

As We See It

“At the beginning stages of the electrical revolution, from the 1880s to the 1910s, sharp competition among technological systems offered several routes to the future.”

The Electric City
by Harold L. Platt

Whether it was people power, animal power, wind power, waterpower, or steam power, businesses and households have always used energy. That energy, for centuries, was produced and consumed on site. For example, flourmills were powered by water wheels and steam engines provided energy for such diverse needs as threshing machines, factories, and steamboats.

The use of *self-contained* power sources began to change with the introduction of electricity. But even this technology was initially provided by privately-owned systems. According to Harold L. Platt’s enlightening book, *The Electric City* (about Chicago’s growth in the early days of electricity), the self-contained plant was an attractive alternative for many businesses such as factories, hotels, and office buildings that already had steam boilers and engines which could be used to power a dynamo to generate electricity. Moreover, as related in *The Electric City*, wealthy individuals installed their own systems. “In November 1882, John Doane [a wealthy tea merchant] celebrated his silver wedding anniversary by wiring his home with 250 lights for a gala party.” The source of the electricity was a “. . .self-contained electrical plant and steam engine in the stable behind his mansion.”

By the time of the 1893 World’s Fair, which focused on electrical technology, Chicago was a hodgepodge of small electricity generating systems—some selling electricity to others but most were self contained. According to Platt, “Within municipal borders alone, the city inspector’s report of 1892 listed 18 central stations and 498 self-contained systems. . .”

In 1892 Chicago Edison hired a visionary chief executive officer named Samuel Insull. Insull was a strong believer that central stations would eventually become much more efficient than self-contained systems. His theory was correct but it took years of innovation—which improved efficiency—and shrewd marketing to convince people to abandon their self-contained systems.

Insull’s primary challenge was to expand the use of electricity beyond lighting to other tasks that would consume electricity when demand for lighting was low and thereby utilize the plant’s capacity more fully and evenly. To accomplish this, he developed an innovative marketing program and a variable rate structure. He signed up street railway companies at low rates because they had two peak use times which were not peak times elsewhere. His door-to-door salesmen offered to wire houses at cost. He was able to convince owners of office buildings that it was cheaper to power their elevators with electricity purchased from a central station than to invest in their own electricity generation which was needed only sporadically. With these and many other marketing successes, Insull’s vision for the central station came to fruition. As more customers were attracted to central station service, capacity was increased which increased efficiency and permitted lower rates, which in turn led to increased electricity sales, still larger and more efficient plants, and still lower rates.

By the 1920s, electric utilities had become growth stocks and were among the glamour stocks of the 1920s bull market. Just as firms such as General Electric and Westinghouse prospered in the 1920s by manufacturing a wide variety of appliances, as well as equipment for generating and distributing power (infrastructure), today’s telecommunications companies and their suppliers—by providing the infrastructure—are benefiting from the Internet.

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