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A Wind Powered World

In this time and era, we need to keep our earth clean, not just for us but also for our children. Burning fossil fuels and using them as one of our main source of energy is one of the biggest confusions that we humans have today. An idea that occurred to me was that we should use neodymium magnets and wind turbines. Although the magnets are limited, we need not to worry since the wind will always be free and unlimited no matter what. Only a very small amount of magnets will be needed. Say that there was 100,000,000 pounds of Neodymium magnets available for use today, we would only need about 10% or less from it. The rest of the magic is really the works of nature, i.e. the wind. All in all, neodymium magnets combined with wind turbines is a more efficient and cleaner way of creating energy than burning fossil fuels, building dams, and using natural gasses.

According to IER (Institute For Energy Research, n.d.), 45% of the energy we make per year is used on industrial use and 41% on residential and commercial uses. Imagine all the fossil fuels that were burnt to create that energy; imagine all the pollution that was caused; and finally imagine using clean, unlimited, and non polluting ways to create that very same energy. This can be made possible through the creative ideas and brilliant thinking of hard working men of this century.

According to an article that talked about America outpacing China and Germany in wind power, “the U.S. actually produces more electricity that is delivered to the grid, which in turn reaches more businesses and homes. And while China's wind industry delivered less than 138 billion kilowatt-hours in 2013, the U.S.'s delivered more than 167 billion” (). Arthur Karpal, 1997.

We can create so much clean energy for those businesses and homes than one could imagine. But that’s not where it should end. There will also be times where the wind turbines wont be moving, since there isn't any wind for the turbines to create energy. Surely that can happen countless times. If those turbines have neodymium magnets in their motors or wings, then even at the times that there is little to no wind, they would still be generating

energy. This could help us in thousands of different ways. More than what one could possibly imagine.

Since the beginning of the information age, or the technological age, as some people may call it, we have been discovering and developing so many new things. From the time Boyle discovered his new law to when wireless charging was developed, this is all part of the 'New era' or the information age. The point I want to make is that even now we have been improvising and moving forward. The world is rapidly changing, in some ways to the better, while in others to the worse. But either way, our world is evolving. We are discovering countless of more discoveries each and every year compared to what we would have in the so called "Golden Age". What I mean is that changes should be made to our technologies. To our wind turbines. Trying different methods will ensure that we keep moving on with the information age.

There are numerous benefits in helping create wind turbines or if possible, farms. When wind farms are created, they help the area/community they are created in by helping create jobs for the locally unemployed. Not just that but those who create them are also rewarded. "On wind energy, we get a tax credit if we build a lot of wind farms," said Buffett at a conference in Omaha in May "(www.DailyFinance.com)".

Another benefit of having wind energy is that it decreases our reliance on imported energy like fossil fuels. This removes a huge burden off the US and in the long run helps our economy. According to a website, the main benefit is that wind electricity generation is now a lot cheaper than it used to be. Windmill energy production costs have decreased by at least 80 percent since the eighties. This makes the market for windmill energy very competitive, not just in the environmental sense, but in the financial sense as well.

(www.bionomicfuel.com)

Probably the best part of having a windmill is that it pumps billions of dollars into our economy every year. In fact in 2012 alone wind energy companies invested around \$25 billion dollars in to wind energy projects. That alone tells us how important it is for us to carry out these projects in our country. Furthermore, Wind turbines are drought-resistant and which is very important in many parts of our country as well as the world. It also employees more than 50,000 across many varieties of development in its projects.

The terms "wind energy" or "wind power" describe the process by which the wind is used to generate mechanical power or electricity. What the wind turbines do is convert the kinetic energy through the wind into mechanical power. This mechanical power can be used for various tasks such as generating it into mechanical power for electricity to power homes, businesses, schools, etc.

Wind turbines are like aircraft propeller blades. They turn when air is provided to them and power an electric generator that supplies an electric current. One can say that a wind turbine is the exact opposite of a fan. Instead of using electricity to make wind, they use wind to make electricity. The wind rotates the blades, which spin a shaft, which connects to a generator and makes electricity. That's as simple as it can get.

There are also many types of windmills. Modern wind turbines fall into two basic groups, the first being the horizontal-axis variety, which are similar to the traditional farm windmills used for pumping water. The other is the vertical-axis design, which is similar to the eggbeater-style Darrieus model, also named after its French inventor. Most large modern wind turbines are horizontal-axis turbines. They are both compatible with neodymium magnets, but according to physics, it would be easier to use a horizontal-axis turbine.

The horizontal axis wind turbines, also known as HAWT for short. They must be pointed to the wind at all times. If not they won't be able to generate enough electricity. A problem that could arise with having that type of turbine is that since it has to be pointed to the wind at all times, how is it going to produce enough electricity for the town or city it is built for. The answer is actually pretty simple. Most windmills are created with a gearbox.

It connects the low-speed shaft to the high-speed shaft and increases the rotational speeds from about 30-60 rotations per minute, to about 1,000-1,800 rpm; this is the rotational speed required by most generators to produce electricity.

Wind turbines or wind energy in general has a great history. From where they originated to where they are now. Man has been using wind energy longer than we may think, though they may have been different in form and shape. Some evidences show that we have been using wind energy for many centuries. The earliest use was when they were used as a power source for sailboats and giant ships. They were used to navigate through the vast oceans for hundred and thousand of miles. That was also a type of energy being used from the wind.

The first ever recorded use of wind energy was in persia. At around 500-900 it was used for pumping water and grinding wheat. But one thing that we can note is that wind energy has actually been used in china for over 2,000 years and therefore making it the birthplace of wind energy. From there, the concept of wind mills and the use of wind energy spread to Europe and the western countries. The earliest European designs have been recorded to be at or around 1270 A.D. That was right after the time period of the crusades. "Windmill." How Products Are Made. 2002. Retrieved January 26, 2015 from Encyclopedia.com:<http://www.encyclopedia.com/doc/1G2-2897100107.html>

Now that we have a clear understanding of what the benefits of wind energy and wind farms are, we shouldn't have a hard time understanding that this is the future of our generation. That this is one of the only ways our world will survive against the war that we have with nature. Where both humans and nature will survive.

Considering that we have over thousands of people working in this field, we should create or add another factor to wind energy. As many things evolve over time so should wind mills. The idea that neodymium magnets or magnetic powered generators power these wind mills will evolve them, bringing this era into a new technological field. At the end both humans and nature will see the effect. Now we may think that this will take a considerable amount of time, effort, and money. But what we must acknowledge is that everything that is helpful to mankind comes with time, money, and effort.

All in all, by using neodymium magnets assisted with wind turbines, we can generate electricity and a whole new world, a newer and brighter world with electricity reaching billions more and, with that, countless benefits to hundreds of governments who

adopt them. And finally, by using this way as a fossil fuel substitute, we will create a much cleaner and healthier environment for our children and the generations to come.

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