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How wind energy may be the next big thing

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In 2008, Rock Port, MO, became the first town in America to be powered 100% by wind energy. This community uses on average 13 million kilowatt hours per year. The four turbines were estimated to produce 16 million kilowatt hours per year. So where exactly does the excess energy go? Missouri Joint Municipal Utilities will purchase the excess energy and use it for other areas<sup>1</sup>.

How likely is it for other communities to catch onto this alternative form of energy? The initial cost of these farms, including manufacturing and installation, is costly but the payoff is extensive. Wind turbines have an estimated 20 year lifespan with minimal maintenance<sup>2</sup>. Electricity from wind farms in the long-run is a very economical alternative to other forms of energy.

The efficiency of these turbines makes them more valuable than other forms of energy. According to the American Wind Energy Association, a wind turbine in the midwestern United States is expected to run 65-90 percent of the time. Turbines aren't expected to run at full capacity all the time and will generate about 30 percent of the theoretical maximum output<sup>3</sup>. But nonetheless, wind energy will always be a more effective renewable energy source compared to nonrenewable energy sources.

Since the 1970s, there have been multiple acts that endorse the use of renewable energy sources. In 1975, President Ford signed the Energy Policy and Conservation Act. This act was meant to help cut the energy demand in the United States and also to encourage programs, research, and projects dealing with alternative fuels<sup>3</sup>. The Renewable Energy and Energy Efficiency Technology Competitiveness Act, signed in 1989, had the purpose of setting goals for the United States with regards to wind, photovoltaic, and solar thermal energy programs. Wind energy had the specific goal of improving the design and developing more reliable and efficient wind turbines in order to increase the cost competitiveness. A year later, an amendment was made to the Public Utility Regulatory Policies Act (PURPA) to remove size limitations placed on the renewable energy facilities in order to receive PURPA benefits<sup>4</sup>.

Tax credits have proven to be a useful incentive, especially in regards to wind energy. The Energy Policy Act of 1992 enacted the renewable electricity production tax credit, a corporate tax credit that gives a credit of 1.5 cents per kilowatt hour of electricity produced through wind power. This amount has increased to 2.2 cents per kilowatt hour<sup>4</sup>. The production tax credit has been a major enticement for wind energy and has helped to form independent wind energy producers. Further, tax credits have helped to support the acceptance of clean energy technologies by reducing total project costs to the consumer and by encouraging the approval of clean energy practices.

While tax credits are one way to entice people to choose this form of energy, most wind energy policies come from the state level due to limited access of federal incentives. Most states do have a wind energy policy in place and offer tax credits and incentives to producers and consumers to help make it more affordable. A total of fourteen states have declared a clean energy fund to help promote clean energy technologies and renewable energy<sup>5</sup>.

However, the wind energy industry is seeking long-term tax policies to provide a consistent and certain market. The renewable electricity standard is a policy that has set hard targets for renewable energy both in the short- and long-term<sup>6</sup>.

While this may all seem like a good thing, there are negatives to having wind farms all over the place. The term “wind farm” is a problem in itself. Depending upon how many turbines there are, the farm could take up quite a bit of space. But there is a bit of space between each turbine, space that could be used for agricultural purposes<sup>7</sup>.

Another negative factor many bring up is that wind turbines are known for killing birds, especially migratory birds. The American Wind Energy Association has taken steps to help solve this problem. One way to combat this problem is to design the turbines differently and place them away from migratory paths and from ridgelines. Other ways include using radars that will shut the turbine down when birds approach, building turbines higher, putting more space in between turbines, and placing them away from areas where raptors are known to hunt<sup>8</sup>.

What I would like for you to do is to petition your senator for wind energy; the benefits greatly exceed the consequences. Besides, don't we want America more energy independent?

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