

Resource Stock Update V18 # 1.4 Environment/birds WWPW Jan. 19, 2012

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The wind industry (North America) is new and is all about change. The problem is only about 1% of the population can grasp change early and foresee its huge benefits and profit from it. People like Bill Gates, Steve Jobs, Balsillie at RIM are elite examples that brought us change with new innovative products and made huge profits from it. Part of my mission is helping people to understand change. My past tech newsletter focused on new leading edge technologies. Few seen the huge opportunity in precious metals in 2002/03 or Uranium in 2003. I wrote my China report in the 1990s on how it would have huge effects on commodities, 5 years before anyone was talking about it.

What I am saying is that if you are understanding, investing or working with wind energy in North America you would be in a small - less 1% of the population, by the time it goes main stream and understood by many more, we should have made a tidy profit. I do plan to add more wind energy and clean tech companies to our list when a better positive momentum gathers, for now we can get in at the bottom on a few.

A subscriber sent me an article on enormous bird kills by windmills. It never ceases to amaze how much propaganda and misinformation is spewed about on wind energy. It is hard to accept change and people are easily misled in the early days. Of course **there is a reason for this**, but it spurred my interest to look into bird kills by communication towers, as I knew these were much higher than wind mills and a real problem with mass killings, but the results even surprised me.

Following is a few samples:

Summary of early examination of tower kills and work done at a TV tower in Tallahassee, FL, from about 1960 to the present. **In 25 years, 42,000 fatalities** of 189 species were found, mostly in autumn migration.

A single search at a 999-and a 1,552-foot-tall television tower in September 1995 revealed 275 specimens of about 27 species

A study of bird mortality at a west central Wisconsin TV tower from 1957-1995. During 38 autumn and spring migration seasons, conducted for the most part on a "daily basis," 121,560 carcasses representing 123 species were collected through 1994 – **Carcasses were found only after the tower height was increased from 500' to 1,000' in height.**

Summary of numbers and species of kills from 1960 to 1997 at a 1,368 foot tall television tower (with lights and guy-wires) near Nashville, Tennessee. 19,880 birds of 112 species were collected. Kills on two nights accounted for 45% of all fatalities found.

On Jan. 22, 1998, a kill of between 5-10,000 Lapland Longspurs and a few other birds occurred at a series of 3 communication towers and a natural gas pumping facility tower near Rochester, KS. The tallest of these towers is 420 ft.

Some 125 publications are listed and annotated focusing primarily on communication tower kills and to a lesser extent on glass windows, tall buildings, and other structures. To view more incidents at the US Fish and Wildlife web site

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/tower.html>

Environmental impact

This is all I could find at the government site Industry Canada on environmental laws for communication towers. Industry Canada is responsible for regulating radio communication in Canada and for authorizing radio communication facilities. This is what their web site says:

The Federal Communications Commission is responsible for a multi-stage assessment and justification process which creates onerous study and information requirements for both the applicant and the Commission itself. The process is so onerous that upon every occasion when the eight preconditions under the regulation have been triggered, in all but two instances in the past thirteen years, the applicant has withdrawn the application or amended it so that an environmental assessment was no longer required.

So you might ask what are the 8 conditions and are any to do with protecting the environment. I was simply stunned at the lack of regulation or even due process.

The eight preconditions which trigger the process involve situations where the antenna proposal will: be located in a **designated wilderness area**; be located in a **designated wildlife preserve**; affect historic places or structures registered, or to be registered, in the National Register of Historic Places; be located in a floodplain; involve site preparations which will **significantly change the existing surface features (i.e. drain and fill wetlands)**; be located in a residential area and be equipped with high intensity lighting; expose workers or the public to radio frequency emission levels which exceed ANSI STD C95.1-1982;132 and, in addition to the above, the FCC itself may determine that a major environmental impact is likely and an assessment is therefore necessary.

So as long as you avoid these obvious areas an environmental review is likely not even triggered

Environment Canada's Canadian Wildlife Service (CWS) is examining the issue of tall structures, such as radio communication towers and the potential threats they pose to birds. Based on this work, the CWS **may develop criteria and guidance** for use in environmental assessments or in other planning and management contexts that would assist in reducing these risks.

Now if you want to put up a wind mill or wind farm at least a year long bird study is required, because it has to be done at different times of the year (migration, breeding etc) and proven that impact on birds will be minimal.

Environment Canada has a 50 page document that outlines what is required
http://www.bape.gouv.qc.ca/sections/mandats/eole_matane/documents/DB15.pdf

So in summary, there are rigorous regulations for birds at wind mill sites and virtually nothing for communication towers, when it is obvious that comm towers kill probably hundreds of times or more birds per structure, and the growth of comm towers is huge, it appears to be around 50% to 100% growth in the past 10 years. You can check out this site for details on comm tower numbers in North America
<http://www.towerkill.com/>

For example Ontario has over 1700 towers, Florida 3200

With some research it becomes quite clear why communication towers kill so many birds. They are much higher than windmills and many 3 and 4 times higher, the web site above gives height ranges.

Modern Windmills are typically about 300 to 400 feet high to the top blade. Comm towers in most case have many guide wires and these thin wires that can't be seen easily are doing the damage, along with the lights attracting the birds (especially migrating birds at night). Many comm towers have steady lights while wind mills are using a quick flash or strobe light.

With improving technologies in wind they are building wind mills larger, **but much further apart** and that is also responsible for fewer kills and much **more attention is paid with regulations** to the location of wind mills, **but sadly not for communication towers.**

Well you would think with all these problems, environmentalists would be all over the comm tower industry. Well they are, with many petitions and they have been in court with the FCC for many years, but as far as I can find there has be no resolutions yet and no regulations. Thankfully the industry itself has taken some measures, but there is much more that should be done.

The number of kills has been decreasing over the decades, but unfortunately it surely looks to me that it is a direct results of declining bird populations.

So why is the wind industry battered with a bunch of false propaganda on bird kills and a much worse culprit the communication industry with nothing? It is all about money, unfortunately \$\$ is way to important for too many. The coal industry is one of the richest and produced more billionaires then most any other industry so they have lots of \$\$ to bash wind because wind energy is stealing their market share and \$\$\$. There is even an organization named "Billionaires for Coal" that fraternizes the wealthy coal magnets. The communication industry is not taking away from anything, except perhaps the pony express and postal service and we all want our TV, cell phones and internet.

And just before I sign out on this topic, I will say there is some wind mill sites that have seen some bird kills, but looking into this these – they were older sites with older wind mills much closer together and probably in locations not appropriate, and before bird studies were a requirement.

Proceedings of the National Wind Coordinating Meeting, San Diego, CA, 1998. (P2) June through October 1997 carcass searches under 11 192-foot-tall wind turbines on a forested hilltop in southern Vermont yielded no evidence of mortality of migrants. Scavenger and efficiency studies were conducted. The study suggested that towers less than 200 feet in height without lighting do not pose a significant risk to birds.

An assessment of the impacts of Green Mountain Power Corporation's wind power facility on breeding and migrating birds in Searsburg, Vermont. In press. NationalRenewable Energy Laboratory, DOE. Although this report is about a wind-power facility, one section of it contains a review and analysis of the literature on tower kills from the eastern U. S. This is one of the only reports that examines the role of tower height as a factor in towerkills. Little evidence was found implicating towers less than about 300-450 feet in towerkills that involved anything greater than a few birds.

I will also comment that I have been to numerous wind mill sites and have yet to see a dead bird, and I was searching for them

Well enough ranting on saving birds, below is a picture of a wind mill construction site and Wind Works had excellent news today

So how do they put these wind mills together, here is a picture I took a few months ago at a site in Ontario (not WindWorks) and you can see they use a very large crane, once a solid concrete base is built to start mounting the tower in about 3 or 4 segments. The arrow on the right points to a tower segment and the one on the left is the rotor and 3 blade assembly put together on the ground before mounting on top the tower.

increase the royalty to **2% based on the actual performance** of the wind farm; and

"This sale re-enforces our strategy of acquiring advanced-stage projects in Germany, adding value by arranging project financing, finalizing permitting, organizing construction, and then selling for a gain", comments Dr. Ingo Stuckmann, Wind Works' President and CEO." Acting as turnkey contractor for Burg 1 complements our current development activities in Germany. We have 3 other projects in Germany with PPAs totaling 27MW, and we look forward to repeating this success with these projects over the course of 2012/13."

There is a couple key and important points here. **Wind Works was able to sell this project for an exceptional profit over a short time frame and retain a royalty.** Proceeds of this sale will be reinvested in upcoming projects (27 MW)

This sale of **\$12 million was for only 4MW** and WindWorks has **100s of MWs** in their pipeline.

The sale works out to \$3 million/MW which is much higher than we have seen in North America but no doubt reflects the maturity of the German market

I have the stock as a strong buy to \$0.12 as I think there is no rush until they secure the Canadian listing, but we should take advantage of weak prices. I was able to buy some cheaply yesterday as some investor simply dumped their shares on the market. The market makers on the OTC will just take such a seller to the cleaners. They just take him out cheaply then sell the stock back at much higher prices as we have already witnessed.

Wind Works Power Corp. Investor Relations 613-226-7883 [HTTP://www.windworkspower.com](http://www.windworkspower.com)

Struther's Millennium Index <http://www.playstocks.net/Millennium2007.asp>

Model Portfolio <http://www.playstocks.net/Docs/Model%20Porfolio.pdf>

Selection List <http://www.playstocks.net/members/2009SelectionList.asp>

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