

Selling Power: Marketing and Monopoly at Boston Edison, 1886-1926

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While researching the early history of Boston Edison several years ago, I became intrigued by the great scale and variety of the utility's promotional activities. Moreover, these marketing activities blossomed after the turn of the century, soon after Boston Edison became the city's electric central station monopoly. Why, I wondered, would a monopoly with a captive market engage so aggressively in that quintessential competitive behavior, marketing? Both common sense and theories of political economy suggest otherwise. According to conventional theory, monopolies, protected from the rigors of competition and sanctioned with fixed rates of return, become inefficient at best, or vicious price gougers if not restrained by government regulation.

Although a handful of economists and business historians have examined the phenomenon of monopolistic marketing, and historians of the electric industry have pointed out the importance of promotions in load balancing, I could find no comprehensive study of the marketing side of the electric utility industry--nor of any other monopolistic industry. The topic deserved attention, and it became my goal to describe the role Boston Edison and other leading electric utilities played in the complex process of electrification, as well as to test certain common assumptions about monopolistic behavior in American political economy.

Because I defined the central question of "selling power" broadly enough to encompass the relations between Boston Edison and its customers on many levels, I was drawn inexorably into issues not only of corporate strategy but also of technology, public policy, and markets. These became the key variables in my study (although I shall confine most of my remarks here to marketing issues).

Fortunately, sources for my investigation were abundant. Boston Edison's holdings included the usual array of directors' and shareholders' minutes, annual reports, in-house publications, and internal management reports, as well as a rich lode of early correspondence between Boston and New York investors and managers, including Edison himself, J.P. Morgan, Charles Coster, Samuel Insull, Henry Villard, and other less renowned but important figures. I also consulted archives, dissertations, newspapers, industry trade journals, and secondary works, and interviewed present and former Edison employees. Government documents were also abundant,

¹This essay is based on my Brandeis University dissertation, supervised by Morton Keller and Alfred D. Chandler, Jr.

thanks to the initiative of Massachusetts legislators, who created the nation's first electric utility regulatory commission in 1887, and to Progressive-era city and state bureaucrats, with their penchant for compiling and analyzing statistics.

Given the present space restrictions, I shall provide some perspective on four decades of Boston Edison's promotional history through a series of brief verbal portraits. The first picture is from 1886, the year the Edison Electric Illuminating Company of Boston (Boston Edison hereafter) was capitalized at \$100,000 and began serving its first customer in Boston's theater district. The company faced formidable rivals. Boston Gas, the nation's second oldest utility, was valued at \$2.5 million and supplied service along 125 miles downtown streets. The Boston Electric Light Company, capitalized at \$1 million, was created in 1886 through the merger of the city's leading arc lighting companies. Boston Edison also competed directly in the incandescent market against scores of isolated lighting plants--most, ironically, manufactured and sold by other Edison interests.

The second portrait--taken fifteen years later in 1901--shows a dramatically changed utility configuration in Boston. Boston Edison, its capitalization over \$4.3 million, led all of its local rivals in arc and incandescent lighting and motor load. And late in the year, Boston Edison acquired its remaining central station rivals, making it the first big-city electric utility monopoly in America. Nevertheless, formalized marketing played little role in this coup. Up to this point, Boston Edison expected its services to sell themselves. Its promotions were limited to periodic exhibits at industrial fairs, sparse advertising, and the canvassing efforts of a handful of agents. Despite competition, rate setting was primarily non-competitive, except for large commercial and industrial customers. Boston Edison's preeminent marketing challenge had been to construct a large network of underground transmission and distribution lines. Its success in the marketplace resulted mainly from the technological superiority of Edison incandescent lighting over gas and arc lighting, and of electric power over human, animal, and steam power.

These technological advantages intensified after the turn of the century. Boston Edison adapted new, high-efficiency tungsten filament lamps developed by leading domestic manufacturers. It also expanded into several surrounding communities, installed state-of-the-art turbogenerators, and built a large-scale, integrated (AC-DC) system to capture economies of scale and lower rates. By World War I, Edison customers received eight times more light per dollar than in 1890. It is reasonable to assume that Boston Edison--and many other large electric utilities that were pursuing the same strategy--would continue to grow and prosper at the expense of local gas-producing rivals by relying on the technological attributes of their services rather than on marketing.

But something quite different happened, as revealed by our third snapshot, taken on the eve of the First World War. By the first decade of the twentieth century Boston Edison and its industry counterparts had become large-scale, aggressive marketers. Not content to rely on the invisible hand of the marketplace to create demand for their products and services, they created large, internal bureaucracies responsible for developing and administering a wide variety of marketing activities.

In 1914, for example, more middle managers at Boston Edison were devoted to marketing functions than to any other corporate function, including the operation of the company's giant turbogenerator plants. By this time, the utility routinely conducted extensive campaigns to sell electric appliances, signs, and vehicles, and cooperated closely with leading interests in those industries; advertised heavily; compiled statistics regularly and systematically for market research and campaign evaluation; trained and deployed territorial sales forces; marketed appliances through dozens of suburban stores and trained customers in their use; carefully coordinated disparate marketing functions, and formulated long-term strategic marketing goals.

Our final portrait of Boston Edison--from 1929--reveals an even more aggressive and sophisticated marketer. "Experts" handled many sales functions. Home economists conducted electric cooking demonstrations in customer homes, classes, and auditoriums. Illuminating engineers, equipped with light meters and statistical lighting tables, visited homes, stores, offices, and factories to convince Edison customers to install the "right light" in each setting. Not doing so, the new experts claimed, could lead to eye damage, worker injury, lax supervision over office and factory personnel, and other dire consequences.

In the 1920s, Boston Edison built upon its solid prewar foundation in public relations, as it had in marketing. Along with ongoing campaigns for community development and employee welfare, Boston Edison launched an ambitious "Goodwill and Courtesy Movement" and diversified into radio broadcasting. In 1923 portable radio station WTAT began to transmit "entertainment, music, and short talks by prominent people on electrical subjects." The following year WEEI (for "Edison Electric Illuminating"), a more powerful fixed station, went on the air and became one of the original members of AT&T's Red Network.² The Network's regular features included two enormously popular programs produced by Boston Edison: the "Friendly Maids" (a chamber music quartet that accompanied housewives while performing morning chores), and "Big Brother" Bob Emery (who signed up 70,000 youngsters in the Boston Edison Big Brother Club by 1930).

With billboards and suburban shops, with opinion surveys and daily newspaper advertisements and "editorials," with community cooking schools and bi-planes showering contest leaflets on downtown Boston, and with dozens of other regular contacts with its customers each month, Boston Edison commanded a greater presence in the lives of Greater Bostonians by the 1920s than any other industrial corporation--local, regional, or national.

But the central question remains: Why did Boston Edison develop large-scale organizational capabilities in marketing just when its market position was most secure? To begin with, the company never achieved a total monopoly. Competition against gas and isolated electric lighting plants remained important in key markets such as residential heating and cooking and industrial lighting and heating.

²WEEI still operates under non-utility ownership.

Even in less competitive markets, however, a series of powerful constraints drove Boston Edison toward marketing. As a network-based public utility, the company was embedded within its service territory; it could not grow by exploiting a national or international market. Reliant on mass production technology with high fixed costs, it was compelled to utilize plant capacity at high levels. And as a regulated public utility, Boston Edison confronted limits to its rate of return (although these were not codified systematically until much later). Only growth would attract capital and sustain further growth. But growth had to occur within limits, through the aggressive exploitation of the existing market.

These constraints largely explain the timing of Boston Edison's marketing revolution. The company initially grew by adding new territory and new customers. As geographical expansion ceased and distribution within that territory approached universality the emphasis shifted toward increasing consumption among existing customers. Deepening market demand was more challenging than broadening it; the task required well-developed marketing capabilities.

Like other large industrial corporations of its day, Boston Edison pursued a marketing strategy of forward integration and product diversification. Selling an undifferentiated commodity (60-cycle AC current), the utility diversified into the realm of electricity-consuming devices by either selling them, cooperating closely with their manufacturers, or--as in the case of electric vehicles--organizing large-scale promotional campaigns outside of its traditional business. To carry out these activities and monitor their progress, Boston Edison built a large-scale internal organization.

Indeed, marketing burgeoned at Boston Edison in part because it proved to be extremely effective. Although the results of some promotional activities were difficult to measure (as most advertisers know), many were not. Boston Edison determined, for example, that its House Wiring Campaign of 1913-1916 yielded 4,836 kilowatts of new connected load, boosting electrical revenues by \$112,447 per year, for a one-time selling cost of only \$443,221. Most company marketing campaigns were measurably profitable.

In conclusion, I wish to suggest a few key implications of this study. First, proponents of the "organizational synthesis" in American history should find solace in the pages of "Selling Power." By arguing that leading electric utilities, albeit regulated monopolies, behaved similarly to competitive industrial firms, and by emphasizing the importance of technology over public policy, my research presents new evidence of convergence among the strategies and structures of large, bureaucratic firms. Second, this investigation challenges traditional definitions of monopoly and public utility. To be sure, monopoly status discouraged some forms of competitive behavior. But in ways hitherto ignored, the special sanction also prodded electric utilities toward marketing. Along with the important market and profit constraints outlined above, electric utilities succeeded at marketing because of their special knowledge of the marketplace (by being literally wired to their customers), their ability to share marketing know-how through industry associations such as the National Electric Light Association, and their early advances in the closely allied field of public relations.

Third, "Selling Power" may convince some historians to reevaluate the role of electric utilities as agents of technological diffusion in the critical process of electrification. Previous studies have emphasized the promotional efforts of appliance manufacturers, but those enterprises, despite their prominence on the national scene, lacked the local sales and training facilities of utilities as well as their additional motivation to sell kilowatts.

Finally, as the industry now struggles through partial deregulation, this history may convey important lessons to utility regulators, managers, customers, scholars, and journalists. Recalling only recent decades--when rising fuel costs and prices, conservationism, and technical problems drove marketing into eclipse--many stakeholders believe that electric utility load management is new. To be sure, the fundamental mission of electric utility load management is shifting from consumption to conservation. But the methods for achieving that end, as they take shape in the increasingly competitive arena, retrace clearly the contours of the past.