1

An Unseen Force in the New South

In anticipation of the upcoming festivities on an October evening at the 1895 Atlanta Cotton States and International Exposition, a local reporter expressed exhilaration at the thought that "tonight the exposition grounds will be a blaze of glory." Alongside flame-spewing volcano-like structures, the expo's electric lights "dart[ed] back and forth among the buildings like fiery serpents. Everything will be weird in the peculiar glow."[1] The fair's official guidebook likewise emphasized electric lighting at the fair, which offered as its most stunning feature an "electric fountain that glitters over beautiful Clara Meer like a rainbow of the night."[2] Even people with no direct stake in Atlanta's reputation professed amazement. A writer for the *Nation* confessed that the Atlanta expo's electrical display produced a "fine artistic effect . . . and the general effect is fairy-like."[3]

Such scenes, and glowing descriptions of their electrical glory, were commonplace in fin-de-siècle America. World's fairs, especially after the 1893 Columbian Exposition in Chicago, almost as a matter of course featured awe-inspiring electric light shows, electrically illuminated buildings and fairgrounds, and "electricity departments." Yet more than simply standing as gaudy exhibitions of the latest innovations, electric lighting at late nineteenth- and early twentieth-century expositions signified white America's racial, cultural, and technological supremacy. These demonstrations gave "Americans a feeling of participation in a national experience superior to all others, the fairs serving to establish America and Americans as special."[4]

Figure 1.1 Fred L. Howe, *Exposition at Night*, 1895. Credit: Kenan Research Center at the Atlanta History Center.

The Atlanta Cotton States and International Exposition held to this pattern, calling on electricity to narrate in both symbolic and concrete terms the post-bellum South's purported success story.[5] Yet it was only one of Dixie's world's fairs. With displays of electrical prowess in cities such as Atlanta (1881, 1887), Louisville (1883–1887), and Nashville (1897), southerners announced their membership in the elite club of advanced societies. These expos furthermore declared that the "New South," an agenda bent on modernizing the region through rapid urbanization and industrialization, was open for business. In Atlanta's case, according to Henry Morrell Atkinson, the expo's electrical department chairman, "electricity . . . will do its part in demonstrating the progress of the age and the latest improvements in the comforts and necessities of life. And this is what the success of an exposition consists in."[6]

Electricity's special role at the expo went beyond conspicuous display. For Atkinson, electric power was the "unseen force" that "put the throb of life into every section of the exposition grounds"; it powered the less obvious but crucially important elements of the fair as well. Aside from decorative purposes, electricity was responsible for "the patrol and alarm systems, supplying motive

power, transportation by land and water," and a host of other functions. But demonstrations of electricity's uses far exceeded the limited scope of the exposition. According to Atkinson, electricity had helped turn Atlanta into the glowing, bustling New South capital. This unseen force "signalized and manifested in many ways the general gains and advances in governing conditions of everyday life . . . , in social welfare, [and] in industrial progress." These lessons in southern advancement became possible through southerners' cooperative efforts, with a "swiftness and accuracy of purpose which are undoubtedly proofs of genius in those" who had "harmoniously" made electric power a reality.[7]

Atkinson's remarks about the significance of the "unseen force" are instructive in two primary ways. First, they point out that electricity was not simply an ornamental aspect of the exposition. It proved essential to seemingly mundane but indispensable operations at the fair and made modern life in a regional capital possible. His pitch is also telling in that, while it spoke to electricity's seemingly underappreciated part in the making of Atlanta and its exposition, it contained a fundamental deception. As one historian writes about extravagant electrical shows at world's fairs, "the entire scene was completely artificial, a simulacrum of an ideal world."[8] Atkinson's version of electricity at the fair, and by extension in daily life in the broader New South, likewise presented a "simulacrum of an ideal world." The depiction of electrification's ascent as an abstract "unseen force," as having proceeded swiftly and amiably, as having gained acceptance as a universally awe-inspiring, beautifying, progressive, and even magical force obscured as much as it illuminated.

The realities of electrification's initial stages—from the early 1880s through the 1890s, when arc lights and trolleys first appeared on city streets—offer a different account. Electricity's rise, and indeed the entire history of electrification, was far messier and more problematic than Atkinson and other southern boosters allowed. This was not a story in which a mystical wonderworker magically illuminated and powered the New South. Nature's bounty—including increasingly voluminous streams of coal and water from the Appalachians—underwrote this supposedly unseen force. Neither was it one of easily won achievements, congenial cooperation, uniform popular acceptance, and an unfettered free market. It was, rather, a story of near-constant friction. Power company failures, conflicts between business leaders, and governmental interventions marked the electrical age's beginnings.

Big business made the birth of electrification possible, but the process was neither smooth nor coherent. Despite inauspicious, modest, and fractured beginnings, the southern electric industry, even in a supposedly laggard Dixieland, was a full participant in the late nineteenth-century corporate consolidation craze, which saw electricity and the modern corporation emerge simultane-

ously.[9] Fierce rivalries over market control within the chaotic and highly competitive world of modern capitalism characterized the dawn of the electrical age in the South, as in the rest of the United States. In this context romantic southern notions of gentlemanly cooperation and traditional decorum and honor would not do. Cold-blooded calculation reigned. Indeed Atkinson spoke not simply as a civic booster in 1895, but also as president of Atlanta's near-monopoly electric lighting company with designs on overtaking both the lighting and streetcar business in the entire city.

The quest would not be easy. Electrification was a fragile process: not only were electrical systems technically frail, but social, cultural, and political realities threatened this emerging business as well.[10] In the face of such precarious circumstances, the budding electric industry had to rely on the power of government to become viable and ultimately to stay in business. Exclusive contracts in the 1880s and 1890s and municipal legislation after the turn of the century proved necessary to support and then to cement the place of private-power companies in the early twentieth-century South. Prior to receiving public assistance, however, when limited to the nascent street lighting business, it appeared that electric power might have a difficult time even surviving its infancy.

* * *

Before electricity became the "unseen force" behind the modern city's functions, it operated as the animating power behind the very-well-seen arc light. Millions of people likely saw electric lights for the first time at expositions, but the use of spectacular lighting as a lesson in civilizational advancement was not limited to world's fairs. Electric arc lights debuted in American streets, just as in expositions, as examples of "technical monumentalism." Scholars tend to agree that the arc lamp, which produced a brilliant "arc" of light in the open space between two carbon electrodes heated by electric current, served as a shining emblem of progress, not primarily as a tool for improving the functionality or safety of public spaces. Only with the emergence of so-called Great White Ways in city centers across the United States did these lights come to serve the utilitarian function of stoking commercial activity.[11] Atlanta's early experience with electrification in part confirmed that position. Yet it also demonstrated that the people supporting the establishment of an electric illumination system called on this dazzling symbol for an explicitly utilitarian function. Arc lights contributed to the making of the New South.

People like *Atlanta Constitution* editor Henry Grady, widely considered the New South agenda's most important spokesman, believed Dixie's regeneration was urgent. At least since the early nineteenth century but certainly after Reconstruction, many prominent southerners claimed that the white South's devo-

tion to slavery and disdain for urbanization and industrialization left the region on the margins of American abundance. The region had no shortage of natural wealth; what it lacked, many believed, were the mechanisms to convert raw materials into locally distributed and widely shared profits. The benefits of the South's natural bounty flowed instead to the more developed North. Dixie witnessed the results of that flawed system most acutely in the 1860s, when the Confederacy suffered devastating military losses to the industrially superior Union, and after the war when it watched its economy languish while the North's boomed.[12]

Especially against a burdensome backdrop of defeat, poverty, and underdevelopment—a history not of abundance but of scarcity—southern civic boosters advocated for a "New South" of growing cities and factories. Leading entrepreneurs thus installed ornamental electric lights in streets, shops, places of entertainment, and world's fairs to serve as both evidence of and the basis for the rapid expansion of their newly urbanizing-industrializing society. The Atlanta City Council asserted as much in 1895. Despite a devastating situation in the 1860s, it claimed, the city could now call itself "one of the best illuminated in the Union." As such, and in concert with street railways, a mild climate, and other advantages, Atlanta offered potential investors "everything that is favorable to successful manufacturing."[13] So alluring was the promise of this new technology that even small southern towns embraced the hope that electric lights would spark growth. "The next thing" in its development, an Alabama newspaper predicted in 1892, "will be electric lights, then will come factories, etc. Let the good things come." Similarly, a North Carolina man joked that "electric lights, etc. are booming here; N.Y. and Boston will be mere suburbs of Chapel Hill, N.C. soon!"[14]

Pronouncements about the utility of electric lighting were not simply the fantasies of Dixie's self-aggrandizing cities or hopeful towns. The National Electric Light Association (NELA), the US electric industry's trade organization founded in 1885, explicitly encouraged cities to embrace electricity's role as both a spectacle and tool for growth. "A city is judged by impressions," explained a NELA pamphlet. "It may have every natural advantage that a business man may desire. Yet, if it be unattractive, dirty and gloomy, its development will be slow." Decorative street lighting, NELA concluded, played a fundamental role in urban-industrial development.[15]

Even if boosters and trade associations emphasized the functional purposes of electric lighting as much as its symbolic uses, the arc light's debut in the late 1870s nevertheless inspired in southern residents, or at least in booster-journalists, a sense of awe. Many southerners likely witnessed the arc lamp's sublime power for the first time in autumn 1879 when W.W. Cole's New York and New Orleans Circus, Museum, Menagerie, and Congress of Living Wonders toured cities such as Atlanta, Greenville, Montgomery, Nashville, and Pensacola.[16] Although Cole's

traveling circus promised an array of expected attractions—freak shows, performing animals, exotic enticements—the Atlanta press seemed most thrilled by the news that the show would feature arc lights. Advertisements in the city's papers peddled the show as the "first exhibition in Atlanta of the wonderful electric light," which would make "dense night as brilliant as a southern sun."[17] The *Sunny South*, an Atlanta-based literary newspaper, urged readers to attend the circus because it "opens with the wonderful *Electric Light* which we are all anxious to see."[18] The *Atlanta Constitution* billed Cole's circus and its technological marvels as phenomena for which even Biblical wisdom could not adequately account: "The Electric Light Show: Something New under the Sun."[19]

When Cole's troop arrived in Atlanta in early November, some three thousand to four thousand people attended daytime activities to gawk at a pair of giants, a trapeze act, a clown routine, and a lion taming exhibition. As anticipated, however, the dazzling demonstration of electric lights stood out as the big hit of Cole's stop in Atlanta. The *Constitution* reported that "the night performance was even better, if possible, than that of the afternoon, the wonderful electric light being seen to better advantage, and the crowd on hand larger by a thousand or two than in the afternoon."[20]

A circus-going populace, or favorable press coverage, though, did not necessarily signify a widespread desire for the creation of an electrically illuminated city. Nor did it foretell the electric lamp's ultimate triumph. In fact electric lighting suffered through a series of false starts, as well as a lack of popular enthusiasm, in the years following Cole's visit. It took the intervention of municipal government, which finally came to believe that lights would help bring the city more investment capital and tax revenue, to establish this business as a permanent fixture in the urban landscape.

Nevertheless large southern cities were early (potential) adopters of the arc light. The South's largest city, New Orleans, had already negotiated the installation of dozens of arc lamps by 1882 when a five-mile stretch of riverfront glowed under electric lights.[21] Atlanta's boosters believed that if the arc lamp illuminated their streets, their town would stand out as a progressive metropolis that might soon surpass New Orleans in national prestige and regional importance.[22] Atlantans started serious discussions about bringing this technology to their streets following the International Cotton Exposition of 1881, whose purpose was to announce Atlanta as the leading New South city.[23] The fair's inaugural ball boasted "blazing electric lights, whose rays, as bright as polished silver, yet as soft as the mellowest moon light, created a scene as enchanting as from fairy land."[24] The fair's organizers wanted to extend that scene to the streets and feared that, as NELA later warned, their city might not meet its billing as the New South's core if it failed to quickly adopt electric lamps.

To accomplish this goal, Atlanta businessmen Jacob and Aaron Haas welcomed representatives of Cleveland's Brush Electric Company, which dominated the American arc light equipment manufacturing business through the 1880s, to negotiate the establishment of an electric light company. The two parties agreed in principle to a deal in the summer of 1882, provisionally forming the Brush Electric Light and Power Company of Atlanta, with a proposed capitalization of $50,000. For the Haas brothers, the arc light's sheer brilliance alone would bring further investment and handsome profits inevitably and quickly to Atlanta. In an interview with a reporter, Jacob Haas asserted that the "pure radiance" of electric lighting would soon shine on "every street in Atlanta" and eventually supplant the "sickly glare of gas in our shops, offices and drawing rooms." Despite the democratic vision of illuminating every location in the city—and without an officially organized company or a contract for street lights—Haas and his brother secured lighting subscriptions solely from elite enterprises in the central business district. Chief among these were the posh Kimball House and Markham House hotels. Located near Union Railroad Station in the western portion of downtown, Kimball House and Markham House provided lavish accommodations for Atlanta's well-to-do visitors and bachelors and served as a meeting place for business and political leaders.[25] In the short term the arc lamp would brighten only the burgeoning New South's most exclusive spaces.

Unfortunately for the Haas brothers, the electric light's arrival was several years away and its rival, the gas lamp, still seemed firmly entrenched in the city's urban and political landscapes. The Atlanta Gas Light Company, which had been in business since 1856, could boast a network of nearly 450 gas lamps in the early 1880s and had plans to add some 30 more street lights each year. Because the city owned about one-fourth of the gas company's stock, and realized significant annual revenues from the venture, the city council proved reluctant to invest in a novelty. The Haas brothers' venture thus ended before it truly began: Brush Company representatives withdrew from the deal when they realized that, because city fathers would not grant the company a franchise, downtown's streets, hotels, shops, and factories would not soon feature electric lights. Atlanta, it seemed, would not only lag behind New Orleans and rival New South cities such as Chattanooga and Nashville, both of which successfully negotiated the installation of Brush lighting systems in 1882, but would be a gas-lit city for some time to come.[26]

* * *

Although the electric light appeared to founder on the shoals of local politics and general apathy, enterprising Atlanta citizens continued their work to bring the arc lamp to city streets. Over a year after the Brush-Haas electric company failure, another group of Atlanta entrepreneurs formed the Georgia Electric

Light Company of Atlanta (GELCA) to "furnish patrons from a central station . . . electric lights for stores, dwellings, machine shops, depots, inside and out, or to introduce said lights wherever desired." By the end of 1883 GELCA installed a small isolated plant in the basement of the Atlanta Elevator Company's building that powered forty-five lights on the most heavily trafficked downtown roads including Peachtree, Whitehall, and Marietta Streets. The company's first arc lamps, as the Haas brothers had planned, primarily shed light on Atlanta's elite establishments: Kimball House, Markham House, De Give's Opera House, and the Gate City Bank.[27] From the outset the placement of electric lamps established the new technology as a marker of elite privilege and New South values. Yet the early geography of electric lighting went beyond the realm of the symbolic. The intention of such displays was to dispel the notion that "Atlanta was the poorest lighted city of her size" and thus to help realize the New South program by luring new businesses and capital investment.[28]

Though it showed more promise than that of the Haas brothers, GELCA's business suffered troublesome beginnings as well. The company's officers had difficulty raising a paltry $8,500 for the initial minimum investment. (By contrast, in 1881 a group of twenty-five Atlanta businessmen reportedly secured $250,000 for a new cotton mill within one hour of announcing the stock's availability.) What was more, the Lynn, Massachusetts–based Thomson-Houston Company (a forerunner of General Electric), with which GELCA agreed to a lighting contract in 1885, experienced technical difficulties that periodically left street corners in the dark. Perhaps in response to these issues, the Atlanta City Council reduced the original franchise agreement by more than half and admitted that it contracted with GELCA only to "erect a few lights, more as an experiment to test their efficiency than anything else."[29] By December 1886 the city's streets had only 25 electric arc lights, a meager accomplishment compared to that of New Orleans, which had over 650 by the end of 1885.[30] At that point GELCA's prospects seemed destined to replicate those of the Haas brothers.

Yet fortunes changed for the electric light in Atlanta and other southern cities in 1887. In that year a small group of investors successfully chartered Columbia, South Carolina's, first electric light company, the Congaree Gas and Electric Company, and began installing electric lamps around the city.[31] In Atlanta the exposition was once again called on to sell the city on electric illumination. In early 1887 preparations began for the Piedmont Exposition, which would take place in the autumn at newly completed Piedmont Park. Much like the 1881 Atlanta Expo, the 1887 Piedmont fair was designed to entice northern capital to come south by collecting "together the evidences of the resources of the Piedmont region of the Southern States" and by exhibiting "the progress of this section."[32] The expo's executive committee decided to open the fair at night to showcase

the city's new electric lights. One of the exposition's directors excitedly predicted that, based on the strength of the displays, "you will see an enormous crowd here from the north. The Piedmont region," he continued, "is the winning section, and there is going to be more capital seeking investment . . . than has ever been seen together in the south at any one time."[33] Viewing the electric light as a tool to help raise Dixie's profile, city leaders began to show more favor to this emerging enterprise. Not only did the city council sell the city's equity in the Atlanta Gas Light Company—in large part to help fund the 1887 Piedmont Exposition—but it opened the way for a more extensive electric lighting contract with GELCA and for franchises with other electric companies, such as the newly formed Empire State Electric Company, to install street lights.[34]

The adoption of electric lights around the city gained momentum after the Piedmont Exposition. By April 1888 GELCA's contract with Thomson-Houston had expanded to include 100 arc lights at a cost of $120 per light annually.[35] A year later, the streets in the central business district contained 150 arc lights and over 400 incandescent lamps.[36] Those numbers continued to rapidly expand, so that by the end of 1895 nearly 600 arc lights and 1,000 incandescent lights brightened Atlanta's main commercial thoroughfares as well as a few residential streets.[37] While the clear, angular encasement of the gas light fixture could still be seen in parts of the city, the hundreds of electric lights that now shone on Atlanta's streets took a different form and symbolized the transformation of the urban atmosphere. The new lights on Peachtree, Marietta, and Whitehall Streets, many of which featured clusters of 2,000–candle power arc lights mounted atop tall poles, were meant to resemble the light of the moon and the stars, mimicking nature as well as testifying to humanity's domination of it. These faux celestial bodies were meant to be romantic and brilliant in and of themselves. More importantly, though, by illuminating streets, sidewalks, shops, and office buildings, they were designed to reinforce the New South creed that capitalist development and material prosperity would beget regional and social progress.[38]

Whether these new lights brightened everyday life for ordinary residents is another question. Though some citizens doubtlessly agreed with boosters that electricity enhanced the city's functionality and beauty, others griped about the electric light's dark side. An Atlanta woman explained that on a summer evening in 1888 when she became "wild with heat" and her "eyes were burning like balls of fire" due to her gas lamps, she opened her bedroom window for relief. But the powerful electric "street lamp made spots of light on my walls that I could not keep from seeing." Even after closing her eyes, the brilliant arc light "seemed to shine through [her eyelids] as if through glass," and thus she had to "lay all night in torture."[39] Another Atlanta resident, identified as W. P. Patillo, complained that

Figure 1.2 Streetcars and Arc-Light Poles on Atlanta's Marietta Street, ca. 1907. Author's Collection.

any functional improvements electric lighting introduced to city life were far outweighed by the ugliness it foisted on Atlanta's neighborhoods. "The vandalism now being committed in this city," Patillo raged, "is almost beyond endurance." Because of the erection of increasing numbers of electric lights—which, Patillo claimed, worked sporadically at best—the city's elms and water oaks were being destroyed with "wanton recklessness." What was more, Patillo challenged claims that electrical modernization would bring widespread prosperity, fore-

shadowing the rhetoric of an early twentieth-century movement born of popular discontent with electrification's effects on daily life. He blamed the destruction of Atlanta's trees on an "overpaid and unsatisfied corporation, whose large profits out of the contract for lighting the city only serve to make them more greedy of other gains and more blind to the interest of others."[40]

Despite some residents' complaints, the push for more electric light proceeded apace in the late 1880s and early 1890s but went beyond simply placing more arc lamps on the city's main thoroughfares. Now the glow of the incandescent light illuminated some of Atlanta's best-known interiors. Produced in an evacuated glass bulb when electric current courses through and heats a carbon filament, incandescent light, unlike arc light, could be effectively "subdivided," or designed to shine at varying levels of brilliance.[41] What was more, unlike gas light, it consumed no oxygen and produced no objectionable odors or eye-burning smoke. The incandescent light thus proved much more flexible and made for far more agreeable interior illumination than the arc light. It also served well as an outdoor lighting source. Arc lights, like gas lights, would not disappear from city streets for decades, but at least in the eyes of electric lighting firms, the incandescent bulb's enlightenment of interior spaces clearly represented the future.[42]

The market for electric lighting inside Atlanta's prominent places of commerce began to flourish in the late 1880s and provided GELCA and other fledgling electric companies more opportunities to bring their lighting businesses indoors. Though some Atlanta institutions, such as the *Atlanta Constitution*, experimented with incandescent systems as early as 1884, several years would pass before those systems became permanent.[43] One of the first downtown establishments to enjoy permanent interior incandescent lighting was the M. Rich and Bros. department store, commonly referred to as "Rich's." Founded as a dry-goods depot by Hungarian-Jewish immigrant Morris Rich in 1867, by the late 1880s Rich's had become one of the shining symbols of New South progress: in one location it displayed a blossoming consumer culture, a concentration of people, and all the fruits of industrial production. Working with GELCA, Rich installed an isolated generator and incandescent lights in late 1887 to heighten his store's allure. Passersby, including a visiting President Grover Cleveland, could gawk at the "22 electric lights [that] bit chunks of gold out of the sky." That same year, as the "Christmas rush" began, customers could shop for gifts late into the evening under the warm glow of electric lamps.[44] Other establishments soon followed suit. In the spring of 1888 Thomson-Houston agreed to install a coal-fired electric generator, or "dynamo," at the Markham House hotel in exchange for equity in GELCA.[45] The electric light had caught on in the New South's capital city.

Even more significant for electric power's fortunes was the installation by another company of a dynamo at another Atlanta hotel. In May 1888 the Edison

Electric Light Company equipped Kimball House with Thomas Edison's recently patented incandescent lighting system to typical fanfare. The *Atlanta Constitution* wrote in gleeful anticipation of the lights' debut that "the Kimball house will be a blaze of beauty from top to bottom with from 2,500 to 3,000 Edison electric lamps." Housed in the hotel's basement, the coal-fired generators, crowed a proud engineer, "are models of simple and beautiful machinery." But the new dynamos would do more than just animate the hotel's electric lamps. Acting as a central power station that mimicked gas light supply and distribution infrastructure—as Edison intended—the generating plant at Kimball House could, according to the engineer, transmit power "just as strong half a mile from the engine" to other sites, permitting the extension of this system well beyond a single location.[46]

The rise of incandescent lighting complexes by the end of the 1880s represented a milestone in electrification's history. Beyond the purported beauty of dynamos and electric lights, this new development testified to the "maturation of the lighting industry." The electric power business had become increasingly viable, profitable, and standardized.[47] Yet Edison's design also suggested an expansive way forward for the fledgling electric industry. By the late 1880s the Edison system featured a three-wire configuration that, as the engineer at Kimball House declared, offered consistency of electric current at distances relatively far removed from the dynamo (ultimately a few miles at most). Although based on multiple direct-current (DC) generators and therefore limited in geographic scope, it nevertheless opened the path to centrally powered, integrated electrical networks which could stretch across and distribute light and power to an entire city.[48]

The possibilities of integration proved alluring enough for the electric lighting industry but became even more attractive with the rise of a newly viable application: the street railway. The emergence of the streetcar as a potential consumer of large amounts of electricity—one that would require power while the lights were not burning—reinforced and enlarged the possibilities introduced by incandescent lighting systems. In requiring more electricity, more extensive networks, and more investment capital, the trolley provided the spark at the end of the 1880s for the rapid consolidation of utilities and the construction of centralized alternating-current (AC) generating plants that could flash current across citywide webs of powerlines, ushering in the beginning of a new, more intense phase in electrification and capitalist competition.

* * *

In cities across the United States by the end of the 1880s, entrepreneurs faced trends like the one developing in Atlanta. Not only did electricity seem likely to compete with (or even eclipse) gas light, but unlike gas it could power trolleys

as well. Both applications of electric power seemed ripe for expansion as cities experienced rapid growth, which to a significant extent resulted from the utility industry's rise and maturation. In this setting electric companies began to proliferate. The budding electric power sector spawned not only multiple lighting and streetcar companies in each city but increasingly large power plants and fierce rivalries for control over rapidly centralizing power systems. The dawn of electrification prompted and "witnessed changes in the economic structure of capitalism. The transformation of free competition into corporate monopoly capitalism confirmed in economic terms what electrification had anticipated technically": uncertainty and chaos, followed by consolidation and expansion.[49]

The scramble for control over power markets, which precipitated a frenzied atmosphere of corporate competition in cities across the country, took place most notably in New York and Chicago.[50] The power supply market in southern cities too experienced the expansions, competitions, and combinations that led to the rise of multimillion-dollar consolidated corporations and an increasingly electrified city. In the New South's capital between 1887 and 1902, after a series of fierce corporate scuffles culminating in an 1899–1901 fight known as the "Second Battle of Atlanta," Bostonian Henry Atkinson combined more than thirty electric light and streetcar companies into one electric utility. Given Atkinson's importance to the consolidation of electrical networks in the New South's capital, it is worth considering his biography in some detail.

From his first days in the South, Atkinson displayed a shrewd business sense that, perhaps paradoxically, seems to have been sharpened not solely in New England boardrooms but also while working as a ranch hand on the rough terrain of the Dakota, Montana, and Wyoming Territories. Born to a well-connected textile mill owner in Brookline, Massachusetts, in 1862, Atkinson attended elite private schools in Boston before graduating from Harvard in 1884. After graduation, young "Harry" went west to work as a cowboy, where he reportedly made the acquaintance of Theodore Roosevelt.[51] Atkinson's flight from Boston could be characterized as a repetition of Horace Greely's exhortation to overly refined northeastern youngsters to seek out an adventurous life in the West to find true manliness and tame the frontier. Yet Atkinson found little about which to wax romantic in his trek. "This life is severe hardship to anyone just from the East," he wrote to his father while passing through Laramie, Wyoming, in October 1884. "Any romantic feelings the newcomer has about cowboys and galloping over the prairie with a broad brimmed hat on, and all such nonsense is soon knocked out of him."[52]

More likely than just sowing wild oats, Atkinson journeyed to the American West as an emissary of "Brahmin capital" to scout land that he could purchase for mining or railroad development.[53] Considering that he quit ranching and

traveled to Arizona, New Mexico, Texas, and Utah, it is possible that Atkinson was sent to search for grazing land to help expand and consolidate his father's cattle interests. President of Massachusetts Cotton Mills and other enterprises in Brookline, Atkinson's father in 1884 became one of the principal investors in the Arizona-based Aztec Land and Cattle Company, the third largest such firm in the United States until its collapse in 1902.[54] Though Atkinson apparently acquired no land in the Southwest, he gained experiences that served him well when he moved to the South. He worked with local actors who had connections to New England capital, surveyed opportunities on the frontier, and attempted to make strategic investments in properties that would enable success and eventually dominance in his chosen field.

Soon after his return to New England in late 1885, the Atkinson family arranged for Henry to relocate to Atlanta to work as an apprentice for Samuel Inman in his cotton buying firm, S.M. Inman and Company. Among the largest cotton dealers in the South, Inman was friendly with the Atkinson family and had particularly close connections to Henry's uncle, Edward Atkinson, an economist who evangelized for the New South and helped plan the 1881 Atlanta Exposition.[55] Not content to remain a cotton sampler and buyer for long, Henry Atkinson quickly worked his way into the ranks of Atlanta's business elite. In the spring of 1888 he married May Peters, daughter of Atlanta founder and railroad magnate Richard Peters, and within the next year assumed the vice presidency of the Home Loan and Banking Company. In 1891, along with Atlanta business associates and Brahmin seed capital—from the likes of the Cabot, Lodge, and Lowell families—Atkinson organized the Southern Banking and Trust Company, which he used as a pipeline to investment houses in Boston, New York, and London. He also used his connections to solidify his position as a favored member of the city's business leadership. Following the panic of 1893, as the city faced severe financial shortfalls and a possible bankruptcy, Atkinson loaned the city of Atlanta hundreds of thousands of dollars at below-market interest rates. By the First World War's dawn Atkinson had made several seemingly altruistic contributions to city coffers and had funneled over $100 million into Alabama, Florida, and Georgia to establish railroad, shipping, and mining ventures.[56]

Atkinson's most significant and lasting endeavor in the South, however, was in the electric utility industry. Much like his time out west, Atkinson carefully surveyed Atlanta's electrical frontier, hoping to make key acquisitions that would enable him to take a controlling position in the future. After nearly two years of studying the bourgeoning industry, Atkinson began slowly and quietly acquiring equity in GELCA. Intrigued by the possibilities of electric lighting and street railways, the former cowboy collaborated with several prominent Atlanta businessmen to organize a rival power company, the Atlanta Electric Illuminating Com-

pany. Incorporated in October 1890 with Atkinson as president and William and Hugh Inman (Samuel Inman's uncle and brother) as board members and officers, Atlanta Electric was originally capitalized at $100,000. The new utility planned to supply streets, businesses, and residences with electric lighting. Even more importantly it aimed to construct a hulking alternating-current generating plant that would provide motive power for the city's budding streetcar lines.[57]

Atkinson clearly recognized that the key to the domination of a city's electrical market lay not in the management of isolated generators but in the creation of a fully integrated electrical network anchored in a powerful central generating plant. GELCA's managers, who had pursued electrification in the 1880s through installing individually located DC dynamos throughout the city, foresaw the same thing. They thus aimed to enlarge their company's share of Atlanta's power market through the construction of their own AC plant, which would drive streetcar growth and integrate and control Atlanta's electric power market.

GELCA's goals paired well with those of Atlanta real estate and streetcar mogul Joel Hurt. Unlike Atkinson, Hurt departed his native Alabama and arrived in Georgia nearly penniless in the early 1870s. After completing a civil engineering degree at the University of Georgia, he made his way to Atlanta in 1875 and soon after established an insurance company. By the mid-1880s Hurt shifted his focus to other ventures, ultimately aiming to join suburban development with the emerging electric streetcar business, each pressing the other's expansion. To realize his objective, in late 1886 Hurt chartered both the East Atlanta Land Company and the Atlanta and Edgewood Street Railway Company with backing from Baltimore-based banks, the Inman brothers, and other Atlanta businessmen. Hurt's planned suburb was a High Victorian enclave called Inman Park (named for Samuel Inman) located about two miles east of downtown. Atlanta and Edgewood would provide transportation between downtown and Inman Park, though at the time of the company's incorporation—and at the beginning of track construction in 1887—no viable electric traction system existed in the United States. Ultimately, after visiting several American cities and evaluating competing systems (including Frank Sprague's Richmond, Virginia, streetcar line, which in February 1888 became the first successful example of electric traction in the United States), Hurt engaged Thomson-Houston to supply equipment for what would in August 1889 become the city's first electric trolley line—though it was followed just four months later by another line, the Fulton County Street Railroad Company, also a Thomson-Houston client. Yet while both Hurt and GELCA, which furnished power for Atlanta and Edgewood from one of its downtown DC dynamos, had reason to be proud of their accomplishment, both aimed to capture even more of the rapidly growing Atlanta market.[58]

To that end in February 1890 GELCA and Hurt collaborated to raise $100,000

for the construction of a 3,000-horsepower AC generating plant at a defunct rock quarry site on Davis Street slightly west of downtown. Powered by coal from East Tennessee, GELCA's new power station would not only fuel the city's existing street lamps and trolleys; it would also serve as the center of a web of wires stretching across the city that would enable the installation of more lights and streetcars lines—as well as elevators, printing presses, sewing machines, and, in a few private residences, other appliances—which would stretch the city's boundaries, helping to transform it into a modern metropolis.[59] Under such circumstances, all electrical generation, transmission, and distribution in Atlanta, and perhaps beyond, would fall under GELCA's and Hurt's control. Backed by the promise of more electric power for his operations, in 1891 Hurt combined some three-fourths of Atlanta's streetcar lines (several of which were "dummy" or horse-drawn lines that were undergoing electrification) into a new, $2 million firm called the Atlanta Consolidated Street Railway Company.[60]

Given GELCA's and Hurt's apparent ascendency, Henry Atkinson made several moves in 1891 to ensure he would not be elbowed out of Atlanta's electric power scene. Whereas he had begun quietly purchasing GELCA stock in 1888, Atkinson became more aggressive thereafter, acquiring a controlling interest in the company by the autumn of 1891. In December 1891 Atkinson surprised stockholders by announcing that he now controlled a majority stake in GELCA. He then directed the company to sell all its assets, including the Davis Street power plant, to a newly chartered corporation called the Georgia Electric Light Company (GELC), initially capitalized at $600,000.[61]

Shortly before taking over GELCA, Atkinson also claimed a corner of the streetcar business. Along with William Inman, Atkinson bought a substantial share of the Atlanta, West End, and McPherson Barracks Railway (the city's first Sprague system customer) in April 1891. By the end of October the major stakeholders in that company had agreed to purchase the Grant Park Railway Company. The merger of these two streetcar companies resulted in the birth of the Atlanta Traction Company, which featured Atkinson as the new president and held an initial capital stock of $300,000.[62] Not only did Atkinson now pose a threat as a potential competitor in the trolley business, but his power plant supplied most of the energy to Hurt's Consolidated. Soon a bitter rivalry would develop between the two.

Though the conflict between Atkinson and Hurt simmered below the surface for several years, in 1899 the feud boiled over into a two-year campaign of corporate warfare—waged in the press, in boardrooms, in courthouses, and, at times, in the streets—known as the "Second Battle of Atlanta."[63] By 1898 Atkinson's interests held near-monopoly control over electric power generation in Atlanta. GELC enjoyed an exclusive lighting contract with the city and provided all of

Atlanta Railway's (Atlanta Traction's name after an 1895 merger) and half of Consolidated's power requirements. Yet Hurt had plans to usurp his rival from Boston. In November 1898, after the beginning of a franchise fight between Atlanta Railway and Consolidated, a group of Baltimore investors with connections to Hurt began secretly acquiring interest in Atkinson's streetcar line. In spring 1899 the Baltimore syndicate had acquired enough equity to wrest control of Atlanta Railway, which it subsequently combined with Hurt's Consolidated to form the Atlanta Railway and Power Company (ARPC). ARPC boasted a huge initial capitalization of $3 million and now faced competition from only one other streetcar line.[64]

Hurt had his eye on more than just a streetcar monopoly, though. As his new company's name indicated, Hurt intended to completely overtake Atkinson by producing electricity for the entire city at a potent new generating plant. First announced in 1899, the construction of ARPC's power station at Butler Street began in early 1900. By the standards of the time, the plant was massive. At over 12,000 square feet, the building contained five generators—three powered streetcars, two serviced lights—capable of aggregating some 6,700 kilowatts (9,000 horsepower).

Atlanta Railway and Power was not simply an energy producer; just as critically it was a voracious consumer of natural resources. ARPC's Butler Street station fed on coal shipped by rail primarily from the mountains of East Tennessee as the fuel for electric power production. In the Brushy Mountain, Jellico, Coal Creek, and Poplar Creek mines, laborers dug chunks of bituminous coal out of the earth and loaded them into railcars destined for Atlanta. On the tracks of the East Tennessee, Western and Atlantic, Georgia Pacific, and Cincinnati Southern Railroads, countless tons of Appalachian coal flowed into the city each year. The Butler Street plant stood at downtown's southeastern edge adjacent to the tracks of the Georgia Railroad, which annually deposited some 30,000 tons of Appalachian bituminous to the plant's five storage bins. ARPC's power station was also quite thirsty. Each of the 1,000-ton coal bins routed pulverized bituminous into one of the five generators, which for cooling purposes guzzled at least 12 million gallons of Blue Ridge water per day, more than the entire municipal waterworks' daily usage.[65] With the largest power plant Dixie had ever seen, Hurt's utility could both drive the entire streetcar network and fuel all electric lights and appliances in the city. He aimed to do just that with a bid for an exclusive city lighting franchise and with plans to completely buy out GELC.[66]

Though now on the defensive in the battle for dominance over Atlanta, Atkinson weakened Hurt's stranglehold over the city's streetcar market—aided once again by city government action—by combining forces with ARPC's sole remaining competitor, the Collins Park and Belt Railroad Company. Changing the

Figure 1.3 Georgia Railway and Electric Company Streetcar Map, 1902. Credit: University of Texas Libraries, The University of Texas at Austin.

name to the Atlanta Rapid Transit Company in the spring of 1900, Atkinson and his new partners applied for franchises to construct tracks on some fifty Atlanta streets. Though some of its planned routes were still under consideration until well into 1901, many of Rapid Transit's proposed lines won instant approval—doubtlessly in part on the strength of Atkinson's offer to donate $50,000 to the city to help fund a new viaduct on heavily trafficked Whitehall Street. Installation of new lines, some directly beside those of ARPC, began immediately. An incensed Hurt took Atkinson to court and filed injunctions against Rapid Transit's construction program. In court and in the press Atkinson and Hurt hurled insults at one another; one affront from a Hurt associate reportedly provoked Atkinson into a mildly violent street scuffle.[67]

Despite the escalating drama, the affair ended with a handshake and a large buyout. Tiring of the destructive competition between the two camps, Samuel Inman brokered a settlement that concluded the decadelong rivalry. By September 1901 Inman prevailed upon Hurt to sell his properties to Atkinson for $1.14 million. Following several months of political wrangling between the Atkinson forces and the city council over annual tax rates, streetcar fares, and payments

to the city for infrastructure improvements, a Consolidating Ordinance of 1902 formally permitted Atkinson to combine his three companies—GELC, ARPC, and the Atlanta Rapid Transit Company—into a new firm, the Georgia Railway and Electric Company (GREC).[68]

With the 1902 consolidation ordinance and a utility initially capitalized at $14.65 million, the former cowboy now enjoyed legally sanctioned virtual monopoly control over the New South's largest urban power market. Both Atkinson's business and Atlanta only continued to grow thereafter. In 1903 the city's population approached 100,000 and the metropolitan area grew to over 125,000. That same year GREC acquired the Atlanta Steam Company and the Atlanta Gas Light Company so that, along with electric light, traction, and power, it could provide the swelling city with heat. Perhaps as importantly, GREC stretched the boundaries of the growing metropolis by extending its streetcar lines into the surrounding towns of College Park, Decatur, East Point, and Hapeville. Also in 1903, even further expanding the city's reach into its hinterland, GREC established a 20-mile electric interurban railway that linked Atlanta to the town of Marietta; in subsequent years, it built interurbans to the towns of Stone Mountain and Fairburn as well. With these properties combined, GREC could boast over $24 million in total assets. Although the company averaged an annual return on investment of only 5 to 7 percent, GREC's increasingly diverse holdings and large capital investments helped it to realize over $1 million in annual profits as early as 1906.[69] The Georgia Railway and Electric Company had joined the ranks of American big business.

* * *

Beginning in the late 1870s Atlantans were drawn to electricity. In subsequent years people witnessed the arc light's brilliance in expositions and, with capital, technology, and engineering expertise flowing in from northeastern centers, business leaders attempted to leverage this new source of light as a symbol of, and an instrument that would help fashion, the New South. Although the first attempts at establishing a permanent lighting system met with little success, both the arc and incandescent lights had solidified their places in the urban landscape by the late 1880s. Electric traction soon followed, demonstrating electricity's broader potential and the profits to be gained from it. When the expansion and consolidation of these new enterprises became possible, rivalries for control emerged. Corporate battle, both sneak attacks and frontal assaults, bloodied all parties, but concluded at the twentieth century's outset with an apparently clear victor.

The initial phase of electrification in Atlanta hewed closely to larger national patterns. Atlanta, though, was not unique in the South. New South cities'

early experiences with electricity also mirrored those in much of the rest of the United States, even if the scale of electrification in the broader South could not yet match national averages: While nearly one-third of Americans lived in the former Confederacy in 1902, those states contained fewer than 10 percent of the nation's central power plants and produced just one-third as much electric energy as the midwestern states and one-seventh as much New England and the mid-Atlantic.[70] Nevertheless, much like cities in the Northeast and upper Midwest, cities in Alabama, the Carolinas, Tennessee, Virginia, and elsewhere began adopting electric lights shortly after Edison's 1882 Pearl Street demonstration.[71] In terms of electric traction, the South acted as the tip of the spear. Although hampered by technical problems, Charles Van Depoele's innovations allowed Montgomery to claim the place as America's first city with an all-electric streetcar system in 1886. Frank Sprague's success in Richmond in 1888, followed by the speedy adoption of trolley lines in Atlanta, Asheville, and Nashville in 1889, and Charlotte and Columbia soon after, cemented the New South as the electric streetcar's original home.[72]

Corporate acquisitions, mergers, and rivalries for electrical market control featured in many other southern cities as well. In Columbia from 1891 to 1911 competition gave way to consolidation as Edward Robertson's Columbia Railway, Gas, and Electric Company absorbed several streetcar and lighting companies, becoming the de facto monopoly mass transportation provider for South Carolina's capital.[73] In turn-of-the-century Charlotte tobacco and textile tycoon James B. Duke acquired the Catawba Power Company and formed the Southern Power Company (forerunner of Duke Energy) by 1904. Subsequently he took over Charlotte's leading streetcar company, Four Cs, despite bitter opposition.[74] Duke soon controlled an electrical empire that provided power for lights, streetcars, and a suite of other applications (most notably textile mills) in the Piedmont sections of both North and South Carolina. Nashville underwent much the same process. In February 1889 City Electric Railway Company, using the Thomson-Houston system, became Nashville's first firm to gain a municipal franchise for electric streetcar service, followed by United Electric Railway, which consolidated and electrified six dummy and mule lines using the Sprague system in 1890. The Nashville Railway acquired both City Electric and United Electric by 1894. Under local businessman J. P. W. Brown, all streetcar lines in the city were merged into the Nashville Railway in 1899. Finally, Brown brought all electric lighting and traction concerns together in the Nashville Electric Railway and Light Company in 1903.[75] Neither cutting-edge electrical developments nor competitive big business was a stranger to the New South.

Yet what operated as a money-making machine for men like James B. Duke, J. P. W. Brown, and Henry M. Atkinson and as a tool to forge a New South for

boosters served other functions for electricity's consumers. In little more than a decade a technological novelty had become a thoroughly interwoven strand in the fabric of daily life: the steam-driven and gas-lit city of the mid-nineteenth century had by the dawn of the twentieth century become an electric metropolis. While residential service remained out of reach for nearly all ordinary people until after the First World War, constant interactions with electric power in public brought changes in everyday living. Electricity was more than just a question of business and was no unseen force. Despite the seeming monopolistic control of men like Atkinson, Duke, and Brown, competition—from rival power companies, antimonopoly activists, and the public sector—remained part of the electrical landscape for decades to come. It was an abundantly visible arena in which people—rich and poor, black and white—negotiated the core issues of the New South agenda.