
The Creator Of The Electric Age Nikola Tesla

If we're to ask most anyone that's taken a course on history or the sciences they will likely know about Edison, Einstein, and or Newton, but what about the obscure story of the man that sought to pioneer wireless energy through the use of our ionosphere?

It was July 10th, 1856 that Nikolai Tesla was born. He was born in the Austrian Empire where he studied engineering and physics, never actually receiving his degree. Through his studies however, he gained the hands-on experience needed to work in the telephony and new electrical power industry. Later becoming very well known for designing AC generators, and other helpful inventions along his path, "he also developed a device that, according to some, was a telephone repeater or amplifier, but according to others could have been the first loudspeaker." 2

In 1884 Tesla emigrated to America, where he quickly became a citizen. For a small amount of time he worked for his soon to be competitor, Edison, at Edison Machine Works in New York City. Edison was creating some of the first mass production warehouses at the time, and pioneering electrical energy. Soon enough Tesla was able to make it on his own with the help of a few financial and marketing partners. With this new support Tesla was able to set up a few companies and labs to help develop new electrical and mechanical devices. With these new labs Tesla was able to make his alternating current induction motor, or AC for short. This would earn him a good amount of money, and allow for him to take on much more ambitious projects.

Tesla and Edison were natural nemesis. Edison promoted the use of Direct Current (DC) while Tesla promoted the use of Alternating Current (AC). There's a lot of false information out there regarding the things Edison did to belittle his opponent, for example a lot of people believe Edison electrocuted an innocent elephant to show how dangerous Tesla's technology was. In actuality Edison was not documented to be at the location this was happening at the time, and the elephant in question had actually harmed quite a few people and was going to be put down. Will we ever know the truth behind this story? It's hard to tell, but it sounds a little fallacious. They did however compete against each other heavily in the market. Tesla was, in the beginning, developing technologies that he could patent and sell. He created electrical discharge tubes, early X-ray imaging technology, generators and oscillators, and even the first ever wirelessly controlled boat. His inventions would earn him fame and glory in the world of science and celebrities, often going to celebrities parties to show off his inventions. He was also quite revered for his showmanship during his lectures. Tesla was doing quite well financially because of his inventions, and was often said to be one of the most fashionable men around during his time. It wasn't until later in his life that Tesla's ambitious mindset would get him in to financial trouble.

In 1893 Tesla announced that he may have found a way to wirelessly communicate with his inventions. What he meant by communicate wasn't referring to just transmitting messages, but large amounts of energy. This is where his most ambitious project begins to come to life. Tesla named this project The Wardenclyffe Tower, a massive tower that stretched 187 feet in to the sky. Tesla had moved to Colorado to test his new inventions and built this massive tower to instill those inventions. The idea was that he would create a conductive path all the way to the

top of the Earth's ionosphere layer. He then planned to power the ionosphere with millions of volts of electricity, using the entire sky as one plate of a capacitor, and the ground as the other plate. The plasma in the sky would act as a sort of electrical river that carried the energy, with the Earth being a return conductor. His idea was to create a conductive highway so to say, that energy could be transferred through.

Similar to the way a wirelessly controlled car works, but on a much larger scale and instead of using radio waves his idea used the ionospheric conductive highway. This is important because many of his skeptics at the time scoffed at him in regard to the Inverse Square Falloff Law. Inverse Square Law is a law that states that the intensity of an effect such as illumination or gravitational force changes in inverse proportion to the square of the distance from the source, in other words when you widen the distance of two objects by twice the size, the effect will diminish to one quarter of its original strength. The thing is, because Tesla wasn't using radio waves the Inverse Square Law didn't apply to his technology. Nonetheless it did not stop critics from mocking him and belittling his idea based on this, which made it harder for him to find funding and got him laughed at by quite a few in the scientific community. The problem wasn't just that it was an extremely ambitious project that sounded and still sounds somewhat impossible, but also that there wasn't much money to be made off this invention because in the end the energy would be more challenging to monetize than creating power generating stations that link directly to the customer via wires.

Towards the end of Tesla's work on the Wardenclyffe tower, with the diminishing of his funds and loss of financial backers, Tesla, as far as the public knows never completed the project.² He did however state that he had figured out a way to successfully connect to the ionosphere, but he never made his claims public. He changed his mind on making the technology public claiming that the technology could be a major weapons possibility, able to "render uninhabitable" any location on the planet. Stating "It would be like giving a knife to an infant."

After abandoning his Wardenclyffe project Tesla would create a few more inventions from 1910 to the 1920's, some more successful than others. Towards the end of Tesla's life, having spent almost all his money, he fell in to very hard financial times. Hopping from hotel to hotel, skipping out on payments, and eventually dying in New York City in 1943.

Whether or not Tesla figured it out will always be up for speculation, he very well could have been lying to himself in embarrassment of not figuring out what he had been working on for so long. While we may never know if his Wardenclyffe wireless energy idea worked, one thing is very clear, Tesla's inventions and incredible ingenuity leapt us years ahead of where we would have been in the world of electricity and energy.