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By Judith Audette - Why would anyone oppose a renewable method of producing electric power?

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After much personal reflection with regard to this Fall Preview, I decided to memorialize my thoughts about wind energy, renewable energy and my concerns in observing so many people opposed to wind turbines in and around my neighborhood. I have tried to separate business and my personal views with regard to this issue. It is my intention to reflect on my experience and hope that I can shed some light on what seems to be such a huge bone of contention for so many in the community.

My first thought is this: Why would anyone oppose a renewable method of producing electric power? When I use the term renewable, this means that the supply is practically unlimited. I hope that some fears can be put to rest through improved awareness and improved studies that provide factual knowledge, I would like to do my best to explain my views, so I will start in the beginning.

What is wind energy? By definition, when we use the term wind energy we mean the kinetic energy (motion) in the wind. How does wind power produce electricity? The easy answer is that turbines convert the kinetic energy into mechanical energy, which is in turn converted into electricity by a generator. Think of a sailboat, the kinetic energy from wind has been used to power them for thousands of years. It is important to understand that this is exactly the same SOURCE OF ENERGY we use to produce electricity with turbines today. Another way to visualize wind turbine power, think of it as opposite of a fan. Instead of providing the electricity to get the fan to rotate, wind rotates the turbine to generate electricity.

How exactly does wind energy produce electricity? The rotor blades on a wind turbine catch the kinetic energy in the wind and transfer it via a rotor shaft to the generator. The wing blades can be rotated and adjusted to the wind direction and strength for maximum utilization of this energy. Then the rotor spins, the power is transferred via the drive shaft and gearbox, then the generator converts the kinetic energy from the turbine into electrical energy. The electricity is sent to the substation where it is converted and then transported out to the grid. Wind speed must be at least 10 feet per second for a typical large wind turbine (2.3MW) power generator. The maximum effect is achieved when the wind speed is 34-47 knots (gale). During a storm, the turbine will be powered down and the blades feathered vertically to avoid damage to the blades.

One complaint that opponents argue is that the land needed for turbine erection would be rendered unusable for any other purpose and there is not enough open land available for enough wind farms for power production. Time has shown that the land surrounding wind turbines can be used to farm and for grazing livestock, and without any pollutants that harm the land. Another complaint is noise levels produced from living too close to wind turbines. My personal experience with this argument is this; my office is situated directly below a 1.65MW wind turbine. I have not experienced any headaches; loud noise disruptions; or any negative impact whatsoever for myself or heard

complaints from my coworkers from this wind turbine being erected almost on top of us, where we spend at least 50 hours a week.

Like all large structures, wind turbines cast a shadow from the sun hitting the blades, those who are opponents to wind turbines are probably familiar with this term "shadow flicker". My personal experience with flicker is this, the few times that I noticed the flicker effect in my office cast from the turbine blades, I simply adjusted the window blinds and the problem was solved.

A non renewable energy source by definition is an energy resource that cannot sustain its consumption rate. In other words, non renewable energy is not sustainable; the energy reserves will inevitably be depleted. Fossil fuel such as oil, petroleum, natural gas and coal are the most common non-renewable energy sources. These resources will take thousands of years to grow or generate making them non sustainable and therefore non-renewable. In addition to the fact that these resources will inevitably run out, the carbon dioxide and other climate gases released has resulted in the climate crisis. Wind energy is considered the second largest renewable resource after solar. The total worldwide wind energy potential is calculated to be about 3600TW, in simple terms, more than enough to supply humanity's energy needs 200 times.

In closing, I along with my firm are obviously pro wind energy, and pro renewable energy. We have constructed wind turbines at the Mount Wachusett Community College in Gardner, Mass.; the North Central Correctional Institute in Gardner, Mass.; the VA Medical Center in St. Cloud, Minn.; construction is underway at the University of Mass., Dartmouth campus; and soon to be constructed two 2MW wind turbines at the wastewater treatment plant in Fairhaven, Mass. I am proud to be part of the JKS wind team. It is our opinion that the advantages far outweigh the disadvantages on this issue. I personally believe we owe it to our children, our grandchildren and all future generations to be more responsible with the earth in our lifetime so future generations will have the same opportunity.

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