Nikola Tesla: (Not Quite) Celebrated Visionary

Forefront of Electricity, Nikola Tesla

There have been many golden ages throughout history, times of enlightenment and unbound creativity when the human race advanced forward by leaps and bounds. Times when we dared the impossible and soared beyond our wildest dreams. Times such as the Renaissance, The Industrial Age, the Space Age and the Electric Age. The Electric Age was marked by the transition from candles and hand cranks to lightbulbs and motors. It was also during this time when the infamous “War of the Currents” was waged and we decided whether alternating current or direct current would be welcomed to power our homes. (Fortunately, in 1973 we came to our senses and decided AC/DC was the way to go, but that’s another story.) While most people are familiar with names like Edison and Westinghouse, there’s one that’s been largely forgotten until recently: Tesla. No, I’m not I’m not talking about the car, but the man for whom it was named.

Nikola Tesla was a Serbian immigrant who came to our shores in 1884 and was central to some of the most important technologies we have today. He worked for Edison and sold patents to Westinghouse and was a firm believer in alternating current. Tesla was also responsible for inventing the AC induction motor used in applications all over the world for industrial applications all the way down to that fan that’s keeping you from sticking to the couch. Induction motors were an important advance since they required fewer mechanical parts and could offer better durability and speed control. Hydroelectric power is also credited to Tesla and now powers a portion of the US. Hydroelectric dams such as the one at Niagara powers all of the Northeast and the Hoover Dam in Nevada powers Las Vegas, Los Angeles, and the surrounding areas of California, Nevada and Arizona. Hydroelectricity is also one of the cleanest types of renewable energy out there.

Not only was Tesla at the forefront of electricity, he was envisioning the next set of wireless technologies. Yes, wireless technologies … before the 20th century had even dawned. He created a wirelessly controlled boat, sent messages wirelessly and even built a wireless power transmitter in New York. Known as Wardenclyffe Tower, it was built to be an intercontinental radio transmitter and power

transmitter, but it never became operational due to funding issues. In short, investors at the time couldn't see the promise of free wireless electricity for all. Wardenclyffe Tower was related closely to the Tesla Coil we have today. While you won't see many practical applications for the coil itself outside of an electricity demonstration, it would be the basis for a wireless electrical transmission system. The coil's design is also simple enough that it could be built in your home, and people already have. The wireless boat gave rise to cellular phones in that it proved that not only could information be encoded into radio waves, but that an unlimited number of channels within those waves were accessible. Frequency hopping cellphones employ this idea to great effect. And while Edison may typically get credit for inventing the incandescent lightbulb, it was Tesla who invented the neon lightbulb, a far cheaper alternative that lights most businesses, factories and some homes today.

While researching this article I asked myself the almost hackneyed question, "What if Tesla could see the world today, a mere 70 years after his death?" I figured he'd probably say, "I told you so," but after speaking with Tesla expert Marc Seifer, PhD and author of *Wizard: the Life & Times of Nikola Tesla* and *Transcending the Speed of Light: Quantum Physics and Consciousness*, I'd like to change my answer. Marc writes:

Tesla would be very concerned that we are still running our world on coal, nuclear power and oil. He would compel us to use renewable forms of clean energy such as hydroelectric power, wind, solar and geo-thermal. Tesla wrote about this throughout his entire life with major articles on this topic in the 1930s.

By now you're probably wondering, if he was so great, why is he relatively unknown? Tesla was a great engineer and a visionary, but he wasn't a great businessman. Unfortunately, his employers and rivals usually got the credit for his bits of genius. On the bright side there is a growing movement to remember this remarkable man and what he contributed to the world. Comic artist Matthew Inman, better known as The Oatmeal, helped run a crowdfunded campaign to purchase the old Wardenclyffe Tower and turn it into a Tesla Museum. It was an electrifying success. There will also be a large conference about everything Tesla in Toronto on his birthday. Others in the community are trying to get July 10, Tesla's birthday, marked as a world holiday so we can all recognize and unite behind his world changing visions.

I only have enough room on this page to scratch the surface of everything that Tesla did for the world; I highly recommend you spend a few minutes reading about him at your local library. Oh, and one more thing, he even had a theory that would explain away the Higgs-Boson and provide an alternate explanation for how gravity works. No big deal or anything …