James Zartman

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Current Wars paper

**Current Wars AC vs. DC**

We all love the fact that we have electricity at the flip of a switch. There is predominately two different was that we power things, either Alternating Current or Direct Current. There has always been a growing debate over the year’s weather Direct Current (DC) is better than Alternating Current (AC). There was a series of events that happened when electricity was first coming about between Thomas Edison and Nikola Tesla on which current was better.

In the early years of electricity Thomas Edison developed direct current, which is a current that runs in a continually in one direction. For example, a battery or a fuel cell are things that use direct current. At the time, direct current was the standard used in the United States. The biggest issue with direct current at the time of induction was that it was not easily converted to higher or lower voltages. Nikola Tesla believed that alternating current was the answer to this issue. Instead of current that runs in a continuous direction, alternating current changes direction several times per second (60 times per second in the U.S). Alternating current can easily be converted to higher or lower voltages by using a transformer (The war of the Currents).

Edison, not liking this “new” current and not wanting to give up his royalties from his patents on direct current, started a propaganda campaign to spread false claims about how harmful alternating current was. According to PBS Edison, “had a professor named Harold Brown who went around talking to audiences... and electrocuting dogs and old horses right on stage, to show how dangerous alternating current was” (Tesla). Professor Brown had also managed to obtain an alternating current generator to electrocute a man to death as a death sentence to show everyone just how much of an “awful spectacle, far worse than hanging” (Tesla). Even with all the bad publicity that alternating current was getting there was big positive things to come of alternating current.

General Electric using Thomas Edison’s direct current got outbid by George Westinghouse using Tesla’s alternating current to electrify the Chicago World Fair in 1893. In that same year the Niagara Falls awarded Westinghouse the contract to use alternating current to generate power from the falls to then supply power to the city of Buffalo, NY (The war of the Currents). Soon after General Electric had switched to using Alternating Current, which is still widely used to this day. However, there are many electronics in use today that are run off direct current. Such as, electric cars, computers, LED’s, and solar cells. Methods have been developed to be able to convert direct current into higher or lower voltages. According to Energy.gov, “Since direct current is more stable, companies are finding ways of using high voltage direct current (HVDC) to transport electricity long distances with less electricity loss” (The war of the Currents).

Ultimately the knowledge of Thomas Edison and Nikola Tesla got us to where we are today. It also brought us the war of the currents, but today in finding that direct current is more stable than alternating current we could possibly see a time where alternating current and direct current are used side by side.

**Works Cited**

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