

Hello everyone! My name is Alexis Hanson.

What is the first thing you think of when you hear me say wind power? Many of you are probably picturing the big wind towers, that's typical. Wind power however is more than just the big towers. Wind power is one of the oldest sources of power, first used for boats, grinding grains, and pumping water. Now wind can still be used to do all those things, and it is but it is also used on larger scale now as well. A report by the DOE's National Renewable Energy Lab said that by 2050 renewables could contribute to 80% of American electricity. Much of that energy being made by wind power.

Now, if you're like me at first, you're skeptical on if wind power is actually the right decision. Allow me to enlighten you on what I have discovered. Wind Power has many advantages, including the obvious ones that we have heard over and over, it's clean, renewable, and is relatively cheap. So, let's expand on those. Clean, wind energy doesn't require us to burn through natural gases and nonrenewable resources that cause greenhouse gasses and pollution. All it takes to create this energy is obviously, wind! The kinetic energy of wind is used to create mechanical power. The generators then convert that power into electricity so that we can all use it!

Renewable, wind is a renewable resource. As much as wind can be a pain sometimes, it won't run out one day. Other ways of energy, such as fossil fuel burning, use resources that CAN someday run out. Imagine if all our energy relied on a nonrenewable resource and then one day it all ran out?

These Fossil fuels help to transition into the advantage of Wind power being relatively cheap. The U.S currently depends on fossil fuels that are imported into our country. Strains on the supply of fossil fuels are likely to increase the cost of these resources and leave the U.S economy exposed to international market (VOL-A-TIL-ITY)**volatility**. With wind power we wouldn't have to rely on these other country's resources for our power because our power would come from our wind! Yes, we would have to pay to set up the towers and energy centers but after their installation the cost to maintain them is next to nothing. Wind energy is one of the lowest priced energy sources available today, costing between 2 and 6 cents per kilowatt-hour. This is also good because the cost of wind energy does not change like the prices of fossil fuels. Wind energy also is enabling U.S. industry

growth. Wind has an annual economic impact of about \$20 billion on the U.S. economy.

Wind energy plants also creates jobs. The U.S wind sector employed more than 100,000 workers in 2016, and a wind turbine technician is one of the fastest growing American jobs of the decade. According to the Wind Vision Report, wind has the potential to support more than 600,000 jobs in manufacturing, installation, maintenance, and supporting services by 2050.

Now, any amazing idea must have a catch, correct? You may think I'm crazy but now I'm going to tell you some disadvantages, but I'm also going to argue them. The first disadvantage is that the set up of wind turbines and plants is outrageously expensive. Now a typical wind turbine cost roughly \$3-4 million to be installed. I know what you're all thinking, that's a LOT of money! BUT! To build a coal-fired power plant costs well over \$2 billion! That's a lot MORE money! We need to remember that after a turbine is built then it is next to nothing to run. Once a coal plant is built then you need to continue to pay to run it and gather coal.

I'm going to combine the next few because I feel like they can be. A few disadvantages are view interruptions, noise, and wildlife dangers. First, worrying about the view. I'm sure that some people don't want to look out their window and see windmills all over, but maybe some people do. Why do I say that? Because I'd rather see a windmill than having so much smog that I can't see anything. Seeing the windmills is a constant reminder that we are saving our planet, our home. I am puzzled on how seeing smog and pollution sounds more appealing than a windmill. Noise is the next disadvantage. Noise however should be the least of our problems, in my opinion. Windmills do make noise, yes but I think the advantages overcome this disadvantage. Wildlife dangers. Don't get me wrong, me arguing this does not mean I'm an animal hater, in fact I am an extreme animal person, I'm a zookeeper for Pete's sake. However, the number of annual bird fatalities, around 20,000, is tiny compared to transmission lines or even other animals! Today, even the Audubon Society supports wind power, recognizing that global warming causes a far greater threat long-term to all animal populations, not just birds and bats. The National Audubon Society protects birds and their habitats, so if they are supportive of wind energy despite

this disadvantage I think this shows the real **HERE** And I'm sure that the occasional bird that runs into a windmill won't cause them to go extinct. This I'm pretty sure is called natural selection.

**I would like to request the commission to approve the permit for Dakota Range Wind.**

Submitted by: Dylan Lau

Water town SD

