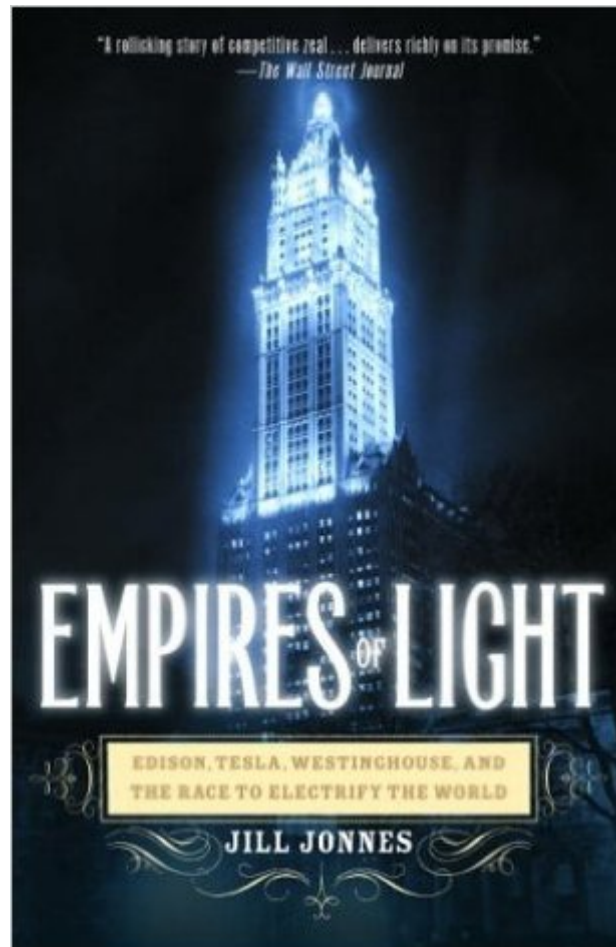


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Empires Of Light: Edison, Tesla, Westinghouse, And The Race To Electrify The World



Synopsis

In the final decades of the nineteenth century, three brilliant and visionary titans of America's Gilded Age—Thomas Edison, Nikola Tesla, and George Westinghouse—battled bitterly as each vied to create a vast and powerful electrical empire. In *Empires of Light*, historian Jill Jonnes portrays this extraordinary trio and their riveting and ruthless world of cutting-edge science, invention, intrigue, money, death, and hard-eyed Wall Street millionaires. At the heart of the story are Thomas Alva Edison, the nation's most famous and folksy inventor, creator of the incandescent light bulb and mastermind of the world's first direct current electrical light networks; the Serbian wizard of invention Nikola Tesla, elegant, highly eccentric, a dreamer who revolutionized the generation and delivery of electricity; and the charismatic George Westinghouse, Pittsburgh inventor and tough corporate entrepreneur, an industrial idealist who in the era of gaslight imagined a world powered by cheap and plentiful electricity and worked heart and soul to create it. Edison struggled to introduce his radical new direct current (DC) technology into the hurly-burly of New York City as Tesla and Westinghouse challenged his dominance with their alternating current (AC), thus setting the stage for one of the eeriest feuds in American corporate history, the War of the Electric Currents. The battlegrounds: Wall Street, the 1893 Chicago World's Fair, Niagara Falls, and, finally, the death chamber—Jonnes takes us on the tense walk down a prison hallway and into the sunlit room where William Kemmler, convicted ax murderer, became the first man to die in the electric chair. *Empires of Light* is the gripping history of electricity, the mysterious fluid, and how the fateful collision of Edison, Tesla, and Westinghouse left the world utterly transformed. From the Hardcover edition.

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Customer Reviews

PAY NO ATTENTION TO THE POOR REVIEW FROM johnjones2! I will base my review of this book based on his ridiculous 2 star review. I have been an Electrical Engineer since the mid-1980s. I enjoyed this book tremendously! This is a book that deals with the history of the THREE PRIMARY men who began the war of AC vs. DC electric currents. They are Edison, Westinghouse, and Tesla. Apparently reviewer johnjones2 does not know his history. Charles Proteus Steinmetz never worked for Westinghouse; he worked for GE (that's common knowledge). He didn't join the GE staff until 1893, which was the year of the Colombian Exposition in Chicago. The war of electric currents was well under way before Steinmetz ever joined the GE staff. As you'll learn in this book (and others), the Colombian Exposition was a major battle ground for the war of electric currents. Steinmetz was an outstanding electrical engineer who later worked (for GE) to help optimize the AC motor by solving hysteresis issues. It was TESLA'S (who began working for Westinghouse in 1888 after a short stint with Edison), NOT Steinmetz's, ALL-IMPORTANT PATENTS that were needed to get the AC business going. That's the way business works! This book is about how the AC / DC war began and how AC proved to be the better technology (that's why our homes are now wired for AC). It's not about how AC systems were later perfected. Am I bothered that the author didn't mention Steinmetz - heck no. There are many other engineers who have worked on AC systems to make them better and more efficient, did I expect all of them to be mentioned in this book as well - again, heck no! For reviewer johnjones2 to say that the author had ulterior motives for leaving out Steinmetz is completely hilarious!

Jonnes gives us a look at the story of electrification from Edison's discovery of the incandescent light to completion of the Niagara Falls hydroelectric generating station (using Westinghouse equipment based on Tesla's AC patents). She begins with an overview of what was known about electricity-the relationship between electricity and magnetism, discovered by Michael Faraday, and the development of electromagnets by Joseph Henry. Development of practical generators in the 1870s, was soon followed by the first arc lights, but they were cumbersome and too bright for home use. Edison took up the challenge to develop an electric light suitable for home use in 1878, completed in 1879, and installed in New York City in 1882. Edison firmly believed in his DC power system, but it was poorly suited to transmitting power long distances. Once AC transformers were

invented, in 1885, George Westinghouse realized that AC was the more practical system. He licensed Tesla's patents for AC generator and motor and began installing systems. A major battle ensued with Edison promoting DC and charging that AC was unsafe. That resulted in the adoption of the AC powered electric chair as a means of execution. Edison General Electric and Westinghouse found themselves in direct competition many times. Edison was a darling of the media. His side of the story has been told many times. Westinghouse was personable, but far less open to the press. No biographies have appeared since 1926. Tesla was a frequent publisher, gave numerous demonstrations especially at technical meetings. His eccentric nature leads to some treatments as a man of mystery. The detailed treatment of the Niagara Power project is much appreciated. This was the first major hydroelectric project in the US.

What does one do when they are on a red-eye flight for six hours and can't sleep? They read! The target of my insomnia for this trip was *Empires Of Light - Edison, Tesla, Westinghouse, And The Race To Electrify The World* by Jill Jonnes. If this is a part of history you haven't ever been exposed to, it's a fascinating read...Jonnes goes back to the mid-to-late 1800's and covers the story of how Thomas Edison, Nikola Tesla, and George Westinghouse transformed society with the power of electricity. Back then, the predominate form of lighting was the gaslight... dirty, smoky, and not very efficient. Edison, Tesla, and Westinghouse all had ideas about electricity and how it might be packaged in a form that could illuminate the night and run motors. Edison was a proponent of Direct Current, or DC, power, while Westinghouse was pushing the Alternating Current, or AC, power type. Since we obviously now have an AC power grid worldwide, you can tell who won the war over the long term. But in the beginning, things were far from settled. DC is a much safer power source, but it can not travel very far. As a result, power stations had to be built all over a city to provide the necessary electricity to that area. On the other hand, AC can travel great distances and is much more efficient, but it can be much more dangerous and deadly. It was this safety issue that led to some of the more "memorable" events of the time, like Edison pushing AC power for an electric chair to kill someone, so that AC would be associated in the public mind as dangerous. While Edison and Westinghouse were fighting things out on the lighting side, Tesla was a complete eccentric who wanted to invent the first AC powered motor (when it was thought that it couldn't be done).

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