Wind Energy Health Impact Assessment REVIEW

PRIORITIES

(To access any of the referenced documents either "Google" document title and author or access the original via wind-watch.org or windaction.org) It isn't necessary to attach entire documents when submitting your comments, just title and author.

1. The HIA upholds the Oregon wind turbine noise standard of base 36 dBA as defined in rule by the Oregon Department of Environmental Quality. Stress the continued necessity of this standard **but** strenuously object to the usage of "or near" used on page 9, Recommendations, paragraph 1, line 3. On page 7 of the HIA the Oregon noise limit for wind turbine facilities chart states that the maximum allowed is 36 dBA or 10 dBA over an assumed background of 26 dBA. Nowhere else in the HIA is this "or near" language used. What does "or near" mean? Five dba over, 10, 20? Stress that the standard is the standard and insist that the enormous loop hole that "or near" creates be removed.

Common definition describes noise as unwanted sound. This assessment carefully avoided the word noise but if you note specific areas in the HIA where you feel the word "sound" should be replaced with the word "noise" comment on that.

2. Push for an adoption of a dBC standard to address low frequency /infrasound as has recently been done in Denmark by the Danish Ministry of the Environment, Environmental Protection Agency. (Low frequency noise can be the hum or buzz from a compressor, rumble from a boiler or a combustion plant or the rumbling of an idling engine, for example. You can "feel" it even if you may or may not "hear" it.)

-New research/studies/papers subsequent to the submission deadline for the HIA include:

- Reference the study by Dr. Alec Salt and Timothy E. Huller, funded in part and published by the National Institute of Health, *Responses of the Ear To Low Frequency Sounds, Infrasound and Wind Turbines*

-Reference the study *Can the Sound Generated by Modern Wind Turbines Affect the Health of Those Living Nearby* by Alec N. Salt, PH.D., Dept of Otolaryngology, Washington University School of Medicine, St. Louis, Missouri . Grant funding for this presentation provided by the NIH.

-Reference *The Bruce McPherson Infrasound and Low Frequency Noise Study,* Dec 2011 by Steven E. Ambrose INCE (Board Cert) and Robert W Rand, INCE member

-Reference: *Wind Turbines and Proximity To Homes: The Impact of Wind Turbine Noise on Health-A review of the literature and discussion of the issues,* Jan 2012, Barbara Frey BA, MA and Peter Hadden BSc)Est Man) FRICS

-Reference: *A Pragmatic View of A Wind Turbine Noise Standard* by Phillip J Dickinson, College of Sciences, Massey University, New Zealand

3. Request verification of developer's sound propagation models, prior to permitting, by on the ground, independent, state employed or contracted engineers. Currently, sound propagation models are conducted by the wind developers in the state permitting process. The data they submit is projected as fact. **After** the facility is completed, the sound propagation model submitted during the permitting process should be independently verified by the state or contracted engineers. If independent monitoring necessitates equipment permanently installed on residential properties adjoining or within proximity of a wind facility, then this is a cost the state will need to factor into the permitting process and pass on to developers.

4. Address the HIA's failure to recognize residential property value impacts. The HIA 's nonacceptance of submitted data that demonstrated loss of property value in areas where industrial wind facilities proliferate is frustrating and contradicts common sense. Under Economic Effects, Page 87, para 2, line 3, etc., the HIA acknowledges that, "few studies" were reviewed. In fact, the HIA lists only two "studies" in the Reference Section. The first, by B. Hoen, *The Impact of Wind Power Projects on Residential Property Values In the United States,* a widely criticized three year study finished in Dec 2009, so presumably started in 2006. Hoen's conclusions are parsed with, "given current research". Challenge the HIA's interpretation of Hoen's conclusions with the following:

On the National Association of Realtors website (realtor.org) type in wind farms, scroll down to Impact On Real Estate Values, Berkeley Lab Studies.... In a subsequent slide presentation Hoen gave at the *New England Wind Energy Education Project* webinar, 2010, On slide #29, "Do these results imply that property values effects near turbines do not exist? NO!" And, "So given these results, are property values something stakeholders should be concerned about? OF COURSE!" Hoen continues, (slide 31) "Property Value Risks Will Persist Unless They Are Measured, Mitigated and Managed" and on slide #32 suggests property value guarantees. He calls for continued measures to better understand effects. And, perhaps most importantly, on slide 25, he concludes that "Absence of Evidence" does not equate to "Evidence of Absence" . In other words, insufficient data has yet to be gathered and continued research is necessary.

Studies, etc. drawing conclusions of negative property value effects in proximity to industrial wind facilities that you should read to better comment and reference on this domain: (either Google title of document and authors below or type title in search area on National Association of Realtor website (realtor.org) or utilize the search engines on wind-watch.org or windaction.org. Additionally, on realtor.org scroll down to Windpowerfacts.info where John Droz, has a page dedicated to real estate and wind facilities.

Refer to:

-A 2011 study *Values in the Wind: A Hedonic Analysis of Wind Power Facilities* by Clarkson economics professor, Dr Martin Heintzelman

-A 2011 study by appraiser Michael McCann on property values in Cape Vincent, New York

-A study done by Metropolitan Appraisal, regarding the Forward Wind Project (Wisconsin)

-*A Wind Turbine Impact Study* by appraisers: Appraisal Group One, Wind Turbines & Property Values (findings in slide version) Kurt Kielisch, ASA, IFAS, SR/WA, R/W.

-*Impact of Wind Turbines on Market Value of Texas Rural Land* by Gardner Appraisal Group

-*Wind Farms, Residential Property Values & Rubber Rulers* by Albert Wilson, principal of A. R. Wilson LLC, Woodland Park, CO , critique of Hoen study and methodology

-*Living With the Impact of Windmills*, by Chris Luxemberger, Real Estate Broker, Director of Brampton Real Estate Board and Chairman of Real Estate Bylaws Committee in Ontario, Canada

Question local real estate agents you may know who are experiencing real estate sales in turbine facilitated areas first hand and ask them to respond to the HIA via the comments.

5. Address the high economic costs and adverse impacts of creating wind energy jobs. Question the quality of the HIA's economic analysis of the cost benefits of industrial wind energy on Oregon's economy. Topics to address include:

- Increases in electricity rates
  -*Obstacles Facing US Wind Energy,* by Gail Tverberg, *Financial Sense,* January 15, 2012
  -*Rational Look at Renewable Energy*, by Kimball Rassmussen, November 2010
  -*Renewable energy: vision or mirage?,* by Sharman, Hugh, Leyland, Bryan, Livermore, and Martin, *The Adam Smith Institute,* December 12, 2011

- Lost discretionary purchasing power due to higher electricity rates

-*Economic impacts from the promotion of renewable energies: the German Experience,* Editor: Prof. Dr. Christoph M. Schmidt, Rheinish-Westfalisches Institute fur Wesfalischfschung, October 2009

- Exorbitantly high cost of jobs created
  -*America's Worst Wind Energy Project,* by Robert Bryce, National Review Online
  -*How Many Jobs From Oregon's Green Energy Initiatives? No One Knows,* by Harry Esteve, The Oregonian, March 15, 2011
- Displacement of Jobs in energy intensive industries
  -*Effects on Employment of Public Aid to Renewable Energy Sources,* Gabriel Calzada, King Juan Carlos University
  -*Rational Look at Renewable Energy* by Kimball Rassmussen, Nov. 2010
  -*Economic Impacts from the promotion of renewable energies:* Prof. Christoph M. Schmidt, Rheinish-Westfalisches Institute fur Westfalischftschung, October 2009
  -Danish Center for Political Studies (CEPOS), The Institute for Energy Research
- Lost opportunity costs of funds committed to industrial wind facilities
  -*Effects on Employment of Public Aid to Renewable Energy Sources,* Gabriel Calzada, King Juan Carlos University
  -Danish Centre for Political Studies, (CEPOS) The Institute for Energy Research
- Extra Costs required to build additional backup power facilities to compensate for variability and inconsistency of wind power
  -*Rational Look at Renewable Energy,* by Kimball Rassmussen, November 2010
  -*Obstacles Facing US Wind Energy* by Gail Tverberg, Financial Sense, Jan 4, 2012
  -*Renewable energy: vision or myth?* by Sharman, Hugh, Leyland, Bryan, Livermore and Martin, The Adam Smith Institute, Dec 12, 2011
- Cost of extra transmission facilities to bring wind generated electricity from distant facilities to point of use
  -*Rational Look at Renewable Energy,* by Kimball Rassmussen, Nov 2010
  -*Obstacles Facing US Wind Energy* by Gail Tverberg, Financial Sense, Jan 4, 2012
- Displacement of conventional jobs by subsidized "green" jobs
  -*Effects on Employment of Public Aid to Renewable Energy Sources,* Gabriel Calzada, King Juan Carlos University
  -*Economic Impacts from the promotion of renewable energies: the German experience,* Editor: Prof Dr. Christoph M. Schmidt, Rheinish-Westfalisches Institute fur Westfalishchftschung, October 2009
  -*Rational Look at Renewable Energy,* by Kimball Rassmussen, Nov 2010
- Impacts of deficit federal financing to subsidize industrial wind facilities
  -*Why They Call it Green Energy,* The Summers/Klain/Browner Memo, Alex Tabarrok, Sept 29, 2011

-*Corporate Welfare Masquerading Under an Environmental Rainbow,* by Institute for Energy Research, Sept 29, 2011

-*Direct Federal Financial Intervention and Subsidies in Energy in Fiscal Year 2011,*US Energy Information Agency

-*Windpower: An Expensive and Inefficient Way to Reduce CO2,* by Nicholas Loris, Sept 14, 2009

-*Obstacles Facing US Wind Energy,* by Gail Tverberg, Financial Sense, Jan 4, 2012

- The impact on services and tax shortfalls caused by the Oregon Business Energy Tax Credit (BETC)

  -*The Oregon Biz Report-Business News from Oregon, Do Oregon's energy tax credits help or hurt the economy?* by Dr. Eric Fruits, Feb 25, 2009

  -*The Cost of Green: Huge eastern Oregon wind farm raises big questions about state, federal subsidies,* by Harry Sickinger, The Oregonian, March 12, 2011

  -*Shephards Flat Wind Farm: What's the Cost to Taxpayers?,* bu Ted Sickin, The Oregonian, March 12, 2011

  -*The Good, The Bad and The Ugly: The Business Energy Tax Credit,* by Todd Wynn, Cascade Policy Institute, January 27, 2010

  -*The Stump*-Guest Editorial, The Oregonian, by Phil Barnhart, November 18, 2009

- Disruption of regional electricity markets

  -*Rational Look At Renewable Energy,* by Kimball Rassmussen, Nov 2010

- Parasitic power costs when wind turbines are not wind operating but required to move to maintain operability

  -*Rational Look at Renewable Energy,* by Kimball Rasmussen, Nov 2010

- Impacts on tourism

  -A 2002 "VisitScotland" survey found 50% of tourists felt that wind turbines would spoil the look of Scotland, one of the main reasons they visited. While 25% said they would be 'less likely' to return to an area with wind turbines, 15% said the 'definitely' would not return. It should be noted that this 2002 survey was done when only 100 developments were proposed and today there are over 250!

- Regional stigma costs

  -A region or county seen to be promoting industrial wind facilities as a principal source of revenue is not an area newcomers select to relocate. Potential residents will select other regions or counties where they are certain their property and business investments will be secure and not impacted by decreases in property value, population and tourism. Despite much touting about the benefits of wind energy facilities on the economies of Sherman and Gilliam counties, populations in both counties are declining. Sherman county from 2000-2010 had a decline in population of -8.7%. Gilliam county had a population decline from 2000-2010 of -2.3%. Number of building permits issued

in both counties for 2010 was zero. Private, non-farm employment in Sherman county between 2000-2009 had a decrease of -7.6%. Private, non-farm employment percentage change in Gilliam county between 2000-2009 indicates a decrease of -5.9%. (Where are all those "green" jobs?) Source: US Census Bureau, State and County QuickFacts. Who and what will the counties be collecting these industrial wind facility revenues for as residents continue to leave and no one relocates to the community?

6. The HIA does note "Place and Identity" as important to a community and observes that wind developments may be perceived as "Large scale technologies that intrude spatially and culturally on accustomed ways of life." However, the suggestion that "consultation and better education" will remedy the problem is patronizing. Industrial wind facilities and the attendant transmissions lines crisscrossing the terrain are a permanent alteration of the rural environment on a massive, unprecedented scale. There is no compromise in the loss of beautiful rural skylines. Compromise and better education in no way offsets these changes.

-The HIA also recognizes that community impacts cause stress which does produce adverse health effects. Commend the importance of this finding but to be meaningful , the consultation process should include the possibility of projects being cancelled based on community input.

-Stress the disruption of rural communities and the natural environment. The proliferation of industrial wind facilities has exceeded the availability of open lands, void of human habitation. The "good" spots are gone. Increasingly, wind facilities are now coming up against residential communities and communities are pushing back pitting participating landowners against nonparticipating homeowners. The most convincing fact to come out of the listening sessions was that industrial wind facilities split communities. These are rural communities where you grow up with your neighbor, ride the same school bus, graduate together and eventually raise your children alongside one another. In Morrow, Umatilla, and Union counties many neighbors no longer speak to one another, discontinuing business relationships and destroying friendships forged over generations. There are social impacts associated with rapidly turning rural landscapes into industrial zones.

*Challenge the HIA cited 2010, poll (page 92, para 1) with:

-The vote in Union County in which a majority of voters opposed industrial wind turbines

-A 2011 Umatilla County citizen initiated petition that produced 3,400 signatures in two weeks supporting 2 mile setbacks and stricter limits on industrial wind facilities

-A "Google" search produces 77 pages of responses when typing in, "wind turbines and community conflict"

-Opposition is growing as hundreds of local, national and international anti-wind groups have formed.

-The Ontario(Canada) Federation of Agriculture, largest farming organization in the province, has called for a moratorium of wind projects stating, "The situation regarding industrial wind turbines (IWT) has become untenable. The proliferation of wind turbines across rural Ontario has seriously polarized our rural communities. Rural residents' health nuisance complaints must be immediately and fairly addressed."

-On Page 93, under 2.1 "controversies at renewable energy facilities": the HIA states that renewable energy facilities have unique characteristics compared to traditional siting conflicts because renewable energy has broad support from public, government, industry and environmental groups. Challenge this "broad support" as the source of this information stems from a 2004 proposed Biogas plant case study. Not 400+ tall, noise making, ridgeline spoiling industrial turbines. Asking someone if they support renewable energy in general or even in their communities is a far cry from asking them if they support industrial wind turbines next to their home.

-Point out much has happened since 2004. Current economic conditions have altered the perception that large tax credits to foreign owned wind energy facilities is not the best use of tax dollars. This erosion of support coincides with federal and state deficits and headline making Solyndra and Shepherds Flats type projects.

-Point out the increasing environmental backlash. Opinions amongst environmentalists are diverging over the killing of birds, (particularly raptors) bats, disruption of migratory flyways, and wide scale habitat disruption. Google, "wind energy opposition by environmental groups" and the results are extensive.

-Make the health connection between vector control species such as bats, raptors and insect eating songbirds that are under population pressures and a contributing factor are deaths from wind turbine facilities. American Bird Conservancy (largest bird conservancy group operating solely in the U. S.) has "formally petitioned the US Department of Interior to protect millions of birds from negative impacts of wind energy by developing regulations that will safeguard wildlife."

-The HIA, when discussing global warming, theorizes that increased temperatures will lead to diseases such as malaria but fails to make the current, real and now, connection between loss of vector control species and increase in disease. Further, point out the necessity of bats and birds when controlling insect pests in our food supply. Without them, agriculturalists would be forced to become more dependent on pesticides.

-Site examples of environmental conflict. For example, the lawsuit by environmentalists against an Invenergy project in Duo, W. VA forcing the shutdown of turbines at night, during times of the year when bats are not hibernating, due to testimony projecting bat kills of 111,000 per year.

-Lawsuits filed by environmental and conservationist groups in opposition to specific wind facilities are ongoing in many states including, Virginia, Maryland, Pennsylvania, Minnesota, Massachusetts, California, Nevada, Texas.

-Closer to home, is the controversial Whistling Ridge wind project in the Columbia Gorge visible from the Columbia Gorge Scenic Area. Local environmental and conservationist groups such as Friends of the Gorge, Audubon, American Bird Conservancy are petitioning Governor Gregoire to prohibit the project. On the EFSEC website, via the Access Washington Official State Government website, 86% of public comments recorded have opposed or expressed concern about the Whistling Ridge project. (links to comments also available on Friends of the Columbia Gorge website)

-The recently released full length documentary film, *Windfall* exemplifies the process by which communities are split

*I have emailed DHM Research who conducted this poll. I have asked the method of collection, phone, online or radio call in. I have asked for copies of the questions and a breakdown of responses. As yet, I have had no response from them. I will resort to phone calling next week but I suggest you try contacting them as well. The poll is listed on the DHM Research website under *Northwest OpinionScape,* December 2010. www.dhmresearch.com Click on NW Opionscape. The poll is titled: *Support For Wind Energy Remains Strong in Northwest* and was conducted in the 4th quarter of 2010

-Other Potential Topics for Inclusion-

+Cumulative effect

+Community Fire Danger

+Separate category for habitat disruption, water shed issues, etc. with direct impact on community health

+HIA would have been strengthened by Tribal participation and perspective

+The inclusion of the HIA section on global warming/climate change with theoretical health effects was not reviewed by the HIA advisory panel members and was inserted after the panel meetings were concluded.

AND FINALLY:

What are "priorities" to one individual in reviewing this health impact assessment on wind energy may not be categorized as such to others. We were asked to list what we considered "priorities" discussed during last week's HIA review at Tamastslikt, including the specific literature supporting them. We encourage you to list your own priorities and attending research when submitting comments to the HIA. If you have more documentation in support of the above "priorities" not referenced, please add those to your HIA comments. These pages have focused on new literature since the close of HIA steering committee submissions, around October of 2011 and reiterated originally submitted documentation that was not considered in the HIA conclusions. Our original submissions filled much of six compacts discs, covering each "domain" separately plus "parking lot" issues not addressed in the "domains".

Your individual participation in the HIA comment submissions is enormously important. These pages are meant to merely assist you in finding materials. Select what is important to you and add your own concerns about the HIA findings. The comment period ends, 5pm, March 30th. You can comment online or mail your comments.

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Wind HIA Comments
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Additionally, please attend the March 20 public information sessions in Pendleton. Time and location yet to be determined. If you have concerns with respect to health and industrial wind turbines attend this session. The wind industry marginalizes and discredits with suggestions that concerns come from only a few malcontents and complainers. Your attendance at this session will prove otherwise.