

Electrifying the Piedmont Carolinas

The Duke Power Company,
1904–1997

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This book is dedicated to the many thousands of Duke Power employees, both blue collar and white collar, throughout most of the Twentieth Century. Only a small fraction of their names are mentioned in this history, but all have helped to make the Piedmont Carolinas a better place to live and work.

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PREFACE

The Duke Power Company's distinctive and proud history, which spans most of the Twentieth century, took a radical turn in June, 1997, when the company merged with one of the nation's largest natural gas companies, PanEnergy of Houston, Texas. While Duke Power continued to be a vital part of the new company, it suddenly became merely a subsidiary—albeit the largest one—of Duke Energy Corporation, as the nationally enlarged enterprise was named.

Beginning with one hydroelectric plant on the Catawba River in 1904, the power company was known first as the Southern Power Company and became the Duke Power Company in 1924. Three men played leading roles in its creation: 1) Dr. W. Gill Wylie, a native South Carolinian who became a distinguished physician in New York, saw great potential in the Catawba's undeveloped water-power sites and also had a most creative idea for linking together a series of hydroelectric plants on the river; 2) William States Lee I, another native South Carolinian and a brilliant engineer educated at the South Carolina Military Academy (later The Citadel), was recruited by Wylie and enthusiastically embraced the idea of linking together multiple generating plants with high-voltage transmission links—if the necessary capital (and lots of it) could be found; and 3) James Buchanan Duke, a native Tar Heel who had made his fortune in tobacco and textiles, saw hydroelectricity as the best means for achieving the industrialization that he hoped could begin to transform the impoverished, overwhelmingly rural and agricultural Piedmont region of the Carolinas. When Wylie and Lee convinced James B. Duke to join with them in 1905, the power company was on its way.

Within a generation, that is prior to J. B. Duke's death in 1925, the company had achieved distinction in several respects. First, most of the early hydroelectric generating plants were built to serve a single city or major factory. On the contrary, the Wylie-Lee-Duke team envisioned from the first an interconnected system of plants and the nation's first comprehensive development of an entire river and its valley. This meant not only a more reliable type of electric service but also a more efficient and economical use of hydro power.

Second, because large amounts of capital were required to build electric utilities, the great majority of those owned by investors ended up under the control of holding companies formed by investment banks and the manufacturers (General Electric and Westinghouse, for example) of expensive turbines and generators. These holding companies, with headquarters in New York or Boston or Chicago, dominated the industry by the 1920s. But the Duke Power Company was a significant exception, for James B. Duke, and to a lesser extent his brother Benjamin N. Duke and his family, supplied most of the capital to launch and sustain the company. Its autonomy meant, among other things, that it was more deeply rooted in its service area—and especially in Charlotte—than was true of most electric utilities.

Third, in 1924 Duke Power, whose engineers had from the first designed the company's plants and dams, began to construct them as well. This was one reason why the company's coal-fired steam plants, which gradually overtook hydro plants in importance during the 1930s and 1940s, long held the national record for fuel efficiency. Moreover, the unique do-it-yourself construction policy carried over into the nuclear era and resulted in significant savings and efficiencies. These, in turn, meant rates to consumers that historically ran about 20 percent lower than national averages.

Fourth, long before such tax-supported, multi-purpose projects as the New Deal's Tennessee Valley Authority, Duke Power's dams and reservoirs, especially but not exclusively on the Catawba, had secondary but significant roles relating to flood control, soil and forest conservation, and recreation. Nature was not generous with lakes in the Piedmont Carolinas, but Duke Power ended up providing eleven lakes on the Catawba alone, and they covered over 70,700 acres.

Fifth and finally, Duke Power became a national leader in its field by pioneering with numerous technologies (such as the use of the nation's first double-circuit 100-kilovolt transmission line). And, as mentioned, Duke's generating plants won recognition over many years as the most efficient in the nation.

The purpose of this book, therefore, is to trace in some detail the evolution—including various trials and tribulations—of a distinctive electric utility through most of the century. The book's thesis is that Duke Power, while by no means the only factor, has been a major player in the economic transformation that has occurred in the Piedmont Carolinas since 1900.

By the 1990s, the Piedmont Carolinas, which had once been a glaringly poor economic backwater, had become something quite different. Many, many problems remained, of course, but few would seriously argue that the

problems engendered by poverty and backwardness are to be preferred to those that accompany economic growth and prosperity.

Money magazine in 1994 named North Carolina's Research Triangle the Number 1 place to live in the United States. (Durham, Chapel Hill, and most of the Research Triangle Park itself are served by the Duke Power Company; Raleigh and a small portion of the Park are served by Carolina Power & Light Company). *Entrepreneur Magazine* in 1997 named the Triad (Winston-Salem, Greensboro, and Burlington) the Number 1 best large city in the Southeast for small business (and number 4 in the nation). And the same magazine selected the Charlotte/Gastonia/Rock Hill area as the Number 2 best city for small business in the Southeast. Top or high rankings for all of these Piedmont cities may also be found in other such business-related publications as *Site Selection*, *Financial World*, and *Inc.*

The economic boom in Duke Power's North Carolina service area continued down the Interstate 85 corridor into South Carolina. There Greenville, Spartanburg, and Anderson could boast high rankings of their own, particularly in the matter of foreign investment. In fact, Greenville and Spartanburg Counties were proud to have the highest per capita foreign investment in the United States.

While the bright economic picture of the Piedmont Carolinas at the close of the Twentieth century resulted from a wide variety of factors—an able and dependable workforce, favorable business climate, excellent transport facilities, and a relatively benign natural climate (thanks in part to air conditioning)—the reliable and comparatively cheap electricity provided by the Duke Power Company has clearly been an important element in the region's economic advancement throughout the century.



The way in which I came to write this book is ironic. Putting the finishing touches on my manuscript history of the Duke Endowment in the spring of 1997, I believed that my involvement with Duke-related matters had come to an end—certainly for a while. Consequently, I made a point of stressing in the preface of *Lasting Legacy to the Carolinas: The Duke Endowment, 1924–1994* (Duke University Press, 1998) that the volume completed what I regarded as a trilogy.

The last two chapters of *The Dukes of Durham, 1865–1929* (Duke University Press, 1975) dealt, respectively, with J. B. Duke's establishment of the Duke Endowment in December, 1924, and the beginning of Duke University later in the same month. Accordingly, *The Launching of Duke University, 1924–1949* (Duke University Press, 1993) may be viewed as a sequel to

The Dukes of Durham, with the focus shifting from the family in the latter volume to the new university's first quarter-century in the former one. Then the history of the Endowment continued a story that was barely begun in *The Dukes of Durham*. In a way, therefore, the three books constituted a trilogy, although each could be read independently and each had a different focus and purpose.

This notion of a completed sequence—a neat trio of interrelated books—got somewhat shaken up by an unexpected encounter in April, 1997. William Grigg, a lawyer and then the chief executive officer of Duke Power, invited me to breakfast in Durham and stated that he wished to commission me to write a history of Duke Power. He went on to explain that since not only the name but also the nature and scope of Duke Power were about to undergo a radical change when the merger with PanEnergy became final, he and his associates had decided they wanted to have written the history of the original company.

At first I demurred, explaining that while I had long believed such a history was needed—and had tried in vain to interest several graduate students in the topic over the years—I did not think I was the right person to undertake it. That was so, I thought, principally because I am not a historian of business or technology. In what I thought might clinch my argument, I confessed that I did not totally understand the phenomenon of electricity. Grigg laughingly replied, “Well, I don’t either.”

That took me by surprise at first, but I quickly surmised that if the head of the company could “wing it” concerning electricity, perhaps I could also. Moreover, Grigg explained that he wanted a book for the general reader rather than for engineers or specialists in economic and business history. He added that he and his associates would be happy to make available all records and check me for accuracy concerning factual matters. All decisions “with respect to the work,” however, and “any and all interpretations with respect to events” were to “rest exclusively” with me. (Letter from Wm. Grigg, April 28, 1997).

I agreed to undertake it—and I have been surprised, frankly, by how much I enjoyed the project. In *The Dukes of Durham* (chapter 9) I did deal, in a fairly general way, with the beginning of the power company down to J. B. Duke’s death. Then in the history of the Duke Endowment I had again to deal with Duke Power in the 1970s, for it got into some serious financial and other difficulties around 1974–1975. Because Duke Power and the Duke Endowment were so thoroughly entangled with each other, as J. B. Duke had carefully planned for them to be, writing about one necessitated writing about the other. So I was not a total stranger to the history of Duke Power.

True to his word, Bill Grigg has been eminently helpful and supportive. He not only lent me his complete set of the company's *Annual Reports*, but he also arranged an oral history conference in Charlotte in December, 1997—the “Old Rats Meeting” he called it—where an assembled group of some eight or nine top Duke Power executives, mostly retired, reminisced quite colorfully and helpfully for several hours.

Other Duke Power people have also been stalwart supports. Dennis Lawson, the company's archivist, has gone far beyond the call of duty to help; not only did he make several trips from Charlotte to bring portions of the company's archives to Duke University's Perkins Library so that I might use them there, but he has also responded generously and quickly to repeated telephoned requests and inquiries. Likewise, Joe Maher, a senior consultant in public affairs, has been most generous with his help. In addition to procuring for me copies of the histories of several Southeastern utilities, he has read my chapters in draft form with a sharp eye for factual accuracy—and used his copy of the Duke Power *Data Manual* to good effect. Doug Booth, a retired Duke Power executive, also read and made helpful suggestions about several chapters.

At Duke University I am once again grateful to Linda McCurdy and her hospitable, helpful staff in the Special Collections department of Perkins Library for facilitating my research, and my colleague in History at Duke, Bill Holley, has shown a continuing and encouraging interest in the project.

The first two chapters of this book have appeared, in somewhat different form, as a two-part article in the *North Carolina Historical Review*, and I am grateful to its publishers for permission to reprint them.

Andrea Long, assisted at times by Deborah Carver-Thien, did all the word-processing with good cheer; both women even had the grace to express interest in the content, and I heartily thank them for their indispensable assistance.

Anne Oller Durden, my wife, has patiently put up with a lot of conversation (or mini-lectures?) about Duke Power, and I once again gratefully anticipate her help with the tiresome but important chore of making an index.

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