

# THE ORIGINS OF POLITICAL ELECTRICITY: MARKET FAILURE OR POLITICAL OPPORTUNISM?

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## I. INTRODUCTION

The current debate over restructuring the electric industry, which includes such issues as displacing the regulatory covenant, repealing the Public Utility Holding Company Act, and privatizing municipal power systems, the Rural Utilities Service (formerly Rural Electrification Administration), and federally owned power systems, makes a look back at the origins of political electricity relevant. The thesis of this essay, that government intervention into electric markets was not the result of market failures but, rather, represented business and political opportunism, suggests that the intellectual and empirical case for market-oriented reform is even stronger than would otherwise be the case.

A major theme of applied political economy is the dynamics of government intervention in the marketplace. Because interventions are often related, an analytical distinction can be made between *basis point* and *cumulative* intervention.<sup>1</sup> Basis point regulation, taxation, or subsidization is the opening government intervention into a market setting; cumulative intervention is further regulation, taxation, or subsidization that is attributable to the effects of prior (basis point or cumulative) intervention. The origins and maturation of political electricity, as will be seen, are interpretable through this theoretical framework.

## II. A NEW INDUSTRY

The commercialization of electric lighting in the United States, successfully competing against gas lamps, kerosene lamps, and wax candles, required affordable generation, long distance transmission capabilities, and satisfactory illumination equipment. All three converged beginning in the 1870s, the most remembered being Thomas Edison's invention of the incandescent electric light bulb in 1878.

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1. For an application of this analysis to manufactured/natural gas regulation, see Robert L. Bradley, Jr., *The Distortions and Dynamics of Gas Regulation*, in *NEW HORIZONS IN NATURAL GAS DEREGULATION* Ch.1 (Jerry Ellig & Joseph Kalt eds., 1996). For an application to petroleum regulation, see Robert L. Bradley, *OIL, GAS, AND GOVERNMENT: THE U.S. EXPERIENCE* ch. 29 (1996).

Beginning in 1879, electricity was used to light streets and selected buildings in major cities. The firms providing the new service, like the manufactured gas companies that had inaugurated lighting service several decades before, had to receive corporate charters and franchises, which often meant providing city fathers with "some kind of personal, extralegal arrangement."<sup>2</sup> This was particularly true given the prior existence of gas franchises and municipal lighting contracts in major cities, a sampling of which is shown in Table 1.

TABLE 1:  
BEGINNING DATES FOR GAS AND ELECTRIC  
SERVICE IN SELECTED U.S. CITIES

CITY	GAS SERVICE	ELECTRIC SERVICE
Baltimore	1816	1881
Boston	1822	1882
New York	1823	1882
St. Louis	1836	1890
Detroit	1849	1883
San Francisco	1854	1879
Los Angeles	1867	1882
Seattle	1873	1889
San Diego	1881	1886

Source: LOUIS STOTZ, *HISTORY OF THE GAS INDUSTRY* 9-10 (New York: Press of Stettinfa Bros., 1938), various others.

The opening era of the electric industry was characterized by competing franchises and "regulation by competition."<sup>3</sup> This free market era was very positive for consumers. Although aggregate price and quantity information is not available for the 1880-1900 period (the first comprehensive Federal Census of the industry was compiled in 1902), city- and company-specific information indicates that the quantity supplied was rapidly increasing from technological advances and expanding affordability, and prices were falling from declining costs and open competition. Between the turn of the century and 1910, production surged from 4.5 million to 17.2 million megawatt hours (mWh), a 280 percent increase. Generation capacity rose proportionally, increasing from 2 million to 7.5 million mWh.<sup>4</sup> This expansion rate, which would not be subsequently equalled, hardly suggests

2. FORREST McDONALD, *INSULL* 30 (1962). While primary incorporation franchises were often issued by the state, municipalities issued secondary franchises governing street lighting and the use of public thoroughfares. Gregg Jarrell, *The Demand for State Regulation of the Electric Utility Industry*, 21 *J.L. & ECON.* 269, 270 (1978).

3. The only "regulation" was price ceilings in long-term fixed-priced contracts for street lighting, which would not be a major constraint due to stable price levels and improving technology lowering costs. This, however, changed with World War I. See BURTON BEHLING, *COMPETITION AND MONOPOLY IN PUBLIC UTILITY INDUSTRIES* 23 (1938); MARTIN GLAESER, *OUTLINES OF PUBLIC UTILITY ECONOMICS* 224-27 (1927).

4. See JOHN BAUER & PETER COSTELLO, *PUBLIC ORGANIZATION OF ELECTRIC POWER* 2 (1949). The electric manufacturing industry grew from virtually nothing in 1875 to over \$100 million in annual sales by 1900. See HAROLD PASSER, *THE ELECTRIC MANUFACTURERS: 1875-1900* 362 (1972).

the “monopolistic” practice of restricting output to maintain or increase prices. Indeed, average prices fell from 3.36 cents per kWh in 1902 to 2.89 cents in 1907, 2.48 cents in 1912, and 1.97 cents in 1917.<sup>5</sup> The “electrification of America” did not require “tearing up the streets” as with manufactured gas lighting, and the economics did not exist for consumer unrest. Consumer organization was virtually absent, in fact. The impetus for regulation and municipalization would come from elsewhere.

Many factors were behind the industry’s growth in its first three decades. The introduction of electric streetcars in the mid-1880s created a daytime market to complement the nighttime lighting load.<sup>6</sup> Metering usage allowed differential pricing to tailor demand to supply—something the gas industry was slower to adopt due to regulatory concerns.<sup>7</sup> A committee of the Institute of Electrical Engineers worked to standardize electric machinery to lower costs, improve quality, and expedite repair and replacement. Other cooperative organizations formed in the 1880s were the National Electric Light Association (NELA) and the Association of Edison Illuminating Companies. Safety procedures were developed in conjunction with the National Board of Fire Underwriters. Market conservation came of age when usage-insensitive rates (a fixed price per lamp per month) were replaced with charges based on recorded usage. This development was simple economics for the supplier, not a public calling to conserve supply for its own sake. On the other hand, quantity discounts encouraged incremental consumption—a standard business practice not unique to electricity. The invention and application of alternating current transformers in the 1890s greatly expanded the range of power transmission to allow large central generating stations to replace “neighborhood” dynamos dependent on direct current transmission that had to be located within a mile of their market. Rotary-powered steam turbines, which came into service after the turn of the century, generated electricity more cheaply, more quietly, and in less space than reciprocating engines. As if led by an “invisible hand,” progress on many fronts was turning electric lighting from a luxury for the few to a necessity for the many.

### III. THE RISE OF STATE PUBLIC-UTILITY REGULATION

#### A. *The Crusade of Samuel Insull for Public Utility Regulation*

The NELA was founded on February 25, 1885, in Chicago. For much of its early history, the association (which in 1933 would become the Edison Electric Institute) focused on business and technical issues and only peripherally delved into political questions such as franchise policy and municipalization. This would change. In a presidential address before the

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5. See JACOB GOULD, *OUTPUT AND PRODUCTIVITY IN THE ELECTRIC AND GAS UTILITIES, 1899-1942* 20 (1946). In 1994 dollars, electricity rates fell from \$.28 per kWh in 1902 to under \$.18 per kWh in 1917.

6. The market share of lighting in the electric market, which began at 100%, would fall to 61% by 1917. *Id.* at 21.

7. See generally SAMUEL INSULL, *PUBLIC UTILITIES AND PUBLIC LIFE: SELECTED SPEECHES* 69-107 (1924).

NELA on June 7, 1898, Samuel Insull, head of Chicago Edison Company, inaugurated a political agenda advocating a middle way between "municipal socialism" and "acute competition."<sup>8</sup> The competitive franchise, complained Insull, "frightens the investor, and compels corporations to pay a very high price for capital."<sup>9</sup> The "inevitable" consolidation then leaves the combined corporation with the economic wastes of duplicate facilities and high interest costs. The solution was the quid pro quo of exclusive franchises for rate regulation. In his words:

The best service at the lowest possible price can only be obtained . . . by exclusive control of a given territory being placed in the hands of one undertaking. . . . In order to protect the public, exclusive franchises should be coupled with the condition of public control requiring all charges for services fixed by public bodies to be based on cost, plus a reasonable profit. . . . The more certain [franchise] protection is made, the lower the rate of interest and the lower the total cost of operation will be, and, consequently, the lower the price of the service to public and private users.<sup>10</sup>

This historic address was just a beginning.<sup>11</sup> The majority of Insull's fellow executives favored the status quo of "home rule" over public utility regulation. While open competition was a burden to established firms, regulation that systemically governed rates and service was perceived as a threat as well. It would take a different threat than market competition to bring the majority of the industry to Insull's view.

Insull's resolve against competition would never waiver in the next decades. He denied ever having a business reason to enter into an occupied market and decried "the desire of . . . the raiding promoter . . . to possess themselves of other men's property."<sup>12</sup> Smaller operations were advised to "go into the consolidation and holding-company business on your own account."<sup>13</sup> The "concentrated production" of World War I planning by the Fuel Administration was seen as a model for peacetime.<sup>14</sup> As a

8. Samuel Insull, *Presidential Address, in NATIONAL ELECTRIC LIGHT ASSOCIATION: TWENTY-FIRST CONVENTION* 24, 26 (1898). Insull's regulatory initiative reflected his experience competing against and buying out competitors, including "a dummy corporation [formed] to impel Insull to make a considerable offer to buy the company's franchise." DOUGLAS ANDERSON, *REGULATORY POLITICS AND ELECTRIC UTILITIES* 35 (1981).

9. Insull, *supra* note 8, at 26.

10. Insull, *supra* note 8, at 27.

11. Insull, however, was scarcely the first to make a "natural monopoly" argument to regulate electric utilities. Stated one writer in 1889: "It is everywhere acknowledged that the multiplication of wires overhead is a crying evil and danger. . . . Can there be any doubt that it is the height of folly to continue [competition], and that the only rational way of entrusting electric service to incorporated companies is to permit but a single company to operate in a district and control prices by some other means than competition?" CHARLES BAKER, *MONOPOLIES AND THE PEOPLE* 66-67 (1889).

12. INSULL, *supra* note 7, at 57. "I have never . . . found it either necessary, economical or desirable to parallel the other man's investment." Insull, *supra* note 7, at 57.

13. INSULL, *supra* note 7, at 67. While advocating "the massing of production and the centralization of distributing systems," however, Insull did not believe in vertical monopolization if purchased power was cheaper than internal generation. INSULL, *supra* note 7, at 66, 155.

14. INSULL, *supra* note 7, at 237.

second-best alternative "if public regulation fails," Insull favored municipalization over competitive franchises.<sup>15</sup>

Insull's goal was to serve the entire Chicago market, which in his era attracted dozens of competitors.<sup>16</sup> Even if he consolidated the market, open entry made every new day insecure. His goal of "a greater permanency of our investment"<sup>17</sup> required regulation by a state commission. It was the empowered state commission, not market competition, that Insull wanted to grade his report card:

If there is anything wrong with my business, I want to know it, and the best way for me to know it is to have a public official who has the right to look into my affairs. . . . I know of no better arrangement than a centralized regulating body covering the whole state.<sup>18</sup>

Insull knew that commission-industry relations had to be cordial and preached to the NELA and other bodies to this end. The one thing Insull did not do, which many others did in the franchised gas, water, streetcar, and electric industries, was to bribe politicians; across-the-board campaign contributions and small favors such as employment referrals were enough to allow him political access but not controversy.<sup>19</sup>

The perceived alternative to public-utility regulation was municipalization. Insull used the specter of municipalization to muster support for his legislative program. The Public Policy Committee of the NELA, with Insull at the helm, issued a report in 1907 warning that the self-preservation of private companies depended on replacing competition with regulation; if not, the wastes of competition would lead the public to demand municipalization. "Properly constituted general supervision and regulation of the electric light industry," the study concluded, required exclusive franchises, nondiscriminatory cost-based rates, uniform accounting, and full public disclosure.<sup>20</sup> The report was adopted by the full association as the lesser evil.

The NELA study was joined by another study the same year that reflected a business-wide consensus favoring state regulation. The National Civic Federation (NCF), a broad-based organization with representation from business, labor, and academia, published a three-volume report espousing "a system of legalized . . . monopoly . . . subject to public regulation and examination under a system of uniform records and

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15. INSULL, *supra* note 7, at 64.

16. INSULL, *supra* note 7, at 57.

17. INSULL, *supra* note 7, at 61. In 1907, some 45 firms had the legal right to serve the Chicago electric market. See BURTON BEHLING, *COMPETITION AND MONOPOLY IN THE PUBLIC UTILITY INDUSTRY* 19 (1938).

18. INSULL, *supra* note 7, at 58.

19. McDONALD, *supra* note 2, at 115-17.

20. See McDONALD, *supra* note 2, at 118. See also Anderson, *supra* note 8, at 37 (identifying the NELA report as "the most important statement on the relationship of government and public utilities ever issued by the electric power industry.").

accounts and full publicity."<sup>21</sup> This position mirrored the NELA report; indeed, Insull's leadership was instrumental to both.<sup>22</sup>

The momentum created by the NELA report and particularly the NCF study directly translated into state action despite the fact that the threat of municipalization was subsequently lessened with the collapse of the municipal bond market. Within months of the reports, New York reorganized its two-year old Commission on Gas and Electricity as a full-scale Public Service Commission, and Wisconsin established a commission to regulate the entry, rates, and service of public utilities. The enabling legislation of the Wisconsin Public Service Commission was drafted by University of Wisconsin economist John Commons, who had worked closely with Insull on the NCF report.<sup>23</sup> Commons' language would become a model for other states that rapidly followed the lead of New York and Wisconsin.<sup>24</sup>

A follow-up study released by the NCF in 1913, which added precision to the policy recommendations of the first report, was utilized by numerous state legislatures considering public utility commissions.<sup>25</sup> A record ten states would establish commissions regulating electricity in this year alone.

The rationale of the state commissions over the piecemeal legislative approach was encapsulated by the Republican platform of one state:

We advocate a just, impartial, and unprejudiced control of public service corporations and public utilities generally in this state through incorruptible, enlightened, and non-partisan agencies; and we condemn any exemption from such supervision and control, and any other special favors to any particular enterprise or corporation.<sup>26</sup>

The belief that public service commissions would be above "big city political machines" and could "scientifically" ascertain "just and reasonable" prices characterized the honeymoon period of commission regulation. This idealistic view of regulation also existed within academia. Statewide regulation received the benefit of the doubt since as an American institution it was "democratic," and the infancy of the new organizations precluded case studies of commission failure. Questions such as "who regulates the regulators" were before their time. Experience would have to be the great teacher.

### *B. Concurrent Interest in Public-Utility Regulation*

The drive for state-level public utility regulation of electricity was abetted by precedent at home and abroad. In England, gas and electricity

21. National Civic Federation, *Introduction to 1 MUNICIPAL AND PRIVATE OPERATION OF PUBLIC UTILITIES* (1907).

22. McDONALD, *supra* note 2, at 120-21.

23. McDONALD, *supra* note 2, at 121.

24. The Wisconsin law made existing franchises open-ended, required new utilities to receive a certificate of convenience and necessity, regulated service and rates, and controlled the capitalization and the issuance of securities. See Jarrell, *supra* note 2, at 271.

25. For an in-depth analysis of the impact of the two NCF studies and the "reform governors" that led the way, see ANDERSON, *supra* note 8, at 44-55.

26. See GEORGE BROWN, *THE GAS LIGHT COMPANY OF BALTIMORE: A STUDY OF NATURAL MONOPOLY* 104 (1936).

companies had been consolidated and placed under utility regulation<sup>27</sup>—something that Insull and other regulatory proponents did not fail to emphasize. The manufactured gas industry implemented a model state-level public utility commission in Massachusetts in 1885; two years later electric regulation was added as well. The Interstate Commerce Act of 1887, subjecting interstate railroads to standardized cost-based rates and entry certification, “indicated the path which the states were to follow in their attempts at regulation.”<sup>28</sup> Approximately thirty states had established “weak type” railroad commissions, primarily dealing with operational and safety issues. In this period (1855-1906), only Massachusetts (1885) and New York (1905) established “strong-type” public utility commissions to regulate gas and electricity.<sup>29</sup> Ten states regulated telephone companies as public utilities by 1909; by 1917, the number swelled to forty-two.<sup>30</sup> Beginning in 1897, Charles Yerkes, Chicago’s electric streetcar magnate, worked to bring the traction industry under state commission regulation to perpetuate his franchises. And last but not least, members of the upstart economics profession, whose views were being considered as expert opinion, looked more critically at *laissez faire* than regulation and municipalization.<sup>31</sup>

### C. *The Institutionalization of State Regulation*

Electric utility regulation by state commissions became a very popular movement. Noted historian Forrest McDonald:

Each of the three pioneer commissions was of extraordinarily high caliber and as a result the regulatory movement was off to an auspicious start. By 1909 most people who were concerned with the subject, in and out of the industry, had begun to look favorably upon regulation by state commissions.<sup>32</sup>

High marks were given to the commissions’ efforts to remove the political impurities of the prior system of franchise regulation and sooth tensions between neighboring municipal and investor-owned electric systems. A new era of stability was ushered in. Commission staffs worked diligently to formulate a uniform system of accounts and set general rate principles.<sup>33</sup> The new fervor spread rapidly—by 1915 the number of state commissions with jurisdiction over electricity swelled from three to thirty-three.<sup>34</sup>

27. See I.C.R. BYATT, *THE BRITISH ELECTRICAL INDUSTRY: 1875-1914* 197-209 (1979).

28. BROWN, *supra* note 26, at 72.

29. C.O. RUGGLES, *ASPECTS OF THE ORGANIZATION, FUNCTIONS, AND FINANCING OF STATE PUBLIC UTILITY COMMISSIONS* 2, 6 (1937).

30. GABRIEL KOLKO, *THE TRIUMPH OF CONSERVATISM* 179 (1963).

31. See generally Jack High, *Economic Theories of Regulation, 1880-1900* (Fall 1990) (Unpublished paper prepared for Harvard University’s Business History Seminar).

32. McDONALD, *supra* note 2, at 121.

33. McDONALD, *supra* note 2, at 121.

34. This momentum lead NELA president Carl Jackson to note that as of 1922 all states either had established a commission or were considering the same (1922) and conclude: “The necessity for regulation and supervision is no longer, I believe, an open question.” Carl Jackson, *Regulation, in* Letter in Response to Senate Resolution No. 83 from the Chairman of the Federal Trade Commission, U.S. Senate, 70th Cong., 1st Sess., *UTILITY CORPORATIONS* 381 (1928).

Another seven commissions brought the total to forty by 1934 as seen in Table 2 below:

TABLE 2  
STATE PUBLIC UTILITY COMMISSIONS  
REGULATING ELECTRICITY

MASSACHUSETTS	1887	IDAHO	1913
NEW YORK	1905	PENNSYLVANIA	1913
WISCONSIN	1907	WEST VIRGINIA	1913
GEORGIA	1907	INDIANA	1913
VERMONT	1908	MISSOURI	1913
MARYLAND	1910	MONTANA	1913
NEW JERSEY	1910	NORTH CAROLINA	1913
CALIFORNIA	1911	OKLAHOMA	1913
CONNECTICUT	1911	MAINE	1914
KANSAS	1911	ILLINOIS	1914
NEVADA	1911	VIRGINIA	1914
NEW HAMPSHIRE	1911	ALABAMA	1915
OHIO	1911	WYOMING	1915
OREGON	1911	NORTH DAKOTA	1919
WASHINGTON	1911	UTAH	1917
ARIZONA	1912	MICHIGAN	1919
RHODE ISLAND	1912	TENNESSEE	1919
NEW MEXICO	1912	LOUISIANA	1921
COLORADO	1913	SOUTH CAROLINA	1922
DISTRICT OF COLUMBIA	1913	ARKANSAS	1933
		KENTUCKY	1934

Source: C.O. RUGGLES, ASPECTS OF THE ORGANIZATION, FUNCTIONS, AND FINANCING OF STATE PUBLIC UTILITY COMMISSIONS 4-5 (1937). As of 1940, only eight states—Delaware (enacted in 1949), Florida (1951), Iowa (1954), Minnesota, Mississippi (1956), Nebraska, South Dakota, and Texas—did not have commissions authorized to regulate electric rates and service.<sup>35</sup>

Early experience reinforced Insull's belief that the regulatory covenant of franchise protection for rate and service regulation would be a net benefit for established investor-owned utilities compared to "regulation by competition." In 1915 Insull proudly stated, "the greatest event that has taken place in the last ten or fifteen years in the local public-utility business is the transfer of control and regulation in most of the states from the state legislatures to state commissions which, besides exercising administrative powers, are also exercising semi-legislative and semi-judicial functions."<sup>36</sup> He pointed to the frequency of rate increase applications that had been approved by commissions around the country, which in 1917 was approximately 90%.<sup>37</sup> Yet just two years later Insull proclaimed that "control of

35. FEDERAL POWER COMM'N, STATE COMMISSION JURISDICTION AND REGULATION OF ELECTRIC AND GAS UTILITIES 28 (1941); George Stigler & Claire Friedland, *What Can Regulators Regulate? The Case of Electricity*, 5 J.L. & Econ. 13 (1962).

36. INSULL, *supra* note 7, at 26.

37. INSULL, *supra* note 7, at 153.



public utilities by means of state regulation is at a crisis in Illinois."<sup>38</sup> The risk of regulation for business—rate reductions for their own sake—was polluting his ideal of enlightened, impartial regulation. Despite the best efforts of the father of public utility regulation of electricity, government intervention was proving to be a double-edged sword.

#### D. *Municipalization In the Competitive and Regulatory Eras*

Government ownership and operation of electric operations grew up alongside the investor-owned industry. Four municipalities were formed in 1882, the same year as Thomas Edison's demonstration project at Pearl Street in New York City. The number of municipalities grew to over one hundred by 1890, 728 by 1900, and 1,534 by 1910.<sup>39</sup> This growth was heavily concentrated in small towns, with the cities primarily relying on investor-owned service. Consequently, the market share of investor-owned utilities was dominant. In 1922, near the peak of the municipal population, the government entities served only 13% of the population and held only 5% of the nation's electric infrastructure.<sup>40</sup>

Relatively few municipalities were discontinued or privatized in this period—two between 1880 and 1890, twenty-four between 1891 and 1900, and 106 between 1901 and 1910. The growth of municipalities would continue until the early 1920s. After peaking at 3,083 entities in 1923, private holding companies (described below) began to purchase public power systems in addition to consolidating private ones. By 1931, some 1,210 municipalities (39% of the total) were either sold or deactivated from this peak.<sup>41</sup>

Another trend was for municipalities to purchase their power from private firms rather than generate it. In 1909, under 10% of the municipalities purchased their power from investor owned companies; by 1923 over one-third did.<sup>42</sup> Wholesale power sales allowed private firms to expand their generation and displace the need for municipal reinvestment. This quasi-privatization left these municipalities in the transmission and distribution business only.

The political recipe for creating and maintaining municipalities, particularly in the big cities, was a time-honored one—concentrated benefits to the municipal hierarchy and dispersed costs to general citizenry.<sup>43</sup> Many urban projects that could not be financed privately were financed publicly. All that was needed was a referendum, and those leading the way could find themselves with jobs with the new municipality after the election.

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38. INSULL, *supra* note 7, at 183.

39. DAVID SCHAPP, *MUNICIPAL OWNERSHIP IN THE ELECTRIC UTILITY INDUSTRY* 9 (1986).

40. Ralph Dewey, *The Municipal Plant: Is It Coming or Going?*, in *GOVERNMENT OWNERSHIP OF POWER AND LIGHT UTILITIES* 59 (Claiborne Duval ed., 1934).

41. SCHAPP, *supra* note 39, at 9. In 1932, 95% of all power, 91% of all customers, and 94% of all revenue was generated from the private power side. BEHLING, *supra* note 3, at 74-75.

42. RICHARD RUDOLPH & SCOTT RIDLEY, *POWER STRUGGLE: THE HUNDRED-YEAR WAR OVER ELECTRICITY* 44 (1986).

43. See SCHAPP, *supra* note 39, at 13-14 (for a discussion that draws upon the theoretical analysis of Armen Alchian).

Other beneficiaries that lobbied for municipalization were (1) private gas firms that believed that government ownership and operation made electricity less competitive with their product, and (2) electric equipment manufacturers who did not want to wait until the private sector found electric provision in a particular local economy.<sup>44</sup>

Consumers were baited by the fact that they received service when there might have been none and enjoyed lower rates than would have otherwise been the case through tax exemptions granted to the municipality. Thus municipalities as "yardstick" enterprises protruded a false economic signal of superior economic performance compared to private utilities.

Several factors limited the spread of municipalization. The NELA formed a Committee on Municipal Ownership in 1904 to educate the public against government ownership and operation.<sup>45</sup> A limit on bonded indebtedness prevented some projects. Another factor that discouraged the spread of municipalization but promoted inefficiency of existing governmental operations was prohibitions on interconnections with other public or private systems.<sup>46</sup>

*E. The Turn to State Public Utility Regulation: Market Failure or Business Protectionism?*

The rush to state-level public utility regulation represented internally-generated intervention by business interests, not external intervention imposed on business from organized consumers aided by public-spirited regulators.<sup>47</sup> The consumer gains from quasi-open competition precluded the fervor for regulatory reform among ratepayers as it did vested providers. Without industry support for regulation, marshalled through the NELA and the NCF, government interest in public utility control would have been much less. However, there was public concern over franchise corruption—a "government failure" rather than a market failure as explained below—that did contribute to the municipalization movement with electricity.

1. The Myth of Natural Monopoly

Insull's argument was the classic rationale for applying public-utility regulation to natural monopoly.<sup>48</sup> Economies of scale made price wars, competitive waste, and eventual monopolization inevitable. To achieve the end result of consolidation, yet avoid the wasteful means of duplication and

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44. McDONALD, *supra* note 2, at 117; Henry Stimson, *Public Operation v. Private Operation of Public Utilities*, in *UTILITY CORPORATIONS*, *supra* note 34, at 341-42.

45. This committee, the predecessor of the Public Policy Committee, was Insull's front group to rally support for regulation as an alternative to municipalization. *Id.*

46. Dewey, *supra* note 40, at 54, 60.

47. These two categories of political intervention, as well as subcategories within each, are developed in greater detail in chapter 30 of BRADLEY, *supra* note 1.

48. He applied the natural monopoly argument to "gas, or electricity, local transportation, or the telegraph, or the telephone, or the steam railroads in any given territory." INSULL, *supra* note 7, at 56.

protect the consumer, the state would grant exclusive franchises and restrict rates to the utility's cost and a normal profit on the firm's rate base.

This argument was not only made by industry leaders such as Samuel Insull, who referred to public control of monopoly as "the first essential," but academic economists such as Richard Ely of the University of Wisconsin who favored municipal ownership to solve a perceived natural monopoly problem.

An anomaly permeates Insull's argument for public-utility regulation. If monopoly is really more efficient than rivalry from scale economies and high capital costs, then the natural outcome should be monopoly. Natural monopoly, indeed, would be natural. An aggressive managerial philosophy of low pricing to existing customers and promotional pricing to new customers—which Insull faithfully practiced<sup>49</sup>—would be all that is necessary to prevent inefficient entry. The *market* phenomenon of natural monopoly should not require governmental involvement, and, indeed, firms would be arguing against regulation rather than for it. A true natural monopolist would have argued *against* regulation, not for it (as Insull), on grounds that:

One firm is most efficient, and my firm is it. We beat the competition fair and square, and we should not be regulated as a result. Neither should the winning firms in other metropolitan areas be regulated from their success. Regulation only increases business costs, introduces taxpayer obligations, and distorts entrepreneurial behavior.

What was really occurring? New entry and price wars from new entry were continually making life difficult for the incumbent firms. "Natural monopoly" was not natural, and a political monopoly was sought instead. New entrants were serving wholly new markets and using their state-of-the-art technology to overcome the sunk-cost advantage of incumbents in existing markets.<sup>50</sup> New entrants were not throwing bad money after the incumbent's good money; they were risking their scarce capital to meet unmet consumer wants.

Insull's agenda sought to create unnatural monopolies. Competition would be frozen as if technological advances could never favor a new entrant and the entire market was being efficiently served by the existing firm(s). This was rarely, if ever, the case. Actual and potential competition were necessary.

The historical fact was that rivalry was not "over" at the time it became illegal with exclusive franchises under public utility regulation. Given this, it is fair to ask whether rivalry would have *ever* been over and natural monopoly institutionalized under free market conditions.

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49. Insull's strategy was "one part quality service, two parts hard selling, and three parts rate cuts." McDONALD, *supra* note 2, at 104. Insull criticized his fellow executives for not following a low-rate strategy to avoid inflaming the public and encouraging municipalization.

50. With the subsequent improvements in generation and transmission, the previously small and non-competing enterprises in one city sought to expand by encroaching upon one another's territory, and spirited competition began. . . . Rapid improvement in technical efficiency and in the investment standing of the industries made larger producing and distributing units possible and accounted for the cut-throat competition which soon appeared. BEHLING, *supra* note 3, at 19.

## 2. Gains from Competition

The competitive saga in Insull's own market, Chicago, hardly suggests that consumers were losing from open competition. In 1892, the year Insull became president of Chicago Edison, electricity was sold for \$0.20 per kilowatt-hour (kWh). By 1897 rates had dropped to \$0.10/kWh, well below other comparable cities.<sup>51</sup> After the turn of the century price competition and rate reductions continued. Actual and potential competition ensured this result; if one firm was not or would not pass along the fruits of technological progress and scale economies, another firm would.

National statistics that were first compiled in 1902 show a more-than-doubling of station capacity and generated power five years later, a time in which only four states implemented public utility regulation. In the same period operating revenue per kilowatt hour fell over 8%.<sup>52</sup> Thus it is not surprising that Insull's speeches calling for regulation did not contain statistics concerning price or quantity. Evidence of "natural monopoly" would have included erratic price behavior by the monopolist, at least after the consolidation phase, restraints in the quantity supplied, and service indiscretions. Open competition, however, precluded these results.

"Cut-throat" competition, "duplicative" facilities, and "monopolistic" consolidation were all beneficial aspects of the market process. Consumer welfare takes precedence over producer welfare in a market setting, and price wars from new entry represented immediate ratepayer gains. "Duplicative" capacity fostered electric-on-electric competition, provided insurance capacity for peaking needs, and served the growth market over the longer term. New entry and rivalry as a rule were for expanding markets, not stagnant or declining ones. Consolidation was not the end of competition but a stage in the competitive process that new entry could (and often did) challenge. Insull, in 1914, stated that electricity provision "has not reached a point of saturation in any of the communities in which it is operated,"<sup>53</sup> confirming that the competitive process was young too. The proactive force of new entry was still needed to push new markets and discipline existing ones. There was no time for competitive holidays.

The inconveniences of duplicate electric service were oft-cited but exaggerated. The analogue of "tearing up the streets" with new gas mains was the relatively innocuous "'dead wires' and useless poles"<sup>54</sup> phenomenon with competitive electricity. Removing obsolete wires and poles was a simple maintenance chore for the municipality. It was not an important consideration for public policy. "Street brawls among the workers of the rival organizations, each seeking to prevent the other from installing its distributions system,"<sup>55</sup> were more serious, but they, too, were not a matter for public policy. It was a matter for the street owners, preferably private,

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51. McDONALD, *supra* note 2, at 104-05. A 7% deflation occurred in the five year period.

52. U.S. census data is summarized in L.R. NASH, *THE ECONOMICS OF PUBLIC UTILITIES* 6 (1925).

53. INSULL, *supra* note 7, at 6.

54. BEHLING, *supra* note 2, at 20.

55. BEHLING, *supra* note 2, at 21.

to set conditions of entry and police their property against the initiation of force.

Whatever the above problems, evidence also exists that new entry was not duplicative. Gregg Jarrell's study of the historical record found "many cases of competitive franchises being granted with no resulting increase in physical plant or duplication of facilities."<sup>56</sup>

As was the case with manufactured gas, the electric industry in the market-raiding era was constantly innovating and improving. England, which terminated its competitive era several decades before the United States did, failed to keep up technologically with its trans-Atlantic rival.<sup>57</sup>

Both the prospect and actuality of competition had an undeniable salutary effect of lowering prices for consumers. Existing providers must price electricity below what new entrants would need to charge, and situations of stranded capacity sparked price wars down to variable cost.<sup>58</sup> What the provider had to give up was the consumer's gain.

Competition in these decades existed not only between electric firms but among rival lighting fuels—kerosene and manufactured gas, in particular. One electric utility executive complained that "the Standard Oil Company is better satisfied with the profit which it makes on the sale of kerosene in Detroit than are either the Detroit Gas Company or the electric-light companies in that city with their profits."<sup>59</sup> The introduction of the Welsbach gas mantle in the early 1890s allowed gas to leapfrog electricity in the lighting market. Although missed by the natural monopoly model, consumers had choices in the lighting market.

If the natural monopoly model for regulation was correct, the states that first implemented statewide public-utility regulation should have been the ones that had the highest rates and the lowest quantity supplied. Conversely, the states with the lowest rates and highest quantity supplied should be the last to implement regulation. However, the evidence suggests that the opposite was true with electricity, consistent with the hypothesis that regulation was more a response to protect vested business interests than to address monopolistic behavior during the free market era. Comparing statistics from 1912, when only five states implemented state

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56. Jarrell, *supra* note 2, at 295. Jarrell also found a Demsetzian instance of "a new franchise holder first negotiat[ing] long-term contracts at lower rates with customers of the existing utility, and then offer[ing] to either sell the contracts to the existing utility or purchase the utility's plant." Jarrell, *supra* note 24, at 295.

57. See BYATT, *supra* note 27, at 202. "Inevitably the attempt to regulate public utilities simply by fixing a set of initial conditions at a time when technology was changing rapidly, had substantial disadvantages."

58. If prices remained low and profit margins small, the production economies of large-scale operations and the use of efficient production processes, which were usually patented, kept new firms out of the industry. If high prices had been set, the entry of new firms would have been encouraged because the use of small-scale, obsolete manufacturing methods would have been profitable.

PASSER, *supra* note 4, at 351.

59. Alex Dow, *Public Lighting in Relation to Public Ownership and Operation*, in NATIONAL ELECTRIC LIGHT ASSOCIATION: TWENTY-FIRST CONVENTION 106 (1898).

public utility regulation with electricity, and 1917, a period when twenty-five states had such regulation, Gregg Jarrell concluded:

Utilities in early-regulated (ER) states had 46 per cent lower prices, 38 per cent lower gross profits, and 23 per cent higher output than did utilities in later-regulated (LR) states in 1912. By 1917, after state regulation was established in ER states, prices and profits had risen and output had fallen. These empirical results are difficult to square with the traditional explanation that state regulation was designed to minimize the undesirable social consequences of a naturally monopolistic electric utility industry. . . . The electric utility interests were not acting suicidally when, around 1910, they became the main champions of the movement for state regulation.<sup>60</sup>

### 3. Franchised-Monopoly Failure and Government Failure

A realistic perspective of the choice between political regulation and the self-regulating market must not only account for "market failure" but "monopoly failure" by exclusively franchised utilities and "government failure" of political control. Insull himself had pains of conscience over the "new element" of political interference in business life that he himself was so instrumental in securing:

Sometimes I wonder whether this regulation may not check enterprise and destroy individuality in management. I sometimes ask myself whether we are not in danger of drifting to a species of paternalism which will end in our simply fulfilling our allotted task and being satisfied with just what we have today, forgetful of the fact that the electricity-supply business is relatively a new industry.<sup>61</sup>

Future decades would give credence to Insull's early fears that his vision of "calm, scientific, and just regulation" would be contradicted by reality.<sup>62</sup> State regulation, like local regulation before it, turned out not to be apolitical and peopled by altruistic, energetic, career-minded individuals. The machinery of regulation was political and peopled by quite ordinary and fallible individuals. It would also bring out the worst in the regulated industry. Executive decision-making in the regulated era would contradict the paternalistic image exhibited by Insull as the apostle for electric regulation.

#### *F. The Case for Municipalization Reconsidered*

The argument for establishing municipal electric operations in place of investor owned utilities involved an economic element of lower rates and a managerial aspect of less political control. Both reasons, however, were illusory from a market viewpoint.

The rate advantage of municipalities centered around its tax advantages compared to private utilities. "In an endeavor to supply electric service at lower apparent cost than possible under private operation," explained Ernest Abrams, "political expediency has decreed that public

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60. Jarrell, *supra* note 2, at 292-93, 295.

61. INSULL, *supra* note 7, at 31.

62. INSULL, *supra* note 7, at 179.

electric systems be largely relieved of the tax burdens which weigh so heavily on private enterprise today."<sup>63</sup>

Other things equal, the costs and rates of private firms subject to market competition should be lower than government firms protected from competition. One study in 1932 found that corrected for taxes, municipal electric rates were substantially higher than for similarly sized private utilities.<sup>64</sup> Contrary studies have not so much proved the opposite as revealed the ambiguity of using statistics and econometric analysis where data is imperfect and controlled experiments are not possible.<sup>65</sup>

The rationale for municipalization was intertwined with the problems of private regulation—both ad hoc franchise regulation and systematic public utility regulation. Municipalization, however, was not an escape from politics as proponents advertised but institutionalized political control. Stated William Prendergast:

Those who clamor for public ownership and operation of the electric industry are in the same breath condemning regulation by state commissions. But if regulation is a failure—regulation by appointed and elected public officials—what chance would there be for the success of public ownership and operation with public officials in charge. The proposed task is certainly ten times as great as the present one!<sup>66</sup>

Many states regulated electric municipalities to address the distortions of political control. By 1928, seventeen state utility commissions regulated electric municipalities along with investor-owned utilities.<sup>67</sup> This increased to twenty-four state commissions by 1940.<sup>68</sup>

Private ownership, particularly if unregulated, would have allowed a degree of entrepreneurial discovery and economic efficiency that bureaucratic management cannot. City fathers could have entered into private contracts to support the private provision of electricity rather than create a new department to provide the same.

63. ERNEST ABRAMS, *POWER IN TRANSITION* 17 (1940). A comparison of tax rates for 1937 federal census data showed a 14% rate for electric utilities and less than a 2% rate for the average electric municipality. *Id.*

64. See *GOVERNMENT OWNERSHIP OF POWER AND LIGHT COMPANIES*, *supra* note 40, at 185. Comparisons between private and public power entities did not capture the full contrast since private firms were regulated.

65. For one study finding "significantly higher productive efficiency" for municipal electric firms from the "power of public spirit and *esprit de corps*," see William Hausman & John Neufeld, *Property Rights V. Public Spirit: Ownership and Efficiency of U.S. Electric Utilities Prior to Rate-of-Return Regulation*, 73 *REV. ECON. & STAT.* 421 (1991). Far from just letting the "facts" speak for themselves, a causal explanation for this apparent anomaly is called for and explains: 1) why morale and incentive were greater in government entities than private firms; 2) how the utilization of decentralized knowledge necessary for economic efficiency was better achieved in municipals than private firms; and 3) how other factors might have violated the *ceteris paribus* conditions of the comparison.

66. Hausman & Neufeld, *supra* note 65, at 244-45 (quoting William Prendergast).

67. C.O. RUGGLES, *supra* note 29, at 47.

68. FEDERAL POWER COMMISSION, *STATE COMMISSION JURISDICTION AND REGULATION OF ELECTRIC AND GAS UTILITIES* 22 (1941).

### G. *The Cumulative March of Early Regulation*

A 1914 National Municipal League study verified the sentiment for regulation:

All now seem to assent to the proposition that municipal utilities must be regulated. The point of difference is as to the method and extent of regulation.<sup>69</sup>

This universal agreement resulted from a long process of government involvement, not a sudden interest distrust of market competition, as seen below.

Public utility control of investor-owned electric utilities is a case study of cumulative government intervention. The beginning or basis point intervention was government ownership and operation of the streets, which led to franchise agreements by city fathers for street usage and street lighting contracts.<sup>70</sup> These agreements had the legal status of contracts.<sup>71</sup> Corporate charters, too, were an entre to government-imposed conditions (regulation).<sup>72</sup>

Regulation by state commissions was a cumulative intervention to the political and administrative shortcomings of local (1879-1907) regulation as explained below.

#### 1. The Politicization of Franchise Regulation

The politicization of franchise regulation was recognized in a National Municipal League study released in 1914:

There is no side-stepping the fact that, in American cities, municipal utilities are too often the city's actual governing power. If the utilities cannot, unaided, dominate a city's governmental machinery, they dominate it through alliances with other interests. . . . Obtaining franchises invites occasional corruption and municipal subversion; the interpretation and administration of those franchises invite permanent corruption and subversion.<sup>73</sup>

In their review of the period, Richard Rudolph and Scott Ridley similarly concluded:

In major cities across the nation, journalists and government investigators turned up a steady stream of city councilors for sale and government officials acting on behalf of private interests. One of the choicest plums of public

69. THE REGULATION OF MUNICIPAL UTILITIES 23 (Clyde King ed., 1912).

70. Electricity was "a recognized utility from the outset because of its occupancy of streets and consequent franchise requirements." See JOHN BAUER & NATHANIEL GOLD, THE ELECTRIC POWER INDUSTRY; DEVELOPMENT, ORGANIZATION, AND PUBLIC POLICIES (New York, Harper & Bros. 1939); BAUER & COSTELLO, *supra* note 4 at 14. See also Stigler & Friedland, *supra* note 35, at 3 (stating "Every enterprise producing and distributing electricity has been regulated since its founding by way of charter limitations and franchises; its use of public thoroughfares was enough to insure this.").

71. See OSCAR POND, A TREATISE ON THE LAW OF PUBLIC UTILITIES 138-39 (Indianapolis, Bobbs-Merrill Co. 1925).

72. See, for example, the case for corporate regulation made by one former chairman of the New York Public Service Commission. WILLIAM PRENDERGAST, PUBLIC UTILITIES AND THE PEOPLE 98 (New York, D. Appleton-Century Co. 1933)

73. THE REGULATION OF MUNICIPAL UTILITIES (Clyde King ed., 1914).



office, and one rife with corruption, was the granting of franchises for electric power, the new industrial heartblood.<sup>74</sup>

## 2. Franchise Uncertainty

Limited-term franchises posed another problem that inspired replacement regulation within the industry. Explained Carl Jackson:

A limited-term franchise is a suspended sentence or threat. . . . [It] is notice that at some future date the municipality or State may see fit to treat property and legitimate investment in public utility on the junk-value basis.<sup>75</sup>

The political solution to a political problem would be state public utility regulation that replaced limited-term franchises with indeterminate permits for the established firm and a requirement to obtain a "certificate of public convenience and necessity" from new entrants. While the open-ended permit was technically revokable, in practice it was not.

## 3. The Lure of "Scientific" Regulation

A companion rationale for state regulation in place of local regulation—greater professionalism—was enunciated by Henry Spurr, the editor of *Public Utilities Fortnightly*:

Regulation by a commission ought to be better than regulation by direct action of the legislature. The legislature does not have time to ascertain facts upon which specific regulatory action should be based. It is not in session throughout the year. It could not act quickly in an emergency such as that created by the war. A commission, on the other hand, may be continuously in session. It can ascertain the facts upon which its legislative and administrative action should be based. It can conduct hearings and give both sides a chance to produce their evidence. Theoretically . . . this would seem to be the best form of regulation.<sup>76</sup>

Maryland, for example, established a state commission in 1910 to replace ad hoc regulation with "continuous control":

The failure of the legislature to control the utilities effectively was due . . . to the increasing number of bills brought before it every session and the conduct of some of its members. . . . Under the pressure of numerous local bills, control became a matter of exchanging votes and favors. It was impossible to form any unified state program of utility control. . . . Only when the whole matter of utility control was placed in the hands of a specialized commission could a policy of continuous control be exercised.<sup>77</sup>

C.O. Ruggles, professor of Public Utility Management at Harvard University, similarly concluded, "The early public utility commissions came into existence because regulation by such means as franchises, charters, and

74. RUDOLPH & RIDLEY, *supra* note 42, at 22-23. The authors also noted a precedent, "enormous sums of money . . . spent on politicians by railroad companies seeking land grants, tax relief, and subsidies." *Id.* at 31.

75. See Jackson, in *UTILITY CORPORATIONS*, *supra* note 34, at 384.

76. See Henry Spurr, *Have the State Commissions Fulfilled Their Intended Functions?*, in *GOVERNMENT OWNERSHIP OF POWER AND LIGHT UTILITIES* 175 (Claiborne Duval ed., 1924). See also POND, *supra* note 71, at 6.

77. See BROWN, *supra* note 26, at 107.

direct legislation proved to be too rigid to cope with the complex economic and social problems of highly dynamic public utilities."<sup>78</sup>

#### 4. Technological Developments

A related aspect of the move from local to state regulation was the territorial growth of power companies. Transmission by alternating current, beginning in the 1890s, increasingly brought multiple jurisdictions into play.<sup>79</sup>

#### 5. Cumulative Statewide Regulation

The cumulative march of regulation was also evident as state commissions reached deeper and deeper into managerial decision-making to make public utility regulation more effective. Summarized Ruggles:

There has been a steady growth in commission jurisdiction over more types of utilities, and greater authority over the managerial affairs of the utilities. This latter tendency was apparent as early as 1890 [in Massachusetts with manufactured gas], but it is doubtful if anyone at that time could have anticipated the extent to which internal operations of utilities would be made subject to actual regulation by utility commissions. . . . Increased attention was focused especially on such matters as the power to change contract rates, to issue terminable or indeterminate permits, to control depreciation rates, to approve consolidation and mergers, and to authorize the construction of electric transmission lines.<sup>80</sup>

#### 6. Municipalization as Cumulative Intervention

Electric municipalization was cumulative intervention to the basis point intervention of municipal street ownership. Municipal streets were simply joined by municipal lighting for the streets.<sup>81</sup> "Municipally owned plants not catering to private needs," in fact, "left the industrial field to the private plant and confined their activities principally to street lighting."<sup>82</sup> Later municipalizations were cumulative to "home rule" regulation where the government firm was inspired by the political problems of franchise regulation. Prominent economists such as Richard Ely made this argument for municipalization in books and articles;<sup>83</sup> politicians made the argument in their respective locales. Detroit, for example, established an electric municipality in 1895 after political corruption was uncovered with franchises.<sup>84</sup>

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78. See RUGGLES, *supra* note 29, at 1.

79. See POND, *supra* note 71, at 8.

80. See RUGGLES, *supra* note 29, at 56. See also *infra* note 239.

81. Stated a 1926 NELA study: "So it was that municipal ownership began in the electric-light industry. Such places as Detroit, Wheeling, and Allegheny established arc lighting systems for their streets." See National Electric Light Association, *Political Ownership and the Electric Light and Power Industry*, in *UTILITY CORPORATIONS*, *supra* note 34, at 341.

82. Hubert Havlik, *Some Aspects of the Development of Municipal Ownership in the Electric Light and Power Industry*, in *MATERIALS FOR THE STUDY OF PUBLIC UTILITY ECONOMICS* 922-23 (Herbert Dorau ed., New York, Macmillan Co. 1930).

83. See, e.g., RICHARD ELY, *PROBLEMS OF TODAY* 130 (New York, Thomas Crowell & Co. 1888).

84. RUDOLPH & RIDLEY, *supra* note 42, at 32-33.

State public utility regulation was also cumulative intervention to municipalization to the extent that utility executives spearheaded regulation as the lesser evil compared to government ownership. State regulation of municipalities, which occurred in two dozen states, was also cumulative to municipalization itself.<sup>85</sup>

#### *H. The Myth of Scientific Regulation*

A comprehensive study of power regulation published by The Twentieth Century Fund in 1944 approvingly described the evolution of power regulation from “inflexible” and “corrupt” local regulation to state-level “scientific regulation by administrators armed with authority to determine facts and issue rules and orders.”<sup>86</sup> Yet just pages later the study described some of the following theoretical problems encountered by rate-setting regulation as a surrogate for competition. What is the “fair value” of an asset, and what is a “fair return” on that asset? How should entrepreneurial performance be rewarded or penalized within this framework? Should the rate base be valued at depreciated original cost, reproduction cost, a combination of the two, or other factors (such as future capital attraction)? Economists know that value is not embedded cost, however defined, but the revenue stream associated with an asset, which under regulatory rate-setting creates a circularity problem. The method of depreciation is vital to determine the level of present versus future rates, yet it “can be only roughly estimated” and “has become a focus of wide controversy.”<sup>87</sup> What standard should determine whether costs are prudent or not? What is a “fair” rate structure between customer classes now and in the longer run given the “special costs” of each?<sup>88</sup> Regulation “must also be consistent,”<sup>89</sup> yet different states apply different methodologies and have different authority to regulate.

Given these difficult and even intractable problems, a series of judgment calls come into play that make decision-making dependent on the involved personalities and political situation. Whatever the case for regulation, public utility regulation cannot be “scientific,” duplicate a competitive market, or synthesize market entrepreneurship.

The manifestation of these theoretical problems was the empirical reality that regulation scarcely measured up to the expectations of even its proponents. Summarized Charles Morgan in 1923:

Regulation is still in a state of flux. It has seemingly taken on an entirely new aspect of late, perhaps an aspect which seems altogether unexpected and unwarranted to those who were its early protagonists. Originally a “people’s”

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85. For a schematic describing the interrelationships between the phases of regulation that led to state and then federal public utility regulation in the electric market, see Figure 1 below.

86. THE TWENTIETH CENTURY FUND, *THE POWER INDUSTRY AND THE PUBLIC INTEREST* 16 (Edward Hunt ed., 1944).

87. *Id.* at 19.

88. *Id.*

89. *Id.*

or a "consumers' " movement, today regulation has become by force of circumstance the champion of the rights of the utilities.<sup>90</sup>

### I. "Regulation by Competition": The Foregone Alternative

The problems of regulation beg the question: why not the free and open market? There was another alternative to the interventionist choices of franchise regulation, public utility regulation, and municipalization. It was the "acute competition" that Insull feared.

"Regulation by competition" is anchored on open entry (either no franchise requirement or at least unlimited franchises) that provides actual rivalry in some cases and potential competition in all cases to the established firm(s). This market framework allows "as-agreed" transactions in place of government edicts. Without regulation, regulatory problems would not have existed, and new regulation would not have been necessary to address the problems created by existing regulation. With regulatory costs absent, and unconstrained incentives, market entrepreneurship and its benefits would have been maximized.

Private street ownership would have greatly facilitated the market regime. Lighting contracts would have been less political, and street usage for electric service would have been a purely private matter.

The forsaken free-market alternative would receive long overdue attention with the widely recognized "breakdown of regulation" in the 1930s, examined below. By then, however, it was too late. Following earlier precedent in the electric industry (and other industries such as natural gas), political inertia would add new regulation rather than remove existing regulation.

## IV. THE "BREAKDOWN" OF STATE REGULATION

The quid pro quo of franchise protection for rate regulation offered more upside than downside for affected firms. Franchise protection meant that rates no longer had to be restrained by potential or actual competition. The resulting inelastic demand created a bountiful managerial opportunity to increase costs, rates, and profits within the regulatory constraints. Since regulators are "incapable of forcing the utility to operate at a specified combination of output, price, and cost,"<sup>91</sup> the utilities had a decided advantage. The ability of the utilities to adjust and thrive under public utility regulation would be accomplished to a greater extent than anyone predicted—a development that directly led to federal accounting, securities, and power industry regulation in the mid-1930s.

### A. Advantages of the Regulated Over the Regulators

The regulated had several important advantages over state regulators. One was a greater familiarity with their business. It is always difficult for

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90. CHARLES MORGAN, REGULATION AND THE MANAGEMENT OF PUBLIC UTILITIES 76 (1923).

91. Stigler & Friedland, *supra* note 35, at 11.

“outsiders” to know as much as “insiders” whatever the regulatory constraints, and this was particularly true in the maiden years of commission regulation of electricity. Generally accepted accounting practices, in particular, were reshaped to escape regulatory constraints, a development that would lead to more cumulative regulation.<sup>92</sup>

A second advantage was a disparity of resources available for regulatory disputes. While a commission had to work within its appropriated budget, a firm could pass through its regulatory expenditures to ratepayers. A single rate case could result in the firm spending more money in its defense than the commission's annual budget.<sup>93</sup> In 1926, it was estimated that 39 states together spent less than \$5 million regulating utilities of all kinds.<sup>94</sup>

The utility's ability to hire experts (called “hired imagination” by a critic) and lobbyists (“ex-judges, ex-commissioners and ex-governors are preferred”) provided the balance of power in many important rate proceedings.<sup>95</sup> Commission accounting departments were understaffed relative to the utilities they regulated.<sup>96</sup> Many commissions did not determine “yardstick” costs to assess actual costs, for example.<sup>97</sup> Higher salaries kept more talent on the private side than on the commission side.<sup>98</sup>

These advantages translated into rate case victories for the regulated unless the commission was preordained against the utilities. The evidence is that state commissions were more cordial than adversarial toward electric utilities in the early period.

The ability to capture “monopoly profits in the guise of costs”<sup>99</sup> was a particularly subtle aspect of franchise-protected enterprises. Day-to-day decisions with operating expenses, public relations costs, regulatory proceeding budgets, and affiliate charges (discussed below) were highly subjective and very difficult for outside regulators to intelligently assess.

### *B. Creating Regulatory Gaps Through Vertical Integration*

Electric utilities circumvented rate and profit constraints by integrating their corporate structure. By internalizing their costs, unregulated affiliates could book profits from regulated affiliates with little constraint. Explained an economist of the period:

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92. See *infra* Section V.B.

93. See RUDOLPH & RIDLEY, *supra* note 74, at 54.

94. See BEHLING, *supra* note 3, at 26.

95. Delos Wilcox, *The Reasons for Municipal Ownership*, in GOVERNMENT OWNERSHIP OF POWER AND LIGHT COMPANIES 171-72 (Claiborne Duval ed., 1924).

96. See RUGGLES, *supra* note 29, at 76-77.

97. See RUGGLES, *supra* note 29, at 79. Stated one observant: “The commissions accept [the annual reports of operating companies]; they do not audit them. To do this would require a staff of experts such as no single commission can under present conditions afford.” WILLIAM MOSHER, ELECTRICAL UTILITIES 181 (1929).

98. INSULL, *supra* note 7, at 62. Added another observant: “Serious doubts have been expressed concerning the qualifications and tenure of office of the commissioners as well as the technical ability of the permanent staff.” MOSHER, *supra* note 97, at 180.

99. BEHLING, *supra* note 3, at 47.

Promoters . . . organized and owned auxiliary finance companies, investment companies, engineering companies, management companies, [and] service companies. . . . Through promotion contracts, financing contracts, construction contracts, service contracts, material-purchasing contracts and the like, they can run up the expenses of any local company to any limit they wish. For they are always contracting with themselves for their own benefit.<sup>100</sup>

Beginning in the late 1920s, states such as Wisconsin, Kansas, Massachusetts, Vermont, and Alabama began to investigate and disallow certain inter-subsidary transactions.<sup>101</sup> But this was a difficult and imprecise regulatory foray, and as long as some states were passive the best efforts of other states could be bypassed.<sup>102</sup>

### C. *Creating Regulatory Gaps Through Interstate Commerce*

The rise of long distance electric transmission led to increasing movements of electricity across state boundaries, which by the early 1930s was nearly 15% of total sales.<sup>103</sup> This created a jurisdictional problem for states given the Commerce Clause of the U.S. Constitution. For such interstate flows, rates and service had to be regulated on the federal level or not at all. The FPC first identified this regulatory gap in its 1925 annual report and considered and rejected a regional multi-state compact as a solution.<sup>104</sup>

Holding companies created interstate jurisdictional problems for the states even when electric flows did not traverse state boundaries. If financing and engineering costs for a new generation plant went to subsidiaries that operated in another state, for example, state regulators had to take these costs as given or risk violating the Commerce Clause of the Constitution. Thus the integrated, interstate holding company presented a double barrier to effective state regulation.

### D. *Overcapitalization*

Another regulatory gap concerned overcapitalization. A 1898 Supreme Court decision allowed the regulated company to receive a "fair return upon the value of that which it employs for the public convenience."<sup>105</sup> Through consolidations, the acquiring firm often received assets with a cost value in excess of its economic value as measured by profitability. Explained John Gray:

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100. John Gray, *The State Abdicates: Utilities Govern Themselves*, in GOVERNMENT OWNERSHIP OF POWER AND LIGHT UTILITIES 105 (Claiborne Duval ed., 1924).

101. PRENDERGAST, *supra* note 72, at 83-86.

102. "As long as one state remains overlenient, a company may organize there, engage in objectionable financial practices, flood the country with its securities, dominate and exploit subsidiaries, and escape regulation." PRENDERGAST, *supra* note 72, at 96.

103. Summary Report of the Federal Trade Commission to the Senate of the United States Pursuant to Senate Resolution No. 88, 70th Cong., 1st Sess., *Economic, Financial, and Corporate Phases of Holding and Operating Companies of Electric and Gas Utilities* No. 72-A, at 43 [Washington, D.C., GPO 1935] [Hereinafter *Summary Report of the FTC*]. For a list of power companies transmitting power in interstate commerce in the mid-1920s, see UTILITY CORPORATIONS, *supra* note 34, at 295-305.

104. See THE TWENTIETH CENTURY FUND, ELECTRIC POWER AND GOVERNMENT POLICY 700, 707 (1948).

105. *Smyth v. Ames*, 169 U.S. 466, 547 (1898).

When a holding company buys up a multitude of small plants and establishes large central generating plants a very large part of the old investment becomes useless. But . . . it is still carried on the books nominally as stand-by equipment. The public then pays . . . as if the old investment [was] in full use.<sup>106</sup>

The acquiring firm could also engage in asset "write-ups" where it issued securities for a greater value than the purchase price of the acquired assets.<sup>107</sup> This automatically increased the rate base upon which a regulated rate of return was applied. The larger capitalization also reduced dividends as a percent of capital—a result that could satisfy a regulatory requirement. In all, consolidations across service territories and across states had a regulatory reason in addition to any scale economies that existed.

### E. Winter of Discontent

The above problems under public utility regulation, leaving consumers without competition and without effective rate regulation, did not go unnoticed. Summarized one prominent economist of the day:

After a twenty-year struggle with rate regulation the public authorities today are scarcely in a better position than when they started. During these two decades they have conducted endless investigations, caused the expenditure of hundreds of millions of dollars, piled up mountains of records and opinions; and mostly have not reduced rates when fairly justified, nor advanced them when reasonably needed. They are all but helpless before the huge task of prescribing rates for the many utilities operating under greatly varying conditions, rapidly shifting prices and tremendous transitions in industrial organization—unless principles and policies of regulation are definitely established and exact methods prescribed.<sup>108</sup>

Such criticism by state and federal officials, other academic reformers, and the press led the NELA to establish a public relations committee for the first time in 1921.<sup>109</sup> Despite its efforts, criticism would mount and become a national issue by the end of the decade.

The increasing concentration of the industry created an appearance problem, the problems of regulation aside. By 1932, nearly one-half of the investor-owned utilities were controlled by three holding companies: The Insull Group, Electric Bond & Share (later General Electric), and United Corporation (controlled by J.P. Morgan). Two-thirds of all investor owned utilities were controlled by the top fifteen holding companies.<sup>110</sup>

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106. See Gray, *supra* note 100, at 104-05. BAUER & COSTELLO, *supra* note 4, at 24, similarly described this overcapitalization problem as "the continuance of old, obsolete and even discarded units in the property account."

107. New security issues to correspond to the higher valuation was called "stock watering." See the discussion in PRENDERGAST, *supra* note 72, at 71-72.

108. BAUER & COSTELLO, *supra* note 4, at 372.

109. Martin Insull, *Report of the Public Policy Committee of the Forty-Ninth Annual Convention of the National Electric Light Association, in UTILITY CORPORATIONS*, *supra* note 34, at 317.

110. DOUGLAS HAWES, *UTILITY HOLDING COMPANIES 2-5* (1987).

Franklin D. Roosevelt, then governor of New York, expressed concern over utility practices under regulation during the "roaring '20s" when business criticism was otherwise rare:

The condition of over-capitalization by the issuance of watered stock has come about under the regulation of public utilities by public service commissions, so that the policy has failed to maintain that degree of protection for the public which was contemplated at the outset. It appears to me that the policy of public service commission regulation has broken down and proved itself ineffectual for the purposes originally intended.<sup>111</sup>

In February 1930, a minority report evaluating the New York Public Service Committee concluded:

The State of New York is faced with a crisis. Effective regulation along the lines originally intended by the act has broken down and the consumer has been left to the exploitation of the monopolistic private companies which control the public services. Unless effective regulation can be restored, there is bound to be a rapid shift of public opinion in favor of public ownership and operation.<sup>112</sup>

Pennsylvania Governor Gifford Pinchot, after reviewing a 5,181-page study of the problems of the state's Public Service Commission, forced several commissioners to resign for listening "complaisantly to their utility master's voice."<sup>113</sup> On the academic front, Felix Frankfurter, a well-known law professor at Harvard University, traced the achievements of the public utility commissions prior to the first world war only to add:

Pessimism has supplanted the earlier feeling of hope. . . . Particularly in the leading industrial states, criticism has been voiced against the failure of utility rates to reflect decreased operating costs due to technological improvements; against the costly futility of rate proceedings which distort the protection intended by law; against failure to exercise skilled initiative in the promotion of the public interest. . . . Informed opinion is in substantial agreement that the present system is not adequate for the old evils which brought it into being, and is incapable of coping with new problems of greater subtlety and deeper concern to society.<sup>114</sup>

The "breakdown" of regulation, importantly, was not from a want of regulation at the state level. As detailed above, state regulation had become increasingly comprehensive in the elusive quest to effectively control managerial decision-making.<sup>115</sup>

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111. PRENDERGAST, *supra* note 72, at 267 (quoting remarks made by FDR on Public Utility Regulation, September 22, 1929). FDR would later complain that "in many instances [the selection of public utility commissioners] has been obtained by the public utility corporations themselves." PRENDERGAST, *supra* note 72, at 268.

112. PRENDERGAST, *supra* note 72, at 267. The specter of municipalization, which two decades earlier had contributed to the growth of regulation from the local level to the state level, was now part of the debate from moving from state to federal regulation. It was exaggerated to say, however, that the public was as inflamed as regulators and politicians were.

113. PRENDERGAST, *supra* note 72, at 268. A summary of the report is made in Mauritz Hallgren, *The Farce of Power Regulation*, NATION, June 24, 1931, at 673-75.

114. PRENDERGAST, *supra* note 72, at 269.

115. See RUGGLES, *supra* note 29, at 56 and textual discussion.



## V. FEDERAL RESPONSE

## A. Investigation

Federal interest in regulating the electric power industry began with a Senate Resolution dated February 9, 1925, instructing the Federal Trade Commission (FTC) "to investigate . . . and to report to the Senate the manner in which the General Electric Company has acquired and maintained such monopoly or exercises such control in restraint of trade or commerce and in violation of law."<sup>116</sup> The first comprehensive government study of the U.S. electric industry, released two years later as a 272-page report, examined the entire investor-owned and municipal industry to compare against General Electric. General Electric's 8% profit margin was not particularly excessive,<sup>117</sup> and no major policy conclusions were reached by the report.

Senate Resolution No. 83, dated February 15, 1928, instructed the FTC to undertake a thorough study of the nation's gas and electric holding companies and draw conclusions for public policy. Seven years and 101 volumes of testimony later, the verdict was in. While some "real public benefits" of the holding company structure and ownership concentration were cited—capital attraction, territorial diversification, economies of operation, rapid implementation of technological improvements, and timely service extensions<sup>118</sup>—the disadvantages carried the day, not only in the report but in the popular press.<sup>119</sup> The negatives included "excessive construction and management fees,"<sup>120</sup> "intercompany profits on transfers of properties or securities,"<sup>121</sup> "write-up's, improperly capitalized intangibles and inflation,"<sup>122</sup> "manipulation of stock-market prices,"<sup>123</sup> and "pyramiding in holding-company groups."<sup>124</sup> The study concluded:

The cumulative effect of some of these abuses undoubtedly resulted in the maintenance of higher than reasonable rates to the consumer and unfavorably affected the value of the securities in the hands of many investors. For these conditions the Commission concludes that a thoroughgoing reform is necessary in the intercorporate relations within the holding-company groups, in corporate and financial structure, in accounting practice, and in the extent and methods of public regulation.<sup>125</sup>

116. Quoted in Letter from the Chairman of the Federal Power Commission transmitting in response to S. Res. 329, 69th Cong., 2nd Sess. (1927).

117. *Id.*

118. See *Summary Report of the FTC*, *supra* note 103, at 833, 855-57.

119. See, e.g., McDONALD, *supra* note 2, at 268-70.

120. See *Summary Report of the FTC*, *supra* note 103, at 842.

121. See *Summary Report of the FTC*, *supra* note 103, at 864.

122. See *Summary Report of the FTC*, *supra* note 103, at 845.

123. See *Summary Report of the FTC*, *supra* note 103, at 866.

124. See *Summary Report of the FTC*, *supra* note 103, at 858.

125. See *Summary Report of the FTC*, *supra* note 103, at 882. The blame for the problem was placed on "the managers['] . . . love of power or greed for gain, . . . a disgraceful laxity in the corporate laws of many States, . . . the ineffective and ill-supported regulatory authorities of a good many states, . . . [and] a system of rate regulation imposed by judicial authority . . . based on 'fair value' of properties operated." *Summary Report of the FTC*, *supra* note 103, at 832.

The FTC's conclusions were echoed in other parts of the federal government. In the summer of 1931, a reorganized FPC began to investigate the water power companies licensed by the commission and their parent holding companies. A preliminary report released in July 1932 (Splawn Report) advocated federal control of holding companies, a recommendation that was repeated in their 1932 annual report.<sup>126</sup> In July 1934, FDR convened a National Power Policy Committee to "develop a plan for the closer cooperation of the several factors in our electric power supply—both public and private—whereby national policy in power matters may be unified and electricity be made more broadly available at cheaper rates to industry, to domestic, and particularly to agricultural consumers."<sup>127</sup> The committee, composed of representatives from the FPC, Securities and Exchange Commission, Public Works Administration, War Department, Tennessee Valley Authority, Forest Service, Bureau of Reclamation, and Mississippi Valley Committee,<sup>128</sup> released its findings in March of the next year, documenting holding company practices and control and proposing legislation that would become law in the same year.

Hearings were held by the House Committee on Interstate and Foreign Commerce and the Senate Committee on Interstate Commerce between 1933 and 1935 that also made a favorable record for holding company regulation and interstate commerce regulation. Resisting a major utility-sponsored campaign against federal holding company regulation, the two-part Federal Power Act, also called the Wheeler-Rayburn Act for its sponsors Sen. Burton Wheeler (D-Mont.) and Rep. Sam Rayburn (D-Texas), would become law.

What was the mood of the electric industry toward federal regulation? Opinion was initially against, but by 1932 it was reported that there was "of late more acceptance in utility circles of the idea of regulation of holding companies, even of limited Federal regulation where states have no power to act."<sup>129</sup> The new pragmatism was to shape regulation rather than condemn it per se.

### B. *Public Utility Holding Company Act of 1935*

Title I of The Public Utility Act of 1935, better known as the Public Utility Holding Company Act of 1935 (PUHCA), was designed to rectify a "lack of effective public regulation" that created "abuses . . . injurious to investors, consumers, and the general public."<sup>130</sup> The identified problems created by electric, manufactured gas, and natural gas holding companies were:

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126. PRENDERGAST, *supra* note 72, at 90.

127. ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 711.

128. Chairing the project was Interior Secretary Harold Ickes, the New Deal's top oil regulator and an adroit political strategist.

129. PRENDERGAST, *supra* note 72, at 96.

130. See 49 Stat. 803, 804 (1935). The Public Utility Holding Company Act (PUCHA) is currently codified at 15 U.S.C. §§ 79-79z-6 (1994).

- 1) inadequate investor information because of an absence of uniform accounting standards;<sup>131</sup>
- 2) security issues based on "fictitious or unsound asset values having no fair relation to the sums invested in or the earning capacity of the properties and upon the basis of paper profits from intercompany transactions;"<sup>132</sup>
- 3) overcapitalization "prevent(ing) voluntary rate reductions;"<sup>133</sup> and
- 4) overcharges for "services, construction work, equipment, and materials," reflecting "an absence of arm's-length bargaining or from restraint of free and independent competition."<sup>134</sup>

All of these practices "present problems of regulation which cannot be dealt with effectively by the States."<sup>135</sup>

By December 2, 1935, all public utility holding companies in interstate commerce had to register with the Securities and Exchange Commission (SEC) and provide detailed reports and conform to various prescribed standards.<sup>136</sup> Intercompany loans were prohibited, and other financial transactions within holding companies such as dividends, security issuances, and asset sales were strictly regulated.<sup>137</sup> Effective April 1, 1936, registered holding companies could not enter into intracompany service, sales, or construction contracts except as expressly permitted by the SEC.<sup>138</sup>

The most dramatic action of the new law was to "limit the operations of the holding company system of which such company is a part to a single integrated public utility system" effective January 1, 1938.<sup>139</sup> Dismemberment could not occur, however, if "the loss of substantial economies" occurred.<sup>140</sup>

"The public utility holding company, as a device of financial legerdemain," stated Arthur Dewing, "was to pass from the scene."<sup>141</sup> Between 1938 and 1955, when the SEC's divestment work was mostly concluded, 214 holding companies controlling 922 electric and gas utilities and over a thousand nonutility companies were reduced to 25 holding companies with 171 electric and gas subsidiaries and 137 nonutility subsidiaries. Assets of nearly \$13 billion dollars had been divested in the process.<sup>142</sup> The effective result was to reduce holding companies to one integrated gas or electric system without non-functionally-related subsidiaries "to facilitate rather than supplant state regulation . . . to return effective jurisdiction to the State [commissions]."<sup>143</sup>

131. PUHCA § 1(b)(1), 49 Stat. 803.

132. *Id.*

133. *Id.*

134. *Id.* § 1(b)(2), 49 Stat. at 803.

135. *Id.* § 1(b)(2), 49 Stat. at 804.

136. Holding companies were defined as directly or indirectly owning ten percent or more of a gas or electric public utility company. PUHCA. § 2(a)(7), 49 Stat. at 806.

137. *Id.* § 12, 49 Stat. at 823-24.

138. *Id.* § 13(a), 49 Stat. at 825.

139. *Id.* § 11(b), 49 Stat. at 820.

140. *Id.* § 11(b)(1)(A), 49 Stat. at 820.

141. 2 ARTHUR DEWING, *THE FINANCIAL POLICY OF CORPORATIONS* (Ronald Press Co. 1953).

142. HAWES, *supra* note 110, at 2-18.

143. HAWES, *supra* note 110, at 2-22.

### C. Evaluation of PUHCA

The quest for vertical and horizontal consolidation, particularly across state boundaries, and the "financial legerdemain" within elaborate holding companies, was inspired by more than achieving pro-consumer scale economies in a market setting. These practices were managerial innovations to escape regulatory constraints to exploit inelastic demand (charge what the traffic would bear) created by legal monopoly. The same incentive to integrate and consolidate across state lines and engage in opportunistic accounting practices would not have occurred under "regulation by competition." As such, PUHCA was a regulatory response to a regulatory problem—cumulative federal intervention to plug regulatory gaps with state intervention.<sup>144</sup>

From this perspective, the verdict of Alfred Kahn that "there seems to be little dissent from the conclusion that the job the SEC did in dismantling the jerry-built holding company structures needed doing and was well done"<sup>145</sup> can be reconsidered. Not only could have the huge multi-decade regulatory effort been foregone, PUHCA's negative side effects, such as undoing economic integration along with opportunistic integration (despite the language of the law), could have been avoided. Future integration, furthermore, was also blocked by the law, leaving voluntary collaboration which, Kahn admits, "typically fell considerably short of achieving the full possible advantages of complete integration, and particularly the integrated planning of investment."<sup>146</sup> The irony and legacy of PUHCA is that once its job was complete, the managerial challenge for electric utilities became how to integrate and interconnect neighboring electric systems.<sup>147</sup>

PUHCA was a response to the Great Depression, which itself has been directly linked to activist government monetary and fiscal policies that created the business cycle (1920s boom and 1930s bust) and kept the general economy mired in high unemployment and low output until World War II.<sup>148</sup> Interstate companies of all kind were regulated by the Securities Act of 1933 and the Securities Exchange Act of 1934, which established the SEC; PUHCA just magnified such regulation for public utility holding companies.

Regulation by the SEC in 1933 and 1934 was cumulative intervention to not only the government policies that contributed to the Great Depression but also to regulatory-inspired accounting practices in the industries subject to public utility regulation. Explained George May:

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144. The Act itself makes this point, detailing the problematic holding company practices which "are not susceptible of effective control by any State." 49 Stat. at 803.

145. 2 ALFRED KAHN, *THE ECONOMICS OF REGULATION* 73 (John Wiley & Sons, Inc. 1971).

146. *Id.* This suggests that the law's proviso that dismemberment could not result in "the loss of substantial economies" was honored in the breach.

147. *Id.*

148. See generally, MURRAY ROTHBARD, *AMERICA'S GREAT DEPRESSION* (Sheed & Ward, Inc. 1975); Herbert Hoover and the Myth of *Laissez-Faire*, in *A NEW HISTORY OF LEVIATHAN* 111-45 (Ronald Radosh & Murray Rothbard eds., E.P. Dutton & Co. 1972).

The grant to a regulatory commission of power over accounting in unregulated industries was not and could not have been supported by a claim that abuses had developed in that field which did not exist where accounting was regulated. On the contrary, the practices which had become discredited were more general in the regulated industries (and among the utility holding companies) and had spread from those fields to unregulated industry to only a minor extent where they had spread at all. This is true of the non-acceptance of the cost amortization concept of depreciation; of reappraisal and improper charges against capital surpluses resulting therefrom; of pyramiding of holding companies; of periodical stock dividends improperly accounted for; and of the practice of charging to surplus items which more properly belong in the income account. These together constitute the major defects of accounting that had developed in the prosperous period that ended in 1929 and in the depression that followed.<sup>149</sup>

Even with boom and bust, some conservatively managed holding companies, two being the American Gas and Electric Company and the United Gas Improvement Company, remained financially sound.<sup>150</sup> In fact, "the utility operating companies suffered less than almost any industry group during the depression years."<sup>151</sup> The unsound holding companies, such as Samuel Insull's Middle West Utilities, were dismembered by market forces before PUHCA came into play. The formation of new holding companies fell out of favor with investors once the Great Depression set in. Seen in this light, PUHCA's costs—private and public compliance costs and arbitrary prohibitions on corporate structures—were deadweight losses that public utility deregulation could have entirely avoided.

The FTC's summary report, which provided most of the groundwork for PUHCA, utterly failed to interpret, or even consider as a minority view, the diagnosed problems as the result of *existing* regulation rather than the absence of comprehensive (federal in addition to state) regulation. Thus a free market interpretation was left out of the whole debate. The report had to tiptoe around its stated fact that "there has been a general decline . . . in electric rates, not only during the last thirty years, but also during the last decade"<sup>152</sup> by arguing that rates would have been "just and reasonable" under proper federal regulation. The report concludes that holding companies hurt both consumers and investors,<sup>153</sup> yet what may have been bad for one could have been good for the other outside of some level of pure inefficiency. If rates were really inflated, investors should have gained; if investors were really hurt, captive consumers must have been spared higher rates while keeping their lights on.

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149. George May, *Accounting and Regulation*, J. ACCT., Oct. 1943, at 297.

150. DEWING, *supra* note 141, at 993.

151. HAWES, *supra* note 110, at 2-22.

152. *Summary Report of the FTC*, *supra* note 103, at 833. The report also states that "product costs were being reduced by the development of more efficient generation, transmitting, and distributing equipment." *Summary Report of the FTC*, *supra* note 103, at 58.

153. *Summary Report of the FTC*, *supra* note 103, at 882.

D. *Federal Power Act of 1935*

The passage of Part II of the Public Utility Act of 1935 (Federal Power Act) reflected several motivations. The most important rationale was the aforementioned need to complement state regulation as well as PUHCA by closing a regulatory gap. But another reason was cited by Federal Power Commissioner Clyde Seavey in House debate on the bill:

The machinery of this regulation will permit the coordination of these various sources of power in the United States. . . . The need for such coordination for national purposes, I think, was vividly demonstrated during the World War period. There is provided in this act for the pooling of power in a comprehensive way. This pooling will permit the leveling off of the evil effects of surplus and shortage in local communities . . . and will also stabilize investments in those territories likewise or bring about a better security back of these securities that are issued by those operating companies.<sup>154</sup>

The central planning mentality fostered by the United States Fuel Administration (1917-19), the first central planning agency of its kind in the energy sector, was evident.

The Federal Power Act (FPA) extended regulation to "the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce."<sup>155</sup> Jurisdiction over local distribution and intrastate transmission was left with the states.

Within six months of the FPA, all jurisdictional companies had to secure an order from the FPC to conduct business in interstate commerce.<sup>156</sup> The FPC was empowered to set "just and reasonable" rates by ascertaining the "fair value" of a utility's property, setting the "proper" depreciation rate, and prescribing a system of accounts.<sup>157</sup> The Commission also could order "proper, adequate, or sufficient service" so long as it did not require enlarging generating facilities or impairing service to existing customers.<sup>158</sup>

The FPC was also directed to "promote and encourage" interconnections between and within defined regions to "assur[e] an abundant supply of electric energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources."<sup>159</sup> Such action also could not impair existing service or require expanded generation. In emergencies, however, the Commission could order facilities to be built and dictate business practices, so long as it was "just and reasonable" and fairly compensated.<sup>160</sup> FPC authority also extended to mergers and security issues.<sup>161</sup>

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154. *Hearings Before the Committee on Interstate and Foreign Commerce, House of Representatives, 74th Cong., 1st Sess., PUBLIC UTILITY HOLDING COMPANIES 392*, (Washington, D.C., G.P.O. 1935).

155. See § 201(a), 49 Stat. at 847. The other section of Title II slightly amended the Federal Water Power Act of 1920. 49 Stat. at 838-47.

156. See § 202(e), 49 Stat. at 849.

157. See § 205(a), 49 Stat. at 851; § 301(a), 49 Stat. at 854; § 302(a), 49 Stat. at 855.

158. See § 207, 49 Stat. at 853.

159. See § 202(a), 49 Stat. at 848.

160. See § 202(c), 49 Stat. at 849.

161. See § 203(a), 49 Stat. at 850.

The importance of the FPA would grow as the FPC and, later, the Federal Energy Regulatory Commission liberally interpreted their jurisdiction under it. Jurisdiction would be claimed over (1) utilities that sold power to an intrastate intermediary who then sold it in interstate commerce, (2) power from its point of origin if a later sale affected interstate commerce, and (3) intrastate electricity if commingled with interstate electricity.<sup>162</sup>

#### *E. Evaluation of the FPA*

While PUHCA eradicated many regulatory gaps, the FPA removed another important one to make it also an exercise in cumulative intervention. Explained one study:

The FPC was given jurisdiction over electricity in interstate commerce in order to close a gap in regulation. A considerable quantity of electricity is transmitted in interstate commerce and sold at wholesale to companies engaged in distribution to ultimate consumers. Since the wholesale rate is an interstate rate, it is not controlled by a state commission, yet it has an important effect on the costs of a company whose rates to ultimate consumers are subject to state commission control. Obviously, regulation of the rates to ultimate consumers could not be effective or intelligent unless the state commission investigates the reasonableness of the wholesale rate, but this was beyond its control.<sup>163</sup>

The cumulative march of regulation had now gone from the local level to the state level to the federal level to achieve comprehensive regulation of the power industry as depicted in Figure 1 (see below).

Expenditures by the FPC reflected its increased jurisdiction and cumulative regulatory activities. In 1925, a decade before the FPA but five years after the FPC was formed to oversee federal water projects (see below), total Commission expenses were \$11,000. In 1935, the year of the FPA, expenditures exceeded \$302,000. In 1937, the year before interstate gas transmission was added to the Commission's responsibilities, costs had reached \$1.7 million. In 1940, with both gas and electric responsibilities, commission expenses reached \$2.6 million.<sup>164</sup>

The FPC's power activities were subdued compared to its activities with natural gas beginning in 1938 under the Natural Gas Act and the SEC's activities with utility holding companies under PUHCA. The majority of power (over 80%) was generated, transmitted, and distributed within the same state—quite unlike with natural gas that was commonly produced and consumed in different states. By 1946, the Commission had reviewed

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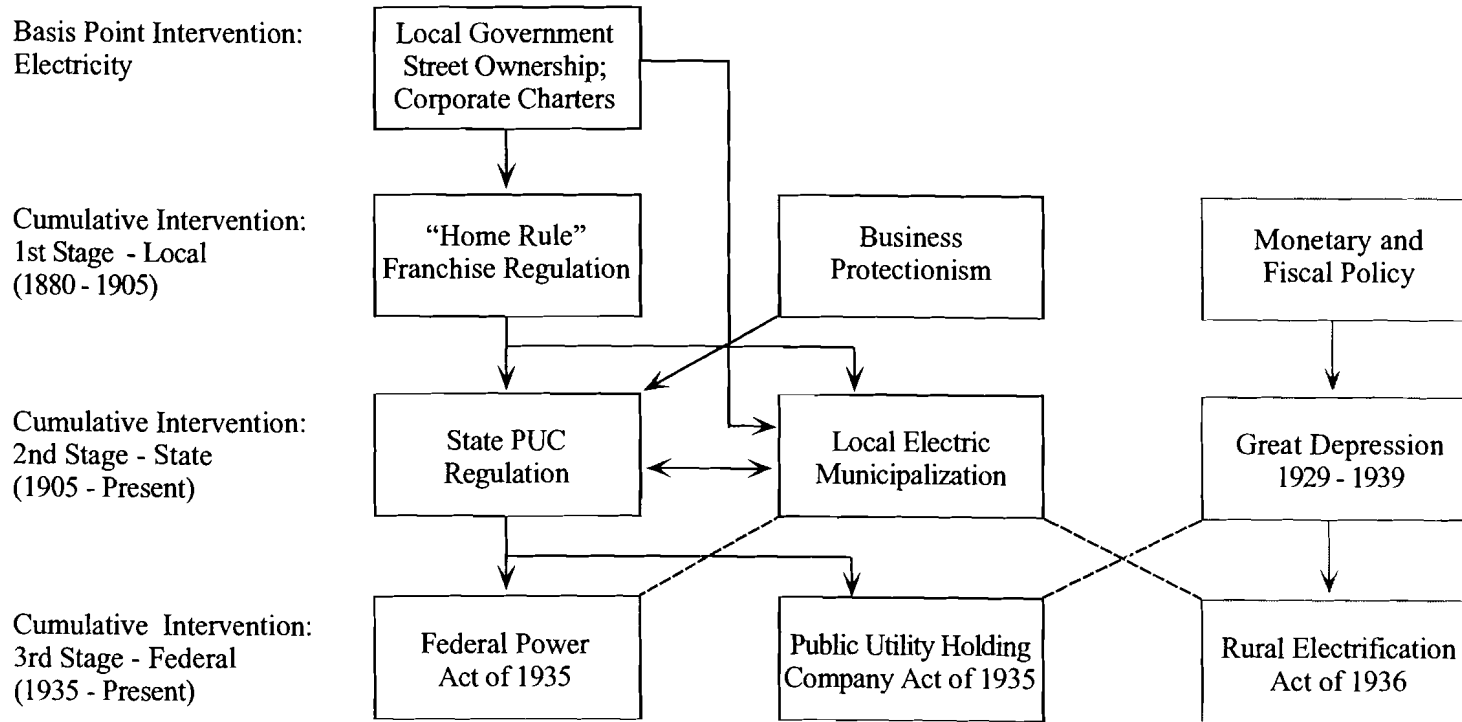
162. STEPHEN FERREY, *LAW OF INDEPENDENT POWER* 5-8 to 5-9 (1994).

163. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 78-79.

164. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 76 (summarizing appropriations and expenditures by the FPC between 1924 and 1941).

FIGURE 1  
THE DYNAMICS OF GOVERNMENT INTERVENTION IN THE U.S. ELECTRIC INDUSTRY

Part I: Public Utility Regulation





the original cost studies of 127 electric companies engaged in interstate commerce with some 20% of the industry still to go. Of this total, only eleven cost and rate determinations went to hearing before the Commission.<sup>165</sup>

The evolution of regulation from "home rule" franchises to statewide public utility control to federal jurisdiction over corporate structure and interstate transmission is depicted in Figure 1.

## VI. EARLY FEDERAL WATER POWER AND RURAL ELECTRIFICATION POLICY

Just as street ownership and operation thrust municipal governments into the private affairs of electric companies, ownership of the waterways and responsibilities for navigation, flood control, irrigation, and land reclamation put government into the hydroelectric business. Since navigable waters were under federal jurisdiction and often traversed state lines anyway, the national government was involved from the beginning.

The first hydroelectric project commenced in 1890. Nine years later, the Rivers and Harbors Act was amended to require federal permission to construct dams on navigable waters.<sup>166</sup>

Prior to 1896, hydropower sites on public land were acquired (or "practically given away" to critics)<sup>167</sup> under either preemption or homestead laws. Between 1896 and 1920, either the War, Interior, or Agriculture department licensed waterway use under the authority of different federal laws such as the General Dam Act (1906 and 1910). While the licenses were often liberally granted, they were revokable, a disconcerting fact to the holders. The production and sale of electricity was not regulated.<sup>168</sup>

Of significant import was the denial of licenses to privately develop major hydro sites on the federal domain. In 1903, Congress denied a private utility's request to build a hydroelectric facility at Muscle Shoals on the Tennessee River to "conserve the benefits of that great natural resource to the people of the region."<sup>169</sup> In 1909, all potential hydroelectric sites on the federal domain were withdrawn from private development by President Teddy Roosevelt.<sup>170</sup> Thus with private development stymied, the

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165. BAUER & COSTELLO, *supra* note 4, at 50.

166. 30 Stat. 1121 (1899).

167. A history of the 1890-1917 "formative period" of the Federal Water Power Act is contained in Opinion No. 88, 11 F.E.R.C. ¶ 61,337, at 61,712-14 (1980).

168. See ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 67. See also MILTON CONOVER, THE FEDERAL POWER COMMISSION: ITS HISTORY, ACTIVITIES, AND ORGANIZATION ch. 1 (1923) (discussing the pre-history of water power regulation beginning in Colonial times).

169. ABRAMS, *supra* note 63, at 21.

170. ERWIN HARGROVE & PAUL CONKIN, TVA: FIFTY YEARS OF GRASS-ROOTS BUREAUCRACY 8 (1983). In the same period, Roosevelt withdrew millions of federal acres from private mineral development. Both actions reflected a conservationist ethic of either husbanding supply for future use or ensuring that the public domain accrued to "the benefit of all of the people." ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 494.

potential of the great waterways for electric generation awaited political decisions to proceed.

The first federal hydro project was built by the Interior Department's Bureau of Reclamation in 1909 in northeastern Utah.<sup>171</sup> Another twenty irrigation and reclamation power projects would follow by 1932, totalling 138 megawatts.<sup>172</sup> The War Department completed the Wilson Dam in 1925 and used its power for wartime materials. By this time, a federal law (see below) was in place to regulate the Wilson Dam and future hydro projects.

#### A. Federal Water Power Act of 1920

After six years of Congressional debate, the Federal Water Power Act of 1920 (FWPA), the first major federal law regulating the power industry, was enacted.<sup>173</sup> The law established the Federal Power Commission (FPC), composed of the secretaries of War, Interior, and Commerce, to:

- 1) gather information concerning the use of domestic water resources for power development and investigate the relationship of the U.S. water power industry to other industries and interstate and foreign commerce;<sup>174</sup>
- 2) determine "whether the power from Government dams can be advantageously used by the United States for its public purposes, and what is a fair value of such power;"<sup>175</sup>
- 3) issue licenses up to fifty years to new investor-owned or municipal power projects on federal waterways and lands "for the purpose of utilizing the surplus water or water power from any Government dam."<sup>176</sup>
- 4) require licensees to make comprehensive cost determinations, disclose all financial information, and establish a uniform system of accounts in any new or improved federal water project;<sup>177</sup>
- 5) set "reasonable, nondiscriminatory, and just" (cost based) rates for water power in interstate or foreign commerce in accordance with the Interstate Commerce Act of 1887;<sup>178</sup>
- 6) set a "reasonable" rate of return for all licensed projects with any "excess" earnings after twenty years either expropriated or applied to reduce net investment;<sup>179</sup>
- 7) assess annual charges for the use of government property, the administration of this Act, and to collect excess profits except for nonprofits and government projects not using federal dams;<sup>180</sup>

171. ABRAMS, *supra* note 63, at 20-21.

172. ABRAMS, *supra* note 63, at 21.

173. Federal Water Power Act of 1920, ch. 285, Pub. L. No. 66-280, 41 Stat. 1063 (1920) (codified as amended by the Public Utility Act of 1935, 16 U.S.C. §§ 791a-828 (1994)) [hereinafter FWPA].

174. *Id.* § 4(a), 41 Stat. at 1065.

175. *Id.*

176. Indian-land projects were not covered, and existing waterway projects were grandfathered. *Id.* § 4(d), 41 Stat. at 1066; Licensing preference was also given to states and municipalities. *Id.* § 7, 41 Stat. at 1067.

177. *Id.* § 4(f), 41 Stat. at 1066.

178. FWPA, § 20, 41 Stat. at 1073, 1074. This provision was a setback for conservationists who wanted to set rates at market value rather than incurred costs. See HARGROVE & CONKIN, *supra* note 170, at 9.

179. *Id.*, § 10(d), 41 Stat. at 1070.

180. *Id.*, § 10(e), 41 Stat. at 1069.

- 8) require "reasonable" investments to improve navigation, or if not reasonable, use federal money for said improvements;<sup>181</sup>
- 9) require project construction to begin within two years of when the license is issued and take possession of unfinished projects after a two-year notification;<sup>182</sup>
- 10) issue a new license or take over all projects after the fifty-year original license expires;<sup>183</sup>
- 11) regulate unregulated state projects until the state itself does so if a complaint is filed;<sup>184</sup> and
- 12) exempt minor hydro projects (those under one hundred horsepower) from all provisions of this law except for the fifty-year license.<sup>185</sup>

The FWPA enjoyed industry and business support. Although regulated, private developers finally could gain entry to at least some water sites. A U.S. Chamber of Commerce speech published by the NELA gushed praise:

In no other Federal legislation has greater care been exercised in protecting essential public interests. . . . Constructive and sympathetic as were the genius and statesmanship embodied in the Federal water power act.<sup>186</sup>

#### B. *Reorganization of the Federal Power Commission*

Under the 1920 act, the FPC was not an independent commission but a hybrid regulatory body run by representatives from three other agencies. Very little regulating was done, and what was done was considered inadequate.<sup>187</sup> This led to a reorganization in 1930 whereby the FPC became an independent agency.<sup>188</sup> The number of commissioners was raised from three to five, and the commissioners had to originate from outside the industry they regulated, be from different political backgrounds, and be full-time members. The new FPC also was authorized to hire staff and contract for the materials "necessary to execute its functions."<sup>189</sup> These changes positioned the FPC for its increased responsibilities that would come with both electricity and natural gas.

#### C. *FDR's Public Power Initiatives*

As governor of New York in the 1920s, Franklin Roosevelt endorsed municipal provision of electric power to ensure that more Americans gained access to power and to use as a "yardstick" enterprise to compete against investor-owned utilities.<sup>190</sup> Power provision to FDR was "a national problem," and in his first term as president he formulated a National Power Policy not only to bring interstate electricity under federal

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181. *Id.*, §§ 11-12, 41 Stat. at 1070.

182. *Id.*, § 13, 41 Stat. at 1071.

183. *Id.*, § 14, 41 Stat. at 1071.

184. *Id.*, § 9, 41 Stat. at 1073.

185. *Id.*, § 10(i), 41 Stat. at 1070.

186. W.H. Onken, *The Hydroelectric Power Era*, in *UTILITY CORPORATIONS*, *supra* note 34, at 412.

187. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 494.

188. Pub. L. No. 71-412, 46 Stat. 797 (1930).

189. 46 Stat. at 798.

190. *ABRAMS*, *supra* note 63, at 21.

public utility regulation but also to make electricity "more broadly available at cheaper rates to industry, to domestic and to agricultural consumers."<sup>191</sup> Hydropower as a federal public works program and rural subsidy program was key.

FDR could build on precedent. The Interior Department, as mentioned, had constructed a number of small hydro projects. But a model large-scale federal hydro project, Boulder Dam on the Colorado River, was well toward completion when FDR took office.

The Boulder Canyon Project Act of 1928 authorized \$165 million and eminent domain rights for flood control, improved navigation, water storage, land reclamation, and electric generation to make the project "self-supporting and financially solvent."<sup>192</sup> The Secretary of Interior (not the FPC, although all requirements of the FWPA of 1920 had to be met) had jurisdiction over Boulder Dam's electric power contracts.<sup>193</sup> Rates had to provide "reasonable returns . . . to [meet] the revenue requirements herein provided," and preference for power purchases was given to governmental agencies.<sup>194</sup> The first open access requirement was imposed, requiring transmission rights for large agencies to allow smaller agencies access on new transmission facilities if costs were reasonably shared.<sup>195</sup>

The project was completed in 1936 and became a major source of electricity for southern California. The "market price" for Boulder Canyon's hydro was the price paid by Southern California Edison for electricity generated from oil and gas-fired steam plants. This price was sufficient to subsidize farmers using irrigation from the project and was lowered by an Act of Congress in 1940.<sup>196</sup>

Three major laws, based in part on precedents enacted in the Boulder Canyon Project Act, would follow as part of FDR's public works program to promote economic recovery during the Great Depression.

### 1. Tennessee Valley Authority

On April 10, 1933, FDR proposed a major hydro project to Congress to rectify "the continued idleness of a great national investment in the Tennessee Valley."<sup>197</sup> The next month, Congress approved the Tennessee Valley Act (TVA) "in the interest of national defense and for agricultural and

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191. ABRAMS, *supra* note 63, at 23. Another aspect of FDR's policy was to encourage municipalization, either by converting investor-owned utilities or creating "yardstick" enterprises to compete against the private sector.

192. Boulder Canyon Project Act of 1928, Pub. L. No. 70-642, 45 Stat. 1057 (1928).

193. *Id.* § 5, 45 Stat. at 1060.

194. *Id.* §§ 5(a), 5(c), 45 Stat. at 1060, 1061.

195. *Id.* § 5(d), 45 Stat. at 1061.

196. Pub. L. No. 76-756, 54 Stat. 774 (1940). For greater detail on the project, see ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 496-512.

197. ABRAMS, *supra* note 63, at 24. This idleness reflected government policy, not private disinterest, given several decades of effort by investor-owned utilities to construct hydro facilities at Muscle Shoals, the second largest potential hydropower site in the eastern U.S. next to Niagara Falls.

industrial development, and to improve navigation in the Tennessee River and to control the destructive flood waters."<sup>198</sup>

The Act established a three-member board with eminent domain powers to "construct dams, reservoirs, power houses, power structures, transmission lines . . . and to unite the various power installations into one or more systems by transmission lines."<sup>199</sup> The agency was empowered to "produce, distribute, and sell electric power" with preference to "States, counties, municipalities, and cooperative organizations of citizens and farmers, not organized or doing business for profit, but primarily for the purpose of supplying electricity to its own citizens or members."<sup>200</sup> Contracts could be for up to twenty years, and agreements with for-profit entities could be voided with five years' notice if the power was needed on the non-profit side.<sup>201</sup>

The law explicitly authorized constructing transmission lines "to farms and small villages that are not otherwise supplied with electricity at reasonable rates."<sup>202</sup> Industrial customers were a secondary market, to be served only to "secure a sufficiently high load factor and revenue returns which will permit domestic and rural use at the lowest possible rates."<sup>203</sup> Rates were to be "just and equitable" without any preference or special concession, and sales for resale by for-profit entities had to be at "reasonable, just, and fair" prices set by the TVA board, not the reorganized FPC.<sup>204</sup> One hundred and fifty million dollars was appropriated to the project; later expenditures would be determined annually by Congress.

TVA represented the idealism of the New Deal and of central planning in general. To FDR it was "national planning for a complete river watershed involving many states and the future lives and welfare of millions."<sup>205</sup> It was multi-purpose economic development, public works, and grassroots politics.

The fateful decision made by Congress was to construct and operate the facilities as a public project. Numerous applications for private development languished before Congress between 1903 and 1933 without approval.<sup>206</sup> Two Tennessee utilities applied for federal permits to invest between \$60 and \$100 million to develop eleven waterpower sites only to

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198. Tennessee Valley Act of 1933, Pub. L. No. 73-17, 48 Stat. 58 (1933) [hereinafter TVAct]. The roots of TVA can be traced to several nitrate plants (nitrate is used in the production of gunpowder) that were built on the Tennessee River at Muscle Shoals, Alabama during the Wilson Administration. Thus the first use of the river was related to a governmental function—national defense.

199. *Id.* § 4(j), 48 Stat. at 61.

200. *Id.* § 5(1), 48 Stat. at 62; § 10, 48 Stat. at 64. The War Department could requisition TVA's power for navigation purposes without payment.

201. *Id.* § 10, 48 Stat. at 64. A nonprofit organization building a transmission line to TVA, however, could enter into a thirty year contract to buy power.

202. *Id.* § 10, 48 Stat. at 64. Farm organizations who did not want to purchase public power could build their own transmission line and purchase electricity from the Alabama Power Company or another private or public entity. *See id.* § 5(n), 48 Stat. at 62.

203. TVAct, § 11, 48 Stat. at 64, 65.

204. *Id.* § 10, 48 Stat. at 64; § 12, 48 Stat. at 65.

205. ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 576.

206. HARGROVE & CONKIN, *supra* note 170, at 7, 9.

encounter years of inaction.<sup>207</sup> The result of government provision was a competitive antagonism between TVA and neighboring private systems who were discriminated against under the preference system and feared taxpayer-funded raiding that led to litigation and obstructionism that retarded rural electrification. Facilities were also duplicated.<sup>208</sup>

## 2. Rural Electrification Act of 1936

In early 1935, FDR endorsed a program to subsidize rural electrification to which Congress responded with a \$100 million appropriation.<sup>209</sup> On May 11, 1935, FDR issued an executive order creating a new agency to transmit electricity "to as many farms as possible in the shortest possible time, and to have it used in quantities sufficient to affect rural life."<sup>210</sup> The Rural Electrification Administration (REA) was empowered to make loans to private and public parties to finance connections with farms. As a public works program, 90% of involved workers had to originate from the relief rolls unless an exemption was granted by the REA.

The next year the program was put on a more permanent basis with the passage of the Rural Electrification Act. The REA was instructed to "make loans in the several States and Territories of the United States for rural electrification and the furnishing of electric energy to person[s] in rural areas [defined as residing in population centers under 1,500 persons] who are not receiving central station service."<sup>211</sup> The REA was appropriated \$50 million for fiscal year 1937 and \$40 million for each of the next eight years to finance generation, transmission, and distribution facilities. Loans for such assets could not exceed 85% of the principal amount and had to be fully amortized over a twenty-five-year period (with a maximum five-year extension) at an interest rate paid by the government on long term debt.<sup>212</sup> Financing preference was given to governmental bodies and private cooperatives and nonprofits.

REA financing was also made available to qualifying premises for purchasing and installing electrical and plumbing equipment. Such loans could not exceed five years (with a maximum two-year extension) and had to be collateralized.<sup>213</sup> The allocation of monies between states was based one-half on need (the proportion of farms without service to the national

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207. Onken, *supra* note 186, at 414. Non-utility applicants included Ford Motor Company and Union Carbide Company. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 574.

208. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 611-12.

209. Emergency Relief Appropriation Act of 1935, Pub. Res. No. 11, 49 Stat. 115.

210. ABRAMS, *supra* note 63, at 32; Exec. Order No. 7037 (1935).

211. Rural Electrification Act of 1936, Pub. L. No. 74-605, 49 Stat. 1363 (1936) [hereinafter REAct].

212. *Id.* § 3, 49 Stat. at 1364; § 4, 49 Stat. at 1365. A change in 1944 lowered the interest rate to 2% and extended the repayment schedule to 35 years, both amendments representing significant taxpayer subsidies. Pub. L. No. 78-425, 58 Stat. 734, 739 (1944).

213. *Id.* § 3, 49 Stat. at 1364.

average) and one-half by discretion.<sup>214</sup> All loans required the consent of the states in which they were made.<sup>215</sup>

The rush of federal dollars to subsidize farm power was not due to neglect from the private sector of this incremental market. Beginning in 1909, private firms "electrified" rural areas to the extent that it was economical to do so. This was clearly in their self interest not only for the usual business reasons but to enlarge the rate base under public utility regulation. The NELA began studying rural electrification in 1911, and by the mid-1920s, seventeen states had committees reporting to the NELA on agricultural electrification experiments. In 1923, the NELA created the Committee on the Relation of Electricity to Agriculture to accelerate private development. Not only investor-owned utilities but also appliance manufacturers were financially contributing to the effort.<sup>216</sup> Martin Insull, meanwhile, following in his father's footsteps, used his NELA platform to exhort the industry to "extend lines to supply . . . the electrification of the agricultural community" wherever economical.<sup>217</sup>

These efforts were bearing results. Between 1924 and 1931, the percentage of farms with electricity increased from 3.2% to 10.4%.<sup>218</sup> Yet this growth would not continue. Due to the Great Depression that stubbornly continued past the mid-1930s, and industry uncertainty created by PUHCA, the capital required to extend markets to marginal customers dried up. Farm demand for electricity was also dampened by hard economic times. This set the stage for taxpayer involvement to overcome the business climate.<sup>219</sup> Yet even with taxpayer competition, private farm service would rebound. From a low of 4,109 hookups in 1933, over 600,000 farm customers were added by investor-owned utilities between 1935 and 1939.<sup>220</sup> This hardly suggests that a "market failure" was present for REA to rectify.

The REA was engaged in loss economics. Profitable rural electrification at the time federal electrification began was calculated to require a population density of four persons per transmission mile. With this market largely served by investor owned utilities, the REA's connections averaged 2.2 customers per mile, resulting in a loss of between 25% and 50% of its \$222 million outlay as of May 1939.<sup>221</sup> But while REA was an economic failure, it was good politics. "With privately owned utilities handicapped by the difficulties of engaging capital for rural extensions during the depression years," explains Ernest Abrams, "the politicians astutely con-

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214. *Id.* § 3(c)(d), 49 Stat. at 1364.

215. *Id.* § 4, 49 Stat. at 1365.

216. D. CLAYTON BROWN, *ELECTRICITY FOR RURAL AMERICA* 3-5 (1980).

217. Insull, *Report of the Public Policy Committee of the Forty-Ninth Annual Convention of the National Electric Light Association*, in *UTILITY CORPORATIONS*, *supra* note 134, at 310.

218. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 441-42.

219. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 442.

220. *ELECTRIC POWER AND GOVERNMENT POLICY*, *supra* note 104, at 467.

221. ABRAMS, *supra* note 63, at 32, 37. Adds Abrams: "The Rural Electrification Administration has ignored not only the experience of privately owned utilities with rural extensions but the legal requirement of economic feasibility as well." ABRAMS, *supra* note 63, at 37.

verted the unsatisfied electric desires of the farmers into a major political issue."<sup>222</sup>

### 3. Bonneville Power Administration Act of 1937

Federal monies to develop the water resources of the Pacific Northwest were first allocated by Congress in 1933 as part of the employment program of the Public Works Administration. An additional allocation followed two years later in the Rivers and Harbors Improvement Act.<sup>223</sup> The final push was the Bonneville Power Administration Act of 1937 (BPA), which authorized the Secretary of War to "provide, construct, operate, maintain, and improve at [the dam projects under construction at Bonneville, Oregon and North Bonneville, Washington] such machines, equipment, and facilities for the generation of electric energy . . . to develop such electricity as rapidly as markets may be found therefor."<sup>224</sup> To "encourage the widest possible use of all electricity," the Bonneville Power Administrator was authorized to construct transmission facilities to interconnect with other markets.<sup>225</sup> Eminent domain rights were granted to facilitate land requisition associated with the above.<sup>226</sup>

The Administrator was empowered to enter into sales and exchange contracts under one major condition. Contractual preference was to be given to government entities and cooperatives to benefit the "general public, and particularly . . . domestic and rural consumers."<sup>227</sup> Non-preference contracts could be cancelled with a five-year notice to this end. Resales to private purchasers were prohibited, but wholesale contracts for resale to preference customers by the Administrator were permitted. Nearby citizens were also given a "reasonable opportunity" to form public bodies or cooperatives to qualify for preferential purchases.<sup>228</sup>

The FPC was granted jurisdiction over the rates negotiated by the administrator. The rates were to be "reasonable and nondiscriminatory" and cost-related to the "the amortization of the capital investment over a reasonable period of years" as determined by the Commission.<sup>229</sup> Rates were also to be set "with a view to encouraging the widest possible diversified use of electric energy."<sup>230</sup>

An advisory board to the Administrator, consisting of a representative of the War, Interior and Agricultural departments and the Federal Power

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222. ABRAMS, *supra* note 63, at 33.

223. Act of Aug. 30, 1935, ch. 831, 49 Stat. 1028 (river and harbor improvement).

224. Act of Aug. 20, 1937, ch. 720, 50 Stat. 731, 731-32 (Bonneville project). Behind this law was a report released by the National Power Policy Committee in February 1937, just six months before the BPA was established, that recommended an electric policy for Bonneville. The report was prepared by the heads of the FPC, REA, SEC, and Dep't of the Interior.

225. Act of Aug. 20, 1937, ch. 720, 50 Stat. 731, 732.

226. 50 Stat. at 732-33.

227. *Id.* at 733.

228. *Id.* at 734.

229. *Id.* at 735. While the contract period had to be fifty years, periodic price re-openers were allowed to address the concerns of buyers that locked-in prices would become non-competitive.

230. *Id.*



Commission, was created, pending the establishment of a permanent administration governing all projects in the Columbia River Basin.<sup>231</sup>

The BPA project was completed in mid-1938 at a cost of \$53 million. Nearly \$20 million more was expended in the next two years to bring the total to \$73 million, not including the previous expenditures in the 1933-37 period.<sup>232</sup>

The BPA encountered the same problem as the TVA—coordination problems with neighboring private utilities. BPA's new generation "unquestionably brought almost a complete cessation of private utility investment in new generating facilities in the region."<sup>233</sup> BPA's neighbors would not always grant transmission access to their taxpayer-funded competitor, and sales of transmission lines were discouraged because BPA was prohibited from buying the generation assets that went with them.<sup>234</sup> But an even bigger problem was marketing the dam's power, something that the preference clause and cancellation provision with nonpreference contracts did not help. Until World War II, the modest industrial development and population of the region made the BPA facilities "white elephants."<sup>235</sup>

#### 4. Summary and Evaluation

A transformation in federal water power policy occurred during the New Deal period. Explained one study:

While the federal government until 1933 regarded electric power solely as a source of revenues to subsidize other functions, especially irrigation, power has been sold since 1933 for other reasons. It was believed that rates charged by electric utilities were too high, and that state regulation could not bring them down. This view was based upon the cumbersome and ineffectual method of rate regulation on the fair-return-on-fair-value principle, and the failure to control operation and capital costs. It was held that publicly-operated plants could by charging lower rates, provide a check upon private rates more effective than state regulation. Such a policy was actively supported by President Roosevelt.<sup>236</sup>

This made the creation of the TVA and BPA not only cumulative to the federal government's responsibilities for flood control, irrigation, navigation, and land reclamation, but also cumulative to the shortcomings of state public utility regulation itself. This relationship and others covered in this section are portrayed in Figure 2 below.

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231. 50 Stat. at 732.

232. ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 515.

233. ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 530.

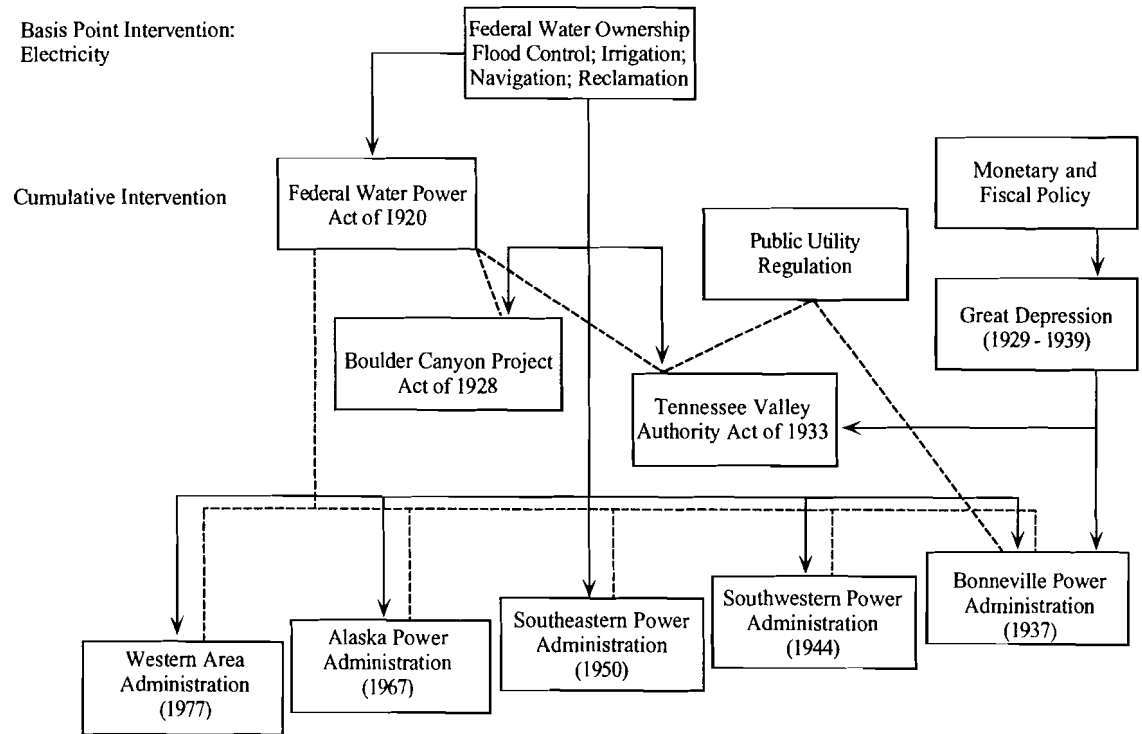
234. ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 527.

235. DAVID SHAPIRO, GENERATING FAILURE: PUBLIC POWER POLICY IN THE PACIFIC NORTHWEST 21 (1989).

236. ELECTRIC POWER AND GOVERNMENT POLICY, *supra* note 104, at 493.

FIGURE 2  
THE DYNAMICS OF REGULATION IN THE U.S. ELECTRIC INDUSTRY

Part II: Water Power Regulation



FDR's policy of "direct and indirect competition in reducing electricity prices . . . including yardstick federal power projects, birch rod potential competition from municipalities and rural cooperatives, [and] well-publicized annual rate surveys" has been found by one business historian to be "quite sound."<sup>237</sup> This analysis adds the caveats, however, that (1) rates could have fallen further still without FDR's activism, and (2) the "administrative costs, rent-seeking costs, price discrimination practices, government subsidies, and other factors" related to his activism would have to be assessed.<sup>238</sup> While the first point can probably be discounted—more generation and distribution investment would surely increase supply to lower prices compared to its absence—the second point raises a very obvious issue: a large dedication of taxpayer resources amid Depression scarcity was not a free lunch. But the foregone opportunity of FDR's action was not so much his inaction. It was the deregulation of electric utilities and privatized electric provision to let market forces guide the industry where, by definition, no taxpayer or regulatory costs would be incurred.

## VII. SUMMARY AND CONCLUSIONS

Reexamining the origins of political electricity casts a decidedly free-market light on the current debates to restructure the electric industry along market-driven lines. The textbook "market failure" rationale for the regulatory covenant, whereby franchise protection was exchanged for cost- and rate-of-return-based regulation, is found to be theoretically and empirically lacking. Competition was never "over" in the open franchise period, and falling prices, increasing quantity supplied, and service-quality improvements suggested that consumers were beneficiaries during the quasi-free market era. Either actual rivalry between two or more firms, or the mere possibility of entry where one firm predominated, created a competitive situation throughout the cycle of the changing industry makeup of individual firms.

In fact, competition was so great that the interests of the status quo, led by "The Chief," Samuel Insull, raised the white flag by asking regulators to replace competition with legal monopoly and, in effect, bureaucratize business management. This business/political trade followed precedent from the intrastate manufactured gas industry (Act to Create a [Massachusetts] Board of Gas Commissioners, 1885) and the interstate railroad industry (Act to Regulate Commerce, 1887).<sup>239</sup>

Once it gained a foothold in the electric market, government involvement took on a life of its own, as basis point intervention gave way to spiralling cumulative intervention. The interventionist dynamic first played out with increasingly stringent public utility commission intrastate require-

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237. William Emmons, *Franklin D. Roosevelt, Electric Utilities, and the Power of Competition*, 53 J. ECON. HIST. 887, 900 (1993).

238. *Id.* at 901.

239. On the push of the major interstate railroads for the regulatory covenant, see GABRIEL KOLKO, *RAILROADS AND REGULATION* 1-3 (1965). On the bellwether Massachusetts law that served as a model for subsequent gas laws in other states, see Robert L. Bradley, Jr., *supra* note 1, at 853-54.

ments and would spread to federal regulation of company structure (Public Utility Holding Company Act of 1935) and rates (Federal Power Act of 1935). The well-coined term, "plugging regulatory gaps," applied.

The historical record of early (pre-1935) government intervention with electricity has implications for at least three current debates with electric restructuring. The first is the utility's case for recovering uneconomic ("stranded") costs from captive ratepayers. Reliance on the regulatory covenant in the absence of explicit contractual obligations is weakened by the fact that business convenience and not market failure (consumer welfare) was responsible for the fateful turn from competition to franchise monopoly. Consumers did not receive compensation for legal monopolization in the various states earlier in this century, and franchised firms received their desired cost-plus oasis. Why now, with the advent of competition, should consumers pay a "strandings" charge from those utilities with uneconomic assets not backed by explicit contracts?

Second, the rationale for PUHCA was never sound, resting on either nonproblems or problems created by preexisting government intervention. In a competitive world where the preferences of consumers are controlling, the rationale to dictate industry structure is not clear.

Third, the rationales for municipalization, federal power agencies and the creation of the Rural Electrification Administration were suspect. Municipalization was not a necessary substitute for a municipal contract supporting private provision, not a cure for but a diversion from the problems of franchise corruption, and a misplaced rationale to replace local franchise regulation with statewide regulation.

Government construction and operation of the Tennessee Valley Authority and the Bonneville Power Administration followed prohibitions on private development and a lack of private property rights to water areas. The Rural Electrification Act was passed after the progress of private utilities to electrify rural areas was stymied by capital constraints from the Great Depression and the financial uncertainty created by PUHCA.

Historical revisionism casting relatively favorable light on the pre-regulatory era of the industry, finally, imparts optimism toward a post-open access deregulation of the electric industry. Once retail competition joins wholesale competition to complete the open-access restructuring, complete with performance-based alternatives to cost-based rate regulation, consumers and the industry will look increasingly hard at the last vestiges of political electricity. To the extent that private parties find that the benefits of self-regulation through settlement contracts outweigh the costs of even light-handed regulation (such as with transmission rates), the deregulatory dynamic could result in a regulatory bypass era.<sup>240</sup> At this point, the long-standing political era of public utility regulation of the electric industry would come to a close with the political means of government intervention in the marketplace replaced by the economic means of self-regulating and self-help market entrepreneurship.

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240. Bradley, *supra* note 1 at 22-22.