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Dodging Science and Transparency at Altamont Pass (wind industry gets away with shoddy research)

By Jim Wiegand -- January 12, 2016

"If the industry's plans go unchallenged and with 280 massive turbines (http://www.bloomberg.com/apps/data?pid=avimage&iid=ibSgAudc30iA%20%20%20%20) planned for Altamont, the turbine rotor sweep will increase 2-3 times when calculated in square meters. Calculated in cubic meters, the blade sweep will increase by as much as 5 times."

"Our supposed regulators and wildlife protection services have looked the other way for 30 years, while the industry produced reams of bogus "studies" designed to justify its existence and hide the death tolls."

The next hearing on expanding wind energy production at the Altamont Pass Wind Resource Area in California is set for January 14, 2016. "Depending on final turbine selection, micro-siting and other considerations, a capacity of 54 MW is still expected to be yielded," says an Alameda County announcement about enormous new Siemens turbines being installed there.

How do you micro-site a spinning monster (https://www.bing.com/images /search?q=turbin+blade&view=detailv2&& id=C172203FFB4DF6EA2D45A5C88AEF42BCC6FC4D7A&selectedIndex=104&ccid=1nRdIAgP&

with a span more than 100 feet longer than tip-to-tip wing span of the world's largest commercial jet? If you are a wind turbine promoter or peddler, ridiculous claims (<https://www.masterresource.org/cuisinarts-of-the-air/clean-energy-producers-act-2015-eagle-amnesty/>) like this are just assumed to be wholly possible.

However, at this hearing, experts will present the truth about this wildlife slaughterhouse.

Under the guise of "repowering" the installation and installing fewer turbines that are more "bird-friendly," the Altamont Pass Wind Resource Area has been secretly undergoing a massive expansion. Using vague and arbitrary terms like "nameplate capacity" or "installed capacity," the industry is installing massive turbines up to 100 times larger (http://gallery.usgs.gov/images/10_19_2009/s84Aq11PPk_10_19_2009/large/04_Bats_and_Wind_Energy.JPG) than previous turbines all across Altamont.

The huge turbines ensure that far more eagle-killing rotor sweep per square mile is also being installed, magnifying what has become dire situation for our disappearing golden eagles.

The public is unaware that all this is taking place, because industry shills have created a mountain of bogus nonscientific research. I know this because of my extensive wildlife background, from reading this industry's research, and because real scientists seek the truth and consistently use scientific methodology in their studies. They also do not avoid obviously needed studies, nor do they design studies to ensure biased outcomes or let industry dictate their research methodology after they have signed nondisclosure agreements.

But in a nutshell, this is how wind industry research has operated for decades.

What has not been revealed publicly is that Altamont's new turbines possess far more energy-producing rotor sweep per rated megawatt (MW). The reason is inconsistent and declining industry MW ratings for turbines, which have little to do with the deceptive labels "installed capacity" and "nameplate capacity."

The fact is, early wind turbines all have far less rotor sweep (see numbers below). However, if the industry's plans go unchallenged and with 280 massive turbines (<http://www.bloomberg.com/apps/data?pid=avimage&iid=ibSgAudc30iA%20%20%20%20>) planned for Altamont, the turbine rotor sweep will increase 2-3 times when calculated in square meters. Calculated in cubic

How large are the blades (<http://www.heavyliftspecialist.com/wp-content/uploads/2013/03/WAgenborgP1020549.jpg>) on these new turbines? The industry has not released the figures in cubic feet but because the new turbine blades have a voluminous hollow construction, a hundred blades from Altamont's KCS 56-100 (<http://en.wind-turbine-models.com/turbines/316-kenetech-kcs-56/picture-2350>) turbines could easily fit inside one of these huge blades. The blades' increased 3-dimensional aspects and faster tip speeds also increase the likelihood of a fatal collision with flying wildlife.

The blades are thus more dangerous to birds and bats, and an examination of the increasing U.S. Fish and Wildlife Service (FWS) eagle carcass counts from Altamont underscore this.

However, wind industry studies have never shown just how dangerous these turbines really are. The reason is that Big Wind is constantly changing its research methodology, with the goal of producing biased results (<http://thecoreport.com/exposing-the-wind-industry-genocide/>) that lead to more profits and less criticism of its appalling death tolls.

As a result, there is not one bit of credible scientific evidence that these turbines actually are safer. But there is plenty of evidence suggesting that Altamont's studies are not only far less credible, but they have drifted even further away from basic scientific principles.

Biased and absurd study methodology

A recent Altamont study examined 34 of their huge 2.3 MW turbines – and produced declining mortality figures. But even a little scrutiny reveals that this is just one more unreliable, deceptive, nonscientific study. Consider this statement from the study:

“Fatality rates are not comparable between wind projects unless one accounts for variation in combinations of tower heights and maximum fatality search radius (Smallwood 2009, 2013a). These combinations partly determine the proportion of fatalities that are found, because turbines on taller towers can throw some birds and bats outside the search area, and search areas that have been implemented at projects have been decided somewhat arbitrarily.”

I applaud the authors' long overdue recognition that previous studies had numerous flaws, and that trying to compare fatality rates is thus an impossible task. It is also progress that the authors of this Altamont study decided to create maximum carcass search areas by using tower height

The problem is that some of these comparisons were made from studies that searched grossly undersized areas and/or were infrequent enough that many or most carcasses had been removed by predators and scavengers before they could be counted. It is thus impossible to reconstruct accurate data from missing or inaccurate fatality counts, or create an honest and accurate study from dishonest and inaccurate past studies.

However, my knowledge of past Altamont studies, declines in eagle populations and other factors enables me to make far more scientific search area comparisons based on the thousands of 50-meter radius searches conducted around Altamont's smaller turbines.

When compared to their 60-foot towers, these latest search areas were easily 4.4 times too small for these huge turbines. When compared to maximum blade tip heights of 26 vs.131 meters (<http://www.eastcountymagazine.org/hiding-mortality-wolfe-island-slaughter>), the search radius should have been 251 meters out from towers. This is a search area 5.7 times larger than what was actually employed.

Fatality rates and carcass distribution are also a factor of a turbine's rotor sweep. With these comparisons to the Altamont's KCS 56/100 turbines, search areas should have been at least 277,032 sq meters or about 300 meters out from each turbine tower. Conveniently unscientific study search areas around these huge turbines were set at only 105 meters out from towers, resulting in a search eight times too small.

Limited search areas means far fewer carcasses will be added to the data. This includes accounting for "blade strike wanderers (<https://baynature.org/wp-content/uploads/2012/07/article-feature-captionimage%28240%29.jpg>)" that are struck by blades and die after wandering far from the turbine. Due to the undersized search areas, one could make a very reasonable argument that mortality estimates given in for this study were too low by 4-8 times.

The new analysis reported that a total of 84 fatalities or carcasses (65 birds and 19 bats) were recorded during the first year of the study. Total estimated fatalities during the first year of monitoring the 34 2.3-MW turbines came out to 0-1 golden eagles (depending on whether one includes the one eagle picked up by wind personnel), 17 to 19 red-tailed hawks (depending on whether one includes fatalities found between Turbine 34 and the 120 KW Bonus turbines), 23 American kestrels, and 4 burrowing owls.

Total estimated mortality was placed at 48-50 raptors of all species, 214 birds of all species, and 131 bats of all species. **However, there was no accounting in the estimates for the enormous areas that *should* have been searched for carcasses, but were not.**

Instead, as with previous studies, this study employed mortality search areas based primarily on the height of towers to which mere 50-meter-long turbine blades were attached. That is far too small for the newer, far larger turbines and blades.

Credible scientific research would look at carcass distribution around turbines as a function of tip speed, maximum blade reach, maximum blade height, wind velocity, wind direction, slope, direction of blade throw and the flight energy given to carcasses after being hit by blade tips moving up to 200 mph.

Instead, wind industry researchers make empty misleading statements like this one in the new study: "Many factors could affect the proportions of fatalities detected beyond the maximum search radius at wind projects, such as *slope and vegetation cover*, but these factors have yet to be adequately quantified." [emphasis added]

This deflective statement does not demonstrate true scientific research. It reflects avoidance of reality and what I believe to be a deliberate attempt to mislead.

Due to the nonscientific research methodology used in the study of the huge new Siemens turbines, one could easily assume these numbers were off by 4-8 times. These necessary corrections would produce fatality numbers that would show **highest estimated mortality and the highest carcass counts ever recorded at Altamont.**

So what is really going on around these turbines?

Were 48-50 raptors killed by these turbines – or were several hundred (<https://baynature.org/wp-content/uploads/2012/07/article-feature-captionimage%28619%29.jpg>) killed and left in the field? Were no eagles killed as suggested – or were 4-8 killed? During the year of the study, were large numbers of unreported raptors picked up by industry personnel and shipped out to FWS repositories? Were 214 birds killed – or were *several thousand* birds killed?

These are all reasonable questions to ask of an industry that voluntarily complies with regulations that are rarely or unevenly enforced, and voluntarily prepares reports on studies that it designs.

They are especially valid questions in view of a little known Altamont study that was conducted around small turbines and used much more frequent 48-hour search intervals (<https://www.masterresource.org/cuisinarts-of-the-air/hiding-avian-mortality-altamont-pass/>). **That study produced bird carcass counts that were the highest ever recorded (5 times higher). And it did so while employing the smallest search areas (40 meter radius) ever used for an Altamont wind turbine study.**

Whatever is going on, we will never know by taking the word of wind industry “research.”

The wind industry’s hidden turbine mortality

Should automobile and drug companies be able to conceal human mortality behind trade secret and confidentiality laws? Should they be able to conceal injury and human mortality data behind their own self-designed fictional research?

Think about the absurdity and corruption behind these two questions because in essence this is exactly how the wind industry operates.

All these avian and raptor slaughtering grounds have freezers for storing carcasses. Yet the public knows nothing about all eagles and raptor carcasses that have been shipped from freezers at Altamont and other wind energy facilities across the country to a central government facility in Denver, Colorado. What I do know from my own investigations is that over 31,000 (<https://www.masterresource.org/cuisinarts-of-the-air/wind-industry-dead-eagle-problem-1/>) unaccounted for eagle carcasses have been shipped to the Denver Repository since 1997.

For the thousands of eagle carcasses picked up by FWS agents from wind farms and shipped to the Repository, there will be no accountability. Though known to the Interior Department, this information will remain hidden because wind farm mortality information is conveniently protected by Freedom of Information Act regulations (<http://www.sec.gov/foia/nfoia.htm>), because it involves *private* companies. Protected under these bogus regulations or exemptions, critical information about the annihilation of protected species is classified as “confidential” or a “business trade secret”.

For the wind industry, America’s freedom of information laws mean about as much as “micro-siting” term it uses with regard to 400-500 foot eagle-killing monsters. For the wind industry, the Freedom of Information act is a **Freedom From Giving Information Act**.

The source of the growing problem

To gauge the impact of this new generation of monstrous wind turbines, consider this summary of turbines previously used at Altamont:

Old generation: Meters of eagle-killing blade sweep per one rated kW

KCS 56/100kW.....square meters swept per one kW: **2.27**

At one time there were 3,500 of these turbines installed at Altamont. The KCS 56/100 has been the Altamont workhorse for about 25 years.

Flowind 56/150.....square meters swept per one kW: **1.73** .

Flowind 56/250.....square meters swept per one kW: **1.36**

Windmaster 200kW..... square meters swept per one kW: **1.89**

Windmaster 250kW..... square meters swept per one kW: **1.68**

Windmaster 300kW.....square meters swept per one kW: **1.63**

Kenetch KVS 400kW.....square meters swept per one kW: **2.12**

Howden 330kW.....square meters swept per one kW: **2.12**

Fayette 95kW square meters swept per one kW: **0.99**

At one time 1,202 of these early turbines were installed at Altamont.

Now compare that to this summary of the new, much larger Altamont turbines.

New generation: Far more eagle-killing blade sweep per one rated kW

Vestas 660kW..... square meters swept per one kW: **2.62**

These are eagle-killing turbines used to replace non-eagle killing turbines, 148 FloWind (http://www.symscape.com/files/images/flowind_darrieus.jpg) (150kW) turbines and 21 Flowind (250 kW) vertical axis turbines. With these turbines, 45,546 sq meters of eagle-safe rotor sweep became 53,756 square meters of new eagle slaughter.

Mitsubishi 1000kW..... square meters swept per one kW: 2.96

Shortly after these 38 turbines were installed, 3 golden eagles were killed in just one 6-month span.

Suzlon 2300kW or 2.3MW square meters swept per one kW: 3.48

These turbines and their bogus associated research were discussed above. Keep in mind that *99 of these turbines equal the total square foot rotor sweep of 3,500 KCS 56/100kW turbines or 8,392 of the early Fayette 95kW turbines.*

Suzlon 2100kW..... square meters swept per one kW: 3.52

A turbine proposed for the Jan 14 expansion hearing. When rotor sweep is compared to the KCS 56/100, this turbine is really the equivalent of 3.25 MW turbine

Suzlon 3300kW.....square meters swept per one kW: 3.54

A turbine proposed for the Jan 14 expansion hearing with a 122 meter blade diameter. This turbine is really a 5.1 MW wind turbine when rotor sweep comparisons are made to the KCS 56-100. It takes 70 of these turbines to equal 3500 of the KCS 56/100kW turbines or 8392 Fayette 95kW turbines.

It is very obvious that the Department of the Interior is fully aware of what is taking place at Altamont and at every other U.S. wind energy facility. After all, its Fish and Wildlife Service has been quietly accepting the hundreds of thousands of chopped-up raptor carcasses that Big Wind companies have shipped to their repositories over the years.

This terrible number also includes the wind industry's contribution to the 31,000-plus bald and golden eagle carcasses sent to the Denver Repository since 1997. It is a gruesome number that has been growing at a rate of about 2,500 to 3,000 carcasses a year.

Such a death toll is unsustainable. It will lead to the extinction of these and other magnificent species in many areas of the United States that are seeing the greatest growth in the number and size of lethal wind turbines, many in sensitive wildlife habitats. It is a maiming and death toll that is not tolerated for any other industry or private citizen, and indeed is punished by major fines and prison sentences.

Can, and should, the slaughter continue?

From the beginning of Altamont, the news media, government agencies and environmental groups have falsely promoted the wind industry as an answer to our nation's dependence on Middle Eastern Oil. Now, 35 years later, America still imports oil, even as we produce more oil and natural gas than at any time in decades. Ironically, we are doing so even as U.S. companies are beginning to *export* oil and natural gas – potentially far more energy per year, in fact, than the entire wind industry produces, as measured in oil-equivalence.

When looking back objectively, much of the wind industry's development has been a multi-trillion-dollar environmental disaster funded through taxpayer subsidies. Our government has propped up and enabled this industry, while holding it to no accountability whatsoever for its huge and growing environmental and wildlife impacts. Perhaps worse, our supposed regulators and wildlife protection services have looked the other way for 30 years, while the industry produced reams of bogus "studies" designed to justify its existence and hide the death tolls.

Our government has led the citizens of this country down a primrose path to environmental and wildlife destruction, in the false name of reducing oil imports and stabilizing Earth's climate.

Wind power's minuscule energy contribution will never change. Wind power is not "green" or "bird friendly." Wind turbines cannot be "micro-sited" given their very large mortality footprint. Wind is an energy for politicians and their private sector cronies at the expense of the local environment and broader society.

Jim Wiegand, drawing upon decades of field observations and analytical work, is devoted to protecting and preserving bird, bat, and other species that are threatened by human encroachment and development. An independent wildlife expert, he has not signed a wind industry nondisclosure agreement.

2 Comments

It is the climate hype industry that is employing tobacco company tactics apparently.

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Jim Wiegand- Wildlife Biologist () • January 12, 2016 at 6:21 pm

First they ignore you

Then they laugh at you,

Then they fight you,

Then you win.

Gandhi

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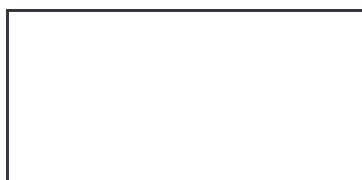
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