Determine the market structure—competition or monopoly—most suitable to attract and maintain the companies

3. Hold a contest to get the best suppliers

a. Shape investors', executives' and workers' incentives so that the merged company produces that mix and quality cost-effectively

b. Discourage, limit or prohibit any business activities, corporate structures and financial arrangements that conflict with or distract from the utility's mission.

c. Must-haves

(1) Specific experience providing the desired services with excellence.

(2) Financial capability to execute the purchase and finance future utility investments.

(3) An executive compensation system that aligns pay with operational performance and that gives executives no reason to pursue shareholder interests that conflict with customer interests.

(4) An internal disciplinary system that makes company wrongdoers fully accountable for their wrongdoing.

(5) Productive labor relations, including third-party audit procedures that ensure all employees' fair pay, health and safety.

(6) A record of respect for the regulatory process, including its key features: candor, transparency and reliance on facts, logic and law instead of less rational forms of persuasion.

(7) Diversity at all levels of the company, reflecting the diversity of the service territory's population.

(8) For non-U.S. holding companies, a home-country legal infrastructure (including accounting rules, regulatory practices and corporate transparency) that is compatible with U.S. law and accessible to U.S. regulators.

d. Must-not-haves

(1) A record of law-breaking or rule-breaking.

(2) A record of poor performance in other franchises.

(3) A record of anticompetitive practices, or of opposition to competition where competition can improve performance—such as competition that allows qualified, cost-effective companies to compete for roles currently performed by the incumbent.

(4) Control of facilities that would give the merged company horizontal or vertical market power in any market, or contribute to a concentration trend that could reasonably lead to market power, unless regulators can remove that market power fully.

(5) Control by a holding company system that is overly complex, overly leveraged or overly invested in businesses whose risks or strategies undermine or conflict with a utility's obligation to serve.

(6) Asymmetrical compensation plans—ones that reward risk-taking executives for the upsides but make shareholders, creditors and customers bear the downsides.

e. Discretionary haves

(1) A culture of experimentation and innovation.

(2) Willingness to forgo additional acquisitions, of specified magnitudes and types, without commission permission aimed at preserving economies and preventing distractions.

(3) Active, educated board members who are not over-compensated relative to their value.

(4) Compensation systems for executives and employees that reward good work appropriately, including a non-excessive ratio of CEO compensation to line-worker compensation.

(5) Type of ownership (e.g., government-owned vs. investor-owned, private equity vs. publicly traded, mutual funds vs. hedge funds).

4. Establish screens for company types: Selection criteria instead of static checklists

5. **Establish conditions: on the transactions and on post-merger actions**

a. Conditions on transaction terms

(1) Control premium: limited to the level that properly compensates target shareholders

(2) Transaction financing: conservative and customer-focused

b. Conditions on the merged entity's actions: Advance review of securities issuances and acquisitions, ring-fencing, limiting risks, separation, no holding company interference, no utility financial support to the non-utility businesses, service quality metrics, sanctions, disaffiliation and revocation

6. Create filing requirements that <u>force comparisons</u> between the proposed merger and the commission's vision

a. Purpose: Bring out the full transaction story: Why is the acquirer buying control? Why is the target selling control? Why this acquisition price? What changes in governance, operations, capital expenditures and financing will the acquirer make? What is the off-ramp if there is harm?

b. Filing requirements: ten categories

(1) Transaction purposes and goals

(2) Transaction form and terms

(3) Transaction costs and transition costs

(4) Capital structure

(5) Acquisition cost

(6) Risks of harm

(7) Benefits

(8) Corporate structure and governance

(9) Competitive advantages

(10) Merger history

7. Organize evidentiary hearings around issues rather than parties

   a. Commissions must convert their evidentiary hearings from party-centric to issue-centric, while focusing their merger decisions less on parties' desires and more on regulatory principles.

   b. The objective staff report

   c. The evidentiary hearing

   d. Applicant opportunities to amend

8. Issue merger opinions that distinguish the suboptimal from the optimal

B. Regulatory infrastructure: Strengthen regulatory resources, clarify statutory powers, assess prior mergers effects

1. Strengthen regulatory resources

2. Clarify statutory powers: Can commissions order mergers?

   a. Path 1: Commission orders two in-state utilities to merge

   b. Path 2: Commission sets rates for two in-state utilities as if they had merged

   c. Path 3: Commission orders a competition to find the best coupling

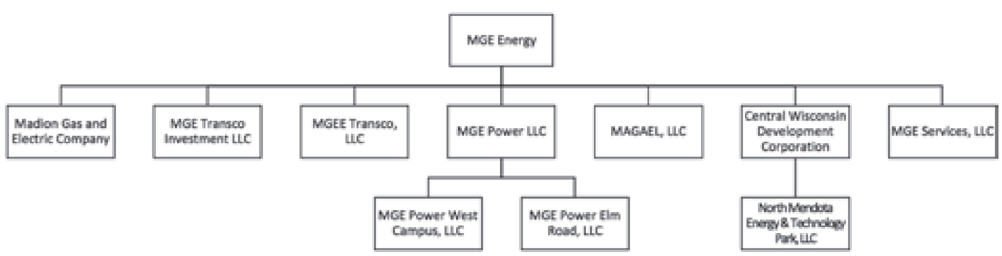
3. Organize a multi-jurisdictional evaluation of prior mergers' effects

Appendix follows

3. The structural result: concentration and complication no one intended

Madison Gas & Electric (MG&E) serves the Madison, Wisconsin area. It is the sole utility subsidiary of the publicly-traded holding company MGE Energy. The utility owns 92 percent of the holding company system's total assets and contributes most of its revenues and earnings. Its seven small subsidiaries all exist to support the local utility, which provides only local service.[1]

Baltimore Gas & Electric (BG&E) serves the Baltimore, Maryland area. It is one of several hundred subsidiaries owned by the publicly-traded holding company Exelon Corp. BG&E has only 8 percent of Exelon's assets and 9 percent of its revenues. It is one of Exelon's six monopoly utility subsidiaries; the others serving captive customers in the District of Columbia, Delaware, Illinois, New Jersey and Pennsylvania. Besides its six utility companies, Exelon owns around 300 other companies, including subsidiaries, and subsidiaries of subsidiaries, invested in fossil, nuclear, solar and wind generation, making wholesale and retail sales in over thirty states.[2] Figures 3.1 and 3.2 display each system's corporate structure.

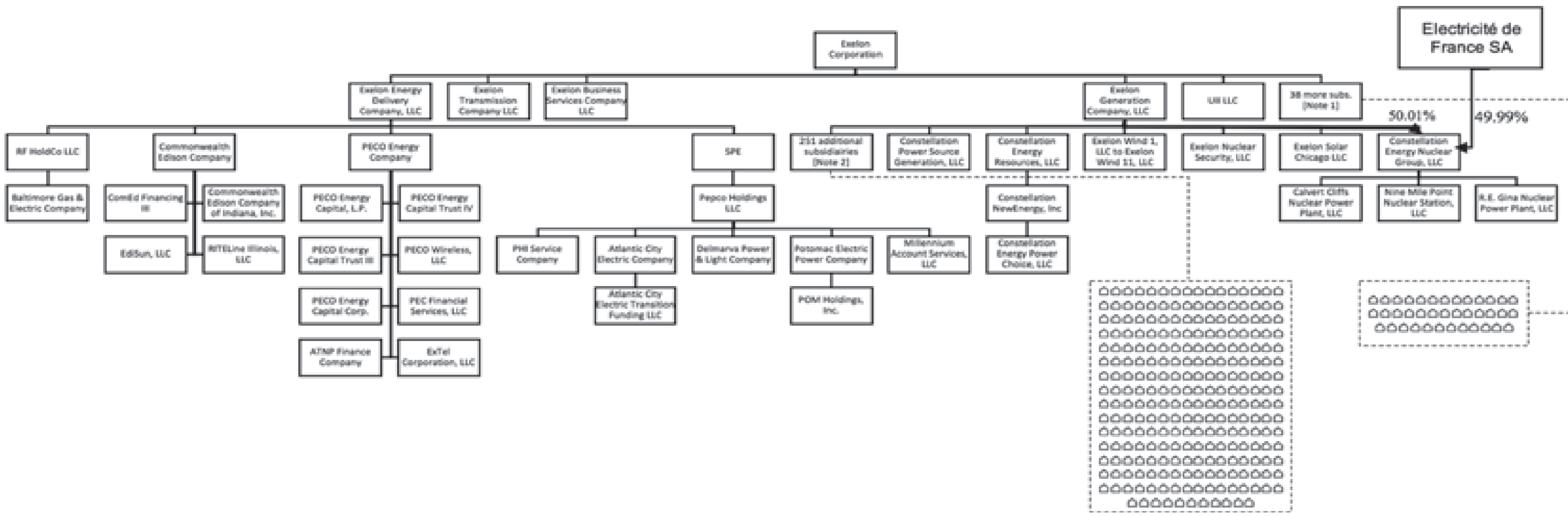


Source: A version of this diagram appears in MGE Energy, Inc., 2019 Q2 Earnings Call Slides, SEEKING ALPHA (Aug. 12, 2019), https://seekingalpha.com/article/4284926-mge-energy-inc-2019-q2-results-earnings-call-slides.

Figure 3.1 MG&E corporate structure

[1] MGE Energy, Inc. Annual Report (Form 10-K) at 7, 54–60 (Feb. 22, 2019). Two of the holding company's subsidiaries, MGE Transco Investment LLC and MGEE Transco, LLC, merely hold the utility's small interest in a regional transmission facility used for the utility's core service.

[2] Exelon Corp., Annual Report (Form 10-K) at 7, 10 (Feb. 8, 2019); Exelon Corp., Annual Report (Form 10-K) at 11 (Feb. 9, 2018). According to Exelon's 2018



Notes: 1. The number 38, representing Exelon Corporation affiliates not shown here, was derived as follows: Exelon has a total of 340 subsidiaries. *See* Exhibit 21.1 of Exelon Corp., Annual Report (Form 10-K for calendar year 2018). From that total of 340, subtract 273 (Generation and its subsidiaries), 5 (ComEd and its subsidiaries), 9 (PECO and its subsidiaries), 2 (BG&E & holding company), 9 (PHI and its holding company and subsidiaries), and 4 (EEDC, Transmission, EBSC, UII LLC), so 340-273-5-9-2-9-4 = 38 subsidiaries not shown. 2. The number 251, representing Exelon Generation subsidiaries not shown here, was derived as follows: Exelon Generation has a total of 272 subsidiaries. *See* Exhibit 21.2 of Exelon Corp., Annual Report (Form 10-K for calendar year 2018). The diagram shows 21, so 272-21=251 subsidiaries not shown.

Source: This diagram is based on two sources: Exelon's 2018 Form 10-K, and a diagram produced in discovery by Exelon in the 2012 regulatory proceedings relating to its acquisition of Constellation Energy. The diagram incorporates Exelon's discussion on how it has restructured PHI and its utility subsidiaries (Potomac Electric, Delmarva Power & Light, and Atlantic City Electric). Exelon Corp., Annual Report, at 8. The diagram also includes known subsidiaries for each Exelon entity, as listed in Exhibits 21.1 to 21.9 in Exelon's 2018 Form 10-K. Because Exelon's 10-K disclosed only the names of its non-utility subsidiaries, the diagram cannot always show accurately where in the multiple corporate layers each non-utility subsidiary resides. Finally, because the 2018 Exelon Form 10-K sometimes referred to an entity using a generic phrase like "special purpose entity," the diagram may be missing the names of certain entities.

Figure 3.2 Exelon corporate structure

Table 3.1 FERC merger approvals

1986	Toledo Edison and Cleveland Electric Illuminating (forming the holding company Centerior)
1988	Georgia Power (owned by Southern Company) and Savannah Electric
1988	Duke Power and Nantahala Power & Light
1988	Utah Power & Light and PacifiCorp
1990	Central Vermont Public Service and Allied Power & Light
1991	Northeast Utilities (holding company for Connecticut Light & Power, Western Massachusetts Electric and Holyoke Water Power) and Public Service of New Hampshire
1991	Kansas Power & Light and Kansas Gas & Electric
1992	Iowa Public Service and Iowa Power & Light (forming the holding company Midwest Power Systems)
1993	Cincinnati Gas & Electric and Public Service of Indiana (forming the holding company Cinergy)
1993	Entergy (holding company owner of Arkansas Power & Light, Louisiana Power & Light, Mississippi Power & Light and New Orleans Public Service) and Gulf States
1994	*El Paso Electric Company and Central & Southwest*
1995	Midwest Power Systems (consisting of Iowa Public Service and Iowa Power & Light) and Iowa-Illinois Gas & Electric (forming the holding company MidAmerican)
1997	Public Service of Colorado and Southwestern Public Service (forming the holding company New Century Energies)
1997	Union Electric and Central Illinois Public Service (forming the holding company Ameren)
1997	*Baltimore Gas & Electric and Potomac Electric Power*
1997	Duke Power and PanEnergy
1997	IES Utilities, Interstate Power, Wisconsin Power & Light, South Beloit Water, Gas & Electric (forming the holding company Alliant)
1997	Enron and Portland General
1997	Centerior (holding company owner of Toledo Edison and Cleveland Electric Illuminating), Ohio Edison Company, Pennsylvania Power Company (forming the holding company FirstEnergy)
1997	Atlantic City Electric and Delmarva Power & Light (becoming Conectiv Power Delivery)
1998	Louisville Gas & Electric and Kentucky Utilities
1998	Scottish Power and PacifiCorp (which owns Utah Power & Light)
1999	New England Electric System (holding company for New England Electric Power, Massachusetts Electric and Narragansett Electric) and National Grid
1999	Eastern Utility Associates (holding company for Montaup Electric, Blackstone Valley Electric, Eastern Edison and Newport Electric) and New England Electric System and National Grid
1999	MidAmerican Energy (holding company for Iowa Public Service, Iowa Power & Light and Iowa-Illinois Gas & Electric) and Berkshire Hathaway
1999	Boston Edison and Commonwealth Energy
1999	AES and Central Illinois Light
1999	Consolidated Edison of New York and Orange & Rockland

1999	Sierra Pacific Power and Nevada Power
1999	Dynegy and Illinois Power
2000	American Electric Power and Central & South West
2000	*Sierra Pacific Power, Nevada Power and Portland General Electric*
2000	New Century Energies (holding company for Southwestern Public Service and Public Service of Colorado), Northern States Power (Minnesota) and Northern States Power (Wisconsin) (forming Xcel Energy)
2000	New York State Electric & Gas and Central Maine Power
2000	Commonwealth Edison and PECO Energy (forming Exelon)
2000	PowerGen (UK) acquires Louisville Gas & Electric and Kentucky Utilities
2000	Carolina Power & Light and Florida Progress (holding company for Florida Power)
2000	UtiliCorp United, St. Joseph Light & Power and Empire District Electric
2000	*Consolidated Edison and Northeast Utilities*
2001	AES and Indianapolis Power & Light (UK)
2001	E.ON (Germany) acquires Louisville Gas & Electric and Kentucky Utilities from PowerGen
2001	FirstEnergy (holding company for Toledo Edison, Cleveland Electric Illuminating, Ohio Edison Company and Pennsylvania Power Company) and General Public Utilities (holding company for Metropolitan Edison, Jersey Central Power & Light and Pennsylvania Electric)
2001	Energy East (holding company for New York State Electric & Gas and Central Maine Power) and RGS Energy Group (holding company for Rochester Gas & Electric)
2001	Potomac Electric Power and Conectiv Power Delivery (the result of the Atlantic City Electric-Delmarva merger) (forming Pepco Holdings)
2002	Ameren (holding company for Union Electric and Central Illinois Public Service) and Central Illinois Light
2004	Ameren (holding company for Union Electric, Central Illinois Public Service and Central Illinois Light) and Illinois Power
2005	Cinergy (holding company for Cincinnati Gas & Electric and PSI Energy) and Duke Energy
2007	Texas Holdings Limited Partnership acquires Oncor Electric Delivery
2005	MidAmerican Energy Holdings acquires PacifiCorp from Scottish Power
2007	Great Plains Energy (holding company for Kansas City Power & Light) acquires Aquila's Missouri operations
2007	Black Hills acquires Aquila's Colorado electric operations
2007	Iberdrola (Spain) acquires Energy East (holding company for New York State Electric & Gas, Central Maine Power and Rochester Gas & Electric)
2010	PPL Electric (holding company for Pennsylvania Power & Light) acquires Louisville Gas & Electric and Kentucky Utilities from E.ON
2010	FirstEnergy Corp. (holding company for Pennsylvania Power, Ohio Edison, Cleveland Electric Illuminating, Toledo Edison, Pennsylvania Electric, Metropolitan Edison and Jersey Central Power & Light) and Allegheny Energy (holding company for Monongahela Power, Potomac Edison and West Penn Power)

2011	Northeast Utilities (holding company for Connecticut Light & Power, Western Massachusetts Electric and Public Service of New Hampshire—it had sold off Holyoke) and NSTAR Electric (consisting of what were Cambridge Electric Light, Commonwealth Electric, Canal Electric and Boston Edison)
2011	Duke Energy (holding company for Duke Energy Carolinas, Duke Energy Indiana, Duke Energy Ohio and Duke Energy Kentucky) and Progress Energy (holding company for Carolina Power & Light and Florida Power Corp)
2011	AES (owner of Indianapolis Power & Light) and Dayton Power & Light
2012	Exelon Corporation (holding company for Commonwealth Edison and PECO Energy) and Constellation Energy Group (holding company for Baltimore Gas & Electric)
2012	Fortis (Canada) acquires Central Hudson Gas & Electric
2013	MidAmerican (holding company for Iowa Public Service, Iowa Power & Light, Iowa-Illinois Gas & Electric and PacifiCorp) and Nevada Power and Sierra Pacific
2014	Fortis (Canada) acquires UNS Energy (holding company for Tucson Electric and UNS Electric)
2015	Wisconsin Energy (holding company for Wisconsin Electric Power) merges with Integrys Energy Group (holding company for Wisconsin Public Service and Upper Peninsula Power)
2015	Macquarie et al. acquires Central Louisiana Electric
2015	Exelon (holding company for Commonwealth Edison, PECO Energy and Baltimore Gas & Electric) acquires Pepco Holdings (holding company for Potomac Electric Power, Delmarva and Atlantic City Electric)
2015	*NextEra and Hawaiian Electric*
2015	Iberdrola (Spain, renamed Avangrid) (holding company for New York State Electric & Gas, Rochester Gas & Electric and Central Maine Power) acquires United Illuminating
2016	Emera (Canada) and Tampa Electric
2016	Empire District Electric and Liberty Utilities
2017	*Oncor and NextEra (holding company for Florida Power & Light)*
2017	Oncor and Sempra (holding company for San Diego Gas & Electric)
2018	*Hydro One (Canada) and Avista*
2018	Great Plains Energy (holding company for Kansas City Power & Light) and Westar (holding company for Kansas Gas & Electric and Kansas Power & Light)
2018	Vectren (holding company for Southern Indiana Gas & Electric) and Centerpoint Energy
2018	Dominion Energy (holding company for Virginia Electric & Power) and SCANA (holding company for South Carolina Gas & Electric)
2018	NextEra and Gulf Power
2020	ENMAX and Emera Maine

3.1.3 Geographical View: Intra-regional, Inter-regional, International

The early mergers in this period were intra-regional. They involved either adjacent utilities, or non-adjacent utilities connected to a common transmission network and sufficiently close to each other to allow them to plan and less literally than did its predecessors. It allowed long-distance, non-integrating transactions like those involving the American Electric Power Company and Central & South West Corp.; Florida Progress (the holding company for Florida Power Corp.) and Carolina Power & Light; and National Grid (UK) and New England Electric System.[11] With the 2005 repeal of PUHCA 1935, mergers and acquisitions soon produced utility holding company systems with

Table 3.2 Inter-regional holding company systems

Holding company	Locations of utility subsidiaries
Berkshire Hathaway	Washington State, Nevada, Oregon, California, Utah, Wyoming and Iowa
Exelon	Illinois, Maryland, District of Columbia, Delaware and New Jersey
American Electric Power	Ohio, Indiana, Michigan, Kentucky, West Virginia, Virginia, Texas, Louisiana, Arkansas and Oklahoma
Duke	Florida, North Carolina, Ohio, Indiana and Kentucky
Xcel	Minnesota, Colorado, New Mexico and Texas

Table 3.3 International holding company systems

Holding company	Utilities
Fortis (Canada)	Tucson Electric, Unisource Energy and Central Hudson Electric & Gas
Emera (Canada)	Bangor-Hydro and Tampa Electric
Iberdrola (Spain)	United Illuminating, New York State Electric & Gas, Rochester Gas & Electric and Central Maine Power
National Grid (UK)	New England Electric System (consisting, before the 1980s, of New England Power, Massachusetts Electric and Narragansett Electric); EUA (consisting, before the 1980s, of Montaup Electric, Blackstone Valley Electric, Eastern Edison and Newport Electric); Niagara Mohawk
Gaz Metro (Canada)	Green Mountain Power and Central Vermont Public Service

[11] The wisdom of those SEC decisions (some of which this author contested—*see Wisconsin's Envtl. Decade* and *Nat'l Rural Elec. Coop. Ass'n*, *supra* note 9; and Envtl. Action, Inc. v. SEC, 895 F.2d. 1255 (9th Cir. 1990)) is outside this chapter's scope. The historically inclined can consult Leonard S. Hyman, America's Electric Utilities: Past, Present and Future 102 (1994) (asserting that the SEC "seems to have lost interest in enforcing the letter of the law … and now approves the formation of holding companies that comply with the law in the most far-fetched ways"); and Richard D. Cudahy & William D. Henderson, *From Insull to Enron: Corporate (Re)Regulation After the Rise and Fall of Two Energy Icons*, 26 Energy L.J. 35, 103–104 (2005) (stating that before 2002, "it had become commonplace for the SEC to approve merger activity with virtually no regard for the Act's geographic strictures"). For a critique of the SEC's actions, see Scott Hempling, *Corporate Restructuring and Consumer Risk: Is the SEC Enforcing the Public Utility Holding Company Act?*, Electricity J., July 1988.

utilities whose remoteness precluded physical integration. Tables 3.2 and 3.3 display, respectively, examples of inter-regional and international mergers.

At least twenty electric utilities are now owned by five foreign companies.

3.1.4 Acceleration: Mergers of the Previously Merged

Several previously merged utilities have merged with each other, intra-regionally and inter-regionally. Three prominent examples are displayed in Table 3.4 as equations, the parentheses and brackets signaling prior mergers.

Table 3.4 Mergers of the merged

2001	FirstEnergy + GPU = [(Cleveland Electric + Toledo Edison) + Ohio Edison + Pennsylvania Power] + [(Jersey Central Power & Light Company, Metropolitan Edison Company and Pennsylvania Electric Company)]
2011	Duke Energy + Florida Progress = [Duke + (Cincinnati Gas & Electric + Public Service of Indiana)] + [(Florida Power Corp. + Carolina Power & Light)]
2015	Exelon + PHI = [(Commonwealth Edison + PECO) + BG&E)] + [(Delmarva + Atlantic City Electric) + Pepco].

With mergers of the previously merged, the ten most active acquirers now own what used to be sixty-four independent utilities—over half the United States total (see Table 3.5).[12]

Adding to those ten holding companies three of the multi-utility holding company systems that pre-dated the 1980s shows a concentration that is even more marked (Table 3.6).

Adding those three systems to our totals, we see that eighty-three formerly independent utilities are now owned by thirteen holding companies.[13]

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[12] For National Grid and Eversource, some of the utilities listed were already in a holding company prior to the 1980s.

[13] The various sources recording the merger trend cite different numbers—because they use different definitions of utility, different definitions of merger, and different time periods. But they all support the existence of a trend. Consider the following five examples.

- In 2000, the U.S. Energy Information Agency reported that "[b]y the end of 2000, the 10 largest IOUs (investor-owned electric utilities) will own approximately 51 percent of all IOU-owned power production capacity (up from about 36 percent in 1992) and the 20 largest IOUs will own approximately 73 percent (up from about 36 percent in 1992)." Stephen Paul Mahinka & Theodore A. Gebhard, *Preclosing Cooperation in Energy Mergers: Antitrust Issues and Practical Concerns*, 13 Electricity J. 68 (2000) (quoting U.S. Energy Information Agency and other sources).

Table 3.5 Ten acquirers own over half of the U.S. utilities

National Grid owns ten	New England Electric System (consisting, before the 1980s, of New England Power, Massachusetts Electric, Granite State Electric, Narragansett Electric, Nantucket Electric); EUA (consisting, before the 1980s, of Montaup Electric, Blackstone Valley Electric, Eastern Edison, Newport Electric); Niagara Mohawk
Great Plains Energy owns eight	UtiliCorp United, St. Joseph Light & Power, Empire District Electric, Kansas City Power & Light, Aquila, Black Hills, Kansas Power & Light and Kansas Gas & Electric
Duke Power Company owns seven	Duke Power, Nantahala Power & Light, Cincinnati Gas & Electric, Public Service of Indiana, PanEnergy, Florida Power & Light and Carolina Power & Light
Berkshire Hathaway owns seven	Iowa Public Service, Iowa Power & Light, Iowa-Illinois Gas & Electric, PacifiCorp, Utah Power & Light, Nevada Power and Sierra Pacific Power
Northeast Utilities (now called Eversource) owns seven	Connecticut Light & Power, Western Massachusetts Electric Power (those two already owned by NU before the 1980s), Public Service of New Hampshire, Boston Edison, Commonwealth Energy, Cambridge Electric Light and Canal Electric
FirstEnergy owns seven	Cleveland Electric Illuminating, Toledo Edison, Ohio Edison, Pennsylvania Power, Monongahela Power Company, Potomac Edison Company and West Penn Power
Exelon owns six	Commonwealth Edison, Philadelphia Electric, Baltimore Gas & Electric, Potomac Electric Power, Delmarva Power & Light and Atlantic City Electric
Ameren owns four	Union Electric, Central Illinois Public Service, Central Illinois Light (acquired from AES in 2003) and Illinois Power (acquired from Dynegy in 2004)
Xcel Energy owns four	Northern States Power-Minnesota, Northern States Power-Wisconsin, Public Service Company of Colorado and Southwestern Public Service
Iberdrola (now called Avangrid) owns four	New York State Electric & Gas, Central Maine Power, United Illuminating and Rochester Gas & Electric

Table 3.6 *AEP, Southern and Entergy*

American Electric Power owns ten	Appalachian Power, Kingsport Power, Indiana Michigan Power, Kentucky Power, Ohio Power, Columbus and Southern (all from the prior AEP family that pre-dated the 1980s-forward merger trend and some of which have merged into a single company); Central Power & Light, West Texas Utilities, Public Service Company of Oklahoma and Southwestern Electric Power Company (all from the prior Central & Southwest family that pre-dated the post-1985 merger trend and some of which have merged into a single utility)
Southern Company owns four	Alabama Power, Georgia Power, Gulf Power and Mississippi Power
Entergy owns five	Entergy Arkansas, Entergy Mississippi, Entergy Louisiana, New Orleans Public Service and Entergy Texas (formerly Gulf States)

Mergers of the previously merged mean larger transaction sizes. As one author noted in 2012:

> For most of the past 12 years, major M&A activities were very limited among the top 10 largest utilities with virtually no mergers among them until recently.

- In 2000, FERC referred to "the more than 50 merger cases filed" since its 1996 Merger Policy Statement. Order No. 642, *Revised Filing Requirements Under Part 33 of the Commission's Regulations*, F.E.R.C. STATS. & REGS. ¶ 31,111, 65 Fed. Reg. 70,984 (2000), *order on reh'g*, Order No. 642-A, 94 F.E.R.C. ¶ 61,289, 66 Fed. Reg. 16,121 (2001).
- A 2012 survey found that from 1995 to 2012, "the number of shareholder-owned electric utility holding companies has declined by 48 percent." Jack Azagury et al., *The Race to Consolidate*, PUB. UTIL. FORTNIGHTLY (Sept. 2012), https://www.fortnightly.com/fortnightly/2012/09/race-consolidate.
- In a 2015–16 merger case before the Hawaii Public Utilities Commission, where NextEra (the holding company for Florida Power & Light) sought to acquire HEI (the holding company for Hawaiian Electric Company's two utility affiliates and a bank), a witness for the applicants testified that the number of investor-owned electric utilities had declined from ninety-eight companies in December 1995 to forty-nine companies as of December 2013. Direct Testimony of John Reed at 10, Hawaiian Electric-NextEra Merger, Docket No. 2015-0022 (Haw. Pub. Util. Comm'n filed Apr. 13, 2015).
- According to the Edison Electric Institute, there were, at the end of 2016, fifty remaining utility systems: forty-four publicly traded on U.S. stock exchanges and six owned by either independent power producers or foreign companies. EDISON ELEC. INST., 2016 FINANCIAL REVIEW: ANNUAL REPORT OF THE U.S. INVESTOR-OWNED ELECTRIC UTILITY INDUSTRY 101 (2017), http://www.eei.org/resourcesandmedia/industrydataanalysis/industryfinancialanalysis/finreview/Documents/FinancialReview_2016.pdf.

> In 2011 and 2012, we saw a departure from this trend, driven primarily by the Exelon-Constellation and Duke-Progress mergers. These changes in concentration within the industry, particularly among the larger players, support the hypothesis that a new pattern of more active mergers and acquisitions is emerging.[14]

One last way to see the national picture is to count the unmerged. Of several hundred independent investor-owned utilities from the early 1980s, only the fourteen listed in Table 3.7 remain uncoupled with some other franchised utility.

Table 3.7 Electric utilities remaining unmerged

Arizona Public Service (owned by Pinnacle West)
Black Hills
Detroit Edison
El Paso Electric
Idaho Power
Madison Gas & Electric
Montana Dakota Utilities
NorthWestern Energy (formerly Montana Power)
Oklahoma Gas & Electric
Otter Tail
Pacific Gas & Electric
Portland General Electric
Public Service Electric & Gas (New Jersey)
Southern California Edison

Some of these fourteen utilities are subsidiaries of holding companies; but unlike the holding companies in the preceding lists, these holding companies own no electric utilities, and usually no other major businesses, other than the listed utility company.[15] These are relatively simple companies.

14 Jack Azagury et al., *supra* note 13.

15 The author developed this list by (1) identifying, from the Edison Electric Institute's Financial Review's 2016 list of all utilities, those that were not part of a multi-utility holding company system; then (2) checking the list against each company's public information.