

The Truth about Wind Power

November 12, 2009

The following information was collected in response to a proposed wind farm in Northeast Oregon wherein the **beauty of Union County will be destroyed by a 47,000 acre wind farm called Antelope Ridge Wind Farm**. This proposed wind farm is being developed by Horizon Wind that is owned by a company in Portugal (EDP Renovaveis). It is being developed at the expense of the residents of Union County using huge tax incentives and government subsidies. For example, **two of the offshore developers here in Oregon recently received 140 million in Stimulus Money**. Horizon Wind is benefitting enormously from a tax gimmick as a result of the Strategic Investment Program (SIP) that was implemented by our legislature to encourage business to come to Oregon or expand current businesses, like Intel with a large employee base. The issue with the program is businesses, such as wind power, that hire very few long-term employees have been able to benefit at the cost of the taxpayer. The SIP program provides for tax incentives if the project exceeds \$500,000 in rural areas. The Elkhorn Wind Farm at Telecast has a real market value of \$207 million, but due to SIP, they are only taxed on the assessed value of \$23.4 million resulting in \$335,053 in annual revenue to Union County. A significant portion of the \$335,053 is a windfall to some small taxing districts in the area of the wind farm, such as the Union Cemetery who received almost \$40,000, and North Powder Fire Department who received nearly \$60,000 in 2008. These windfalls are due to Community Service fees (CFS) that are allowed under the SIP for a few districts and the rest goes into the county's general fund. If the Elkhorn Wind Farm would have been taxed at the normal rate without the SIP, it would be generating \$1.8 to \$1.5 million in annual tax revenue that could have been distributed throughout the county. Since we got a raw deal from the Elkhorn Wind Farm because we were beginners, we hope it does not happen again with the proposed Antelope Ridge Wind Farm. If we use the same raw deal SIP scenario as the Elkhorn Wind Farm, we will generate approximately the same amount of annual revenue even though the Antelope Ridge Wind farm is expected to have a real market value of \$700 million. Again due to the SIP, we could only tax Horizon on something less than \$25 million.

If the Antelope Ridge Wind Farm is not put into the SIP, the county will be able to collect annual taxes of \$7 million the first year, and it would be a great replacement for the loss of the timber tax revenue. These funds could be spread across every taxing district in Union County and with that kind of revenue we could patch every pothole and repair every road in the county.

By allowing this proposed wind farm, our pristine, rural land is being prostituted for few short term tax dollars and a program that the following will prove is of negligible benefit.

Go to www.oregon.gov/ENERGY/SITING/docs/AntelopeRidgeWind-NOI.pdf for Horizon Wind's details of their proposed wind farm.

There has been more than one request forwarded to Horizon Wind Energy, Valerie Franklin, Project Manager, for detailed information about the Antelope Ridge Wind Farm, but the only response that was received was a referral to pro-wind power web sites. They claim transparency, but when one starts to question their quotes, claims and statements, they hide behind pro-web site information that seriously distorts the facts. The following will point out many of the claims made by Horizon Wind Energy are not factual and blatantly wrong and based on big dollar greed.

The following is a collection of information and issues compiled from the Department of Energy, Renewable Energy World, Wind Power Monthly, Center for Science and Public Policy, Wall Street Journal and numerous wind farms across the United States and Europe. Hopefully, this will give you the necessary information to decide for yourself if wind power is truly economically and environmentally efficient.

Wind Power is an irresponsible development

Windpower would not exist in its present industrial form without the tax "incentives." The relatively feckless energy produced is a front for the **real business of generating tax avoidance schemes** benefiting a few at the expense of many, while playing havoc with the environment although claiming to be saving it. The industry is in fact a sacred **descendant of Enron**, the "energy" company that, before its demise, owned and operated the nation's **largest** collection of wind facilities; **it pioneered this tax shelter as a commodity.**

Without the promise of risk-free profit made possible with government subvention, wind developers and their investors would likely wither away. The temptation for profit without restraint is overwhelming. At the same time, many of the negative effects of irresponsible wind farm implementation are now far removed from the everyday lives and experiences of wind investors—and the politicians who encourage them.

All the false and misleading claims which this industry makes for itself work to disguise the fact that it is only a **nominal** producer of electricity in the USA. Its primary purpose is to provide extraordinary tax and income sheltering opportunities for a few wealthy investors at the expense of average taxpayers and rate payers. On a per kilowatt hour basis, **wind is the most heavily subsidized source of industrialized power in the nation.**

In response to persistent lobbying from the wind industry and its allies, 20 plus states have passed renewable portfolio standards requiring each state to purchase a percentage of its electricity from renewable power sources. Oregon is one. This **obligates utility companies** doing business in the state to purchase electricity from the wind industry **without any meaningful competition.** This is in the future for OTEC here in Northeast Oregon which will be required to obtain 5-10% of its power from renewable sources resulting in consumer **electrical rates to increase.** Other larger power companies in Oregon will have to purchase up to 25% of their power from renewable sources.

At the same time, also in response to a long term and very sophisticated political lobbying effort, **Congress has re-authorized substantial subsidies to wind development,** including an accelerated capital depreciation schedule and extraordinary investment and production tax credits. With laws ensuring a captive market and with tantalizing incentives for profit, investment in wind seems nearly risk free. The only remaining factor assuring success is access to land—and lots of it. This is a major obstacle to the industry. A **typical wind farm is gigantic,** consisting of dozens of **400 foot turbines** arranged along many miles of access roads and communication/transmission line infrastructure. But the potential for profit is so great that wind investors are working hard to bulldoze opposition in order to secure the land they so desperately need. If the T. Boone Pickens proposed wind farm is built, it will consume 400,000 acres of the Texas landscape. **The Antelope Ridge Wind Farm proposed for Craig Mountain in scenic Northeast Oregon will consume in excess of 47,000 acres.**

Meanwhile, Congress has made wind initiatives so lucrative that it seems to have discouraged responsible citizenship. Consider what's at stake financially:

- **Federal production tax credits remain front and center for wind developers and their investors,** giving the industry tax credits worth 1.9 cents for each kilowatt hour it produces. A modest 40 MW wind farm should produce about one hundred million KW hours annually, generating nearly **\$20 million in tax credits** over the ten year period allowed by the production tax legislation. Since this wind farm would power about 9,000 homes a year, the total subsidy, underwritten by taxpayers, would be about **\$2,200 for each household powered!** But this is just the beginning of the story.

- Moreover, **federal tax benefits pay as much as two-thirds of the capital cost of each \$1.5 million wind turbine**, with many states creating incentives to cover on average an additional ten percent of these costs.

Wind farm owners can use tax credits to reduce their corporate tax obligations by tens of millions. Who benefits? A parade of characters. But the most stunning numbers have been posted by big companies that wanted to boost their bottom line. The hotel chain **Marriott International Inc.**, which has 2,500 lodging properties worldwide, **bought four synfuel plants in October 2001**. The next year, the first full year of production, Marriott's new synthetic-fuel operations generated **\$159 million in tax credits**. Marriott had paid \$46 million in cash for the facilities, meaning the tax credits gave the company a **return of 246% on its investment in just one year**. It was a welcome boost for the company at a time when the average room revenue from Marriott's traditional lodging business fell 4.8%. Moreover, the company's effective income tax rate plunged to 6.8% in 2002 from 36.1% in 2001, "primarily due to the impact of our synthetic-fuel business," according to its annual report. Consequently, **Marriott paid federal income taxes at a rate below that paid by individuals and families earning less than \$20,000 a year**.

Fuel for the Bottom Line

State renewable portfolio standards laws make it probable that **wind companies will likely charge utilities double the price paid for coal**. For example, a 140MW wind facility as a consequence will likely reap 15-25 million dollars annually for the product it generates, and almost all of that energy product will be wasted in the electricity grid's spinning reserves. **In addition to its lucrative production tax credits, the wind industry is a lusty cash cow**.

It is for these kinds of rewards that wind developers have placed private gain over the public interest. In the process, they have transformed the wind business into yet another extraction industry, relying upon false claims and the gullibility of those seeking easy solutions to complex problems. According to the Department of Energy's Energy Information Administration, if the renewable production tax credit is extended into 2015, there will be 42,000 1.5 MW or larger wind turbines installed in the United States by 2025, covering 3,750 square miles. These would generate 206 billion kilowatt hours of electricity per year, meeting about **3.7 percent of the United States' electricity demand in 2025**. **Although this projection is optimistic because it assumes a capacity factor of 37 percent, the sheer numbers of turbines invite social and environmental havoc without regulations for responsible siting**.

The U.S. Energy Information Administration reported in 2008, on a dollar per megawatt hour basis, the **U.S. Government subsidizes wind at \$23.34 per MWH** compared to reliable energy sources: natural gas at 25¢; coal at 44¢; hydro at 67¢; and nuclear at \$1.59, leading to what some U.S. commentators call **"a huge corporate welfare feeding frenzy."** The Wall Street Journal warns that "wind generation is the prime example of what can go wrong when the government decides to pick winners."

Wildlife loss

The **low bird and bat mortality ultimately acknowledged is extremely misleading** if not outright disingenuous. Their "experts" often use an apples to orangutans comparison, giving statistics (only two or three birds killed per turbine) derived from western turbines averaging about 150 feet tall and located

in fields not known for significant avian migration—then stating these should be comparable to 475 foot turbines located on high forested ridges in areas well known as a major avian flyway. It is a known fact that Union County is directly in line of wildlife migration routes from bats, birds and larger wildlife.

While bird mortality has long been a concern, recent studies show that bat mortality may be an even greater problem, for reasons which are not entirely clear. But wind industry proponents press forward. To insure they receive all their tax credits, they continue to insist on post construction studies. Nonetheless, because of recent discoveries made by radar analysis on ridge top migratory routes, the industry has now begun to admit that wind farm mortality could be very high, but not high enough to deter the building of wind farms. ***When it was discovered that thousands of bats were being killed*** at two wind farms on Appalachian Mountains ridgelines, Florida Power and Light, the owners of these windplants, reacted quickly. ***It barred scientists from pursuing follow-up work*** wherein they pulled its \$75,000 contribution from the research cooperative studying bat mortality and ended the doctoral work of a graduate student who had produced two years of data showing unusually high rates of bat death.

An environmental group, The Center for Biological Diversity, is presently suing twelve wind farm companies to ***stop the slaughter of eagles, hawks, and owls*** at Altamont Pass in California. Moreover, because of the many thousands of bats and birds killed at a recently constructed wind farm atop an Appalachian ridge, ***Congressmen Alan Mollohan and Nick Rahall of West Virginia*** are calling for a wind farm moratorium in their state, while the ***governor of New Jersey*** has mandated a ***moratorium on windpower*** along the Jersey shore to prevent unintentional harm to wildlife and the view shed.

Good public policy requires those who make claims about the safety of their product to substantiate those claims before introducing it into the environment, deferring to what Rachel Carson called the precautionary principle. ***Industry funded research should be highly suspect***. Experts who work for the industry should submit their research and resulting conclusions for independent, peer-reviewed analysis. Good science insists upon conclusions which account for all the evidence, not selective pieces which fit the convenience of a developer's point of view. ***Post construction studies are extremely risky and problematic—and more than a little self-serving***.

Foreign Oil/ Air Quality/ Wind Power Efficiency

Wind only generates electricity. Electricity generation is only part of our energy production. Sixty percent of the nation's energy use does not involve the making of electricity. Wind energy itself will not improve air quality.

The sheer volume of automobile exhaust combined with home heating demand is major contributors to the problem of air quality and use of foreign oil. It is folly to suggest that thousands of wind turbines blanketing the mountains of the US would do anything of significance to mitigate these other energy forces evidently contributing to the warming of the planet. Allegheny Power, the major electricity provider in its region including Western Maryland, reports that oil accounted for 1% of the resources used to generate its power in 2004. Nationwide, this figure is less than 3%. Given that wind only produces electricity, given that we use so little oil for electricity production, and even if large numbers of wind turbines displaced the one percent of our electricity now powered by oil, the region would still be

heavily dependent on coal and gas, power sources and we would ***still be mightily dependent on foreign oil, contrary to what the wind industry claims.***

The electricity grid has a complex monitoring system for predicting and maintaining its supply. Electricity must balance the rate of production with the rate of consumption at all times. A fundamental problem with supplying electricity is that electricity cannot be stored at industrial levels. ***Once generated, electricity must be delivered and consumed immediately.*** However, power sources like coal and nuclear are rarely volatile when producing their yield and produce electricity at about 75-80 percent of their rated capacities. The volatile, extremely unpredictable nature of wind resource makes its technology different from other power sources not only in degree but in kind.

Given the intermittent and volatile nature of the wind, both the mechanics of grid operation and transmission ***technology would have to be retooled—at substantial cost—to back up wind generation.*** This retooling issue was denied in September 2009 by Valerie Franklin, the Horizon Wind spokesperson. In fact, if wind energy increased to provide, say, just a small percentage of the power for the grid, ***primarily fossil-fueled generating plants would have to fire up to levels of 80 percent to function as a "shadow" back up service.***

In fact, wind technology works least when the need is greatest—summer peak demand, when the wind is typically not very active. For example, at the newly constructed Mountaineer wind facility in West Virginia, the capacity factor during summer months averages less than 15 percent—half of the average annual capacity factor.

Wind energy development in the US at its realistic maximum—will not result in a net reduction of greenhouse gases or cut the present rate of the burning of coal and other fossil fuels. The very best case scenario for windpower in the Mid-Atlantic region is that future wind energy development will only slightly lessen the rapidly increasing rate in the growth of demand for electricity from other power sources.

The claim wind companies make about potential wind energy production may seem impressive. In this larger scheme, industrial windpower's comparatively minuscule power production would immediately be engulfed by increasing demand. A power grid in the east coordinates the delivery of more than 163,000 MW of electricity annually to the region. A 45 MW wind facility might annually contribute 14 MW of unreliably intermittent energy to the grid—***.0000858 percent of the grid's current supply.*** The boast that this kind of power plant would be an important first step in the direction of a comprehensively effective wind power system is therefore unsupportable.

Unless we have a major change of political direction, fossil fuel combustion, and the toxins it emits into the air will increase in the future. The wind industry will not itself alter this circumstance. ***Only when the public insists upon implementing appropriate standards and newer equipment to increase efficiency, as well as conservation measures that reduce per capita consumption demand, will air quality improve.*** Indeed, because of some of these measures are residual to the last Administration, which mandated newer, more efficient coal-burning technology, air quality in the region has actually improved in recent years. The same amount of funding that is provided wind power needs to be ***provided to other power sources*** such as natural gas, coal and nuclear. In addition, ***wind power needs to be discontinued since wind power is a Trojan horse program.***

Wind technology is very problematic from an energy production standpoint. The wind needs to blow eight to fourteen miles an hour before a turbine will produce electricity, and a turbine is programmed to shut down when the wind velocity exceeds 50 or 55 miles per hour to prevent harm to its gears. **If the wind were to blow** at a sufficiently consistent velocity all the time and if the turbine never broke down, the turbine would be operating at **100 percent of its capacity** potential over a year's time—**it's Rated Capacity**. However, because **the wind is intermittent and volatile**, and the turbines at various times **require maintenance**, they actually will **produce electricity only some of the time**. No existing wind farms located in Eastern US have achieved a capacity factor of more than 30 percent. This means that **70 percent of the time they are not producing electricity**. Even with a generous 30 percent capacity factor, more than 2,000 giant 2.5 MW turbines are needed to equal the annual production of one 1600 MW coal plant. It is interesting to note that according to the Center for Science and Public Policy in Washington DC, they have found that the **average wind speed in the US is 10 MPH** well below the minimum to generate electricity.

It should also be interesting to note that if wind machines were to operate at a 100% of the time, the maintenance cost would most likely rise to a point of obsolescing these machines a lot sooner than the predicted life. This is just a mechanical fact if one looks at the gear train and the mechanics of the design, mechanical devices wear out. According to Frontier Pro Services, gearbox failures account for the largest amount of downtime. **Renewable Energy World has also determined bearing failure has caused serious downtime of these machines**. Recently per Wind Power Monthly, a wind farm in Canada, Vestas, had to replace the gear boxes for the second time due to failure. This confirms that at a current **operational time of less than 30 %** these machines are very unreliable.

Recently, a wind developer claimed his proposed 40 megawatt wind farm would generate enough electricity to **power 33,000 homes**. A megawatt (MW) is one million watts or one thousand kilowatts (KW). According to the Department of Energy, the average home consumes 12,000 KW hours of electricity annually.* Using this estimate, one can rather easily obtain a reasonable annual projection for the number of homes this wind farm might actually power. The following example assumes a 24 turbine wind farm with 400-foot tall turbines, each rated with a potential of 1.65MW and with a generous operation factor of 30 percent:

1.65 MW x 30% operation factor = .50 MW (or 500 KW)
500 KW x 24 hours x 365 days = 4,380,000 KW hours per year per turbine
4,380,000 KW x 24 turbines = 105,120,000 KW hours annual plant output
105,120,000 KW / 12,000 KW hours average household use per year* = **8,760 homes powered annually**.

Consequently, a 40 MW wind farm would power less than 9,000 homes annually. **Even this overstates the case significantly, since electricity from wind is inherently intermittent and volatile**, it would really "serve" those homes where the occupants were willing to have electricity only when the wind was blowing in the right speed range—or for them to invest in an expensive battery storage system. Seen in this light, **windpower would service no homes in any conventional sense of that term's use**. A 40 MW wind farm may produce about 14 million watts annually for the grid, but this is not the same as saying it will service any particular sector.

Taxes

Rural areas often rely heavily upon tourism attracted to the region's scenic natural beauty. ***The lure of additional revenue without any apparent cost often blinds authorities to the problems*** created by development which will diminish the natural beauty at the heart of the economy.

Developers often ***claim a 30 year turbine life, wherein most are obsolete in 15 years***, which seems meaningless in light of the ***federal double declining capital depreciation schedule allowed*** for the industry wherein allows the developer to write off the investment in a very rapid program, as a result in the ***10 year range, the wind farm is nearly depreciated resulting in very little revenue to the county.***

Double declining balance simply means that the ***wind farm equipment loses value at a much faster rate*** than normal, and owners would be able to deduct from their taxable income a total of 20% in the first year, 32% in the second, 19.2% in the third, 11.2% in the ensuing two tax years, and 6.4% in the sixth year. This depreciation program is ***supported by the Oregon Strategic Investment Program (SIP)*** wherein the Oregon legislators set up this program for companies to make investment in Oregon which was designed for companies that were to hire a significant long term labor force. Somehow Horizon Wind Power was slipped into this program which defeats the program as it was designed. A prime example of the SIP is the where Horizon Wind built the Elkhorn Wind Farm at a ***cost of 207 million*** but ***due to the SIP it is assessed at 23 million to be written off in 15 years*** on a double declining balance wherein the revenue that ***Union County will receive will be minimal in 8 years.***

If the Elkhorn Wind Farm would have been taxed at the normal rate without the SIP, it would be generating \$1.8 to \$1.5 million in annual tax revenue that could have been distributed throughout the county.

If we use the same SIP scenario as the Elkhorn Wind Farm, we will generate approximately the same amount of annual revenue even though the Antelope Ridge Wind farm is expected to have a real market value of \$700 million. Again due to the SIP, we could only tax Horizon on something less than \$25 million.

If the Antelope Ridge Wind Farm is not put into the SIP, the county will be able to collect annual taxes of \$7 million the first year, and it would be a great replacement for the loss of the timber tax revenue. These funds could be spread across every taxing district in Union County.

Wind power companies had originally promised to contribute many hundreds of thousands of dollars in local taxes, but with knowledgeable tax accountants, a developer will undoubtedly look to protect his investors, not a local economy hundreds of miles away from its corporate offices. ***No penalties seem to apply if local jurisdictions do not receive promised tax revenues.*** Consequently, there are no real incentives to tell the truth. ***Wind developers know that spin wins.***

Leases

An examination of several wind leases obtained from disgruntled lessor reveals provision for an initial, one-time payment (from \$500 to \$1,000) to reserve a turbine lease, with pledges of minimum annual rental income of about \$1,500 per turbine against a small percentage of the power the turbines actually produce, generating at maximum about \$2,500 per turbine. Plus, who has control of the records of production? Not the lessor. ***Wind lessor's should interrogate any lease proposal from a wind developer before signing anything.*** The supposedly "solid" promises of lease revenue are typically unsecured—and the ***developer can unilaterally withdraw from the lease with only a 60 day notice.***

The lessor will not have this luxury. Horizon Wind leases are a mystery, for some reason they choose hide what they are offering!

Wind leases are typically written to favor the developer, often **restricting the owner's use of the land for up to 35 years**. Aside from saddling lessors with an onerous obligation, the contract also **may place property owners who live near the proposed wind turbines at risk**. The contract also may stipulate that the wind developer has the right to the free flow of the wind, effectively controlling not only what can and what cannot be built on the property, but also where any building can take place. It usually gives the developer veto power over hunting on the land. The grant of easement may permit the wind developer rights to use any and all the property at the developer's discretion, including provisions for unlimited ingress and egress at any time, for transmission lines, for building any structures, wires, fences, buildings at any place the developer deems necessary, for allowing access at any time to any of its employees—and "an easement for any sound waivers or noise emitted from the wind turbine generators or other equipment."

It is a known fact that wind power developers tie up surrounding land owners to a site with potential contracts while full well knowing there will never be a wind tower on there property. They do this keep the adjacent landowners from complaining after the project is complete or during construction.

Local Revenues

Wind developers nearly always overstate the general local economic benefits from a wind facility by counting the full price of goods and services, rather than value added. Generally, **a large part of the price paid to a local supplier has to be paid by that supplier to another agent**, in this case likely to be a party outside the local area. This price is part of the local supplier's cost of acquiring the goods (for example, the purchase of fuel, wiring, cement) the local supplier is reselling to the wind facility. The only portion of the price paid by the wind facility that should be tallied is the difference between the local supplier's cost and the price he charges—that is, the value added portion—which in any case would be extremely small in a rural county as most goods will be purchased elsewhere for a wind facility.

Property Values

Although looming wind farms are a relatively recent phenomenon in the US, there is increasing **evidence that the closer one resides to them, the lower one's property value falls**. For quiet rural properties, the premiums paid for the serenity of natural views can no longer be justified if the area is surrounded by huge wind turbines. **The rural areas targeted by wind developers are often filled with family farms framed by regal mountains.**

Wind farm leases diminish property values throughout the view shed, while creating major disturbances which reduce the quality of life for nearby residents. One of the most validated real estate precepts is the idea that significant natural views have premium value, and intrusions which **restrict that view erode value**. Realtors doing business near windplants in the western US and in Europe understand that **property will sell for between ten and thirty percent less** than previous market value, depending upon how close it is to the wind farm. According to Paul Gipe, author and proponent of responsible wind development, an axiom for the wind industry is that its technology is far more popular with people who live a remote distance from wind facilities—and much more unpopular with those who live nearby.

In 2001-2002, the Moratorium Committee of Kewaunee County, Lincoln Township, Wisconsin compared property sales prices to assessed values before and after the construction of two wind energy facilities, each having relatively small .65 MW turbines. An assessor reported that property sales (vs. 2001 assessed values) declined by 26% within one mile and by 18% more than one mile of the wind project. The Moratorium Committee also sent anonymous survey forms to 310 property owners, of whom 223 responded. These responses were then grouped based upon proximity to the wind farms. The survey results found that **74% of respondents would not build or buy within 1/4 mile, 61% within 1/2 mile and 59% within 2 miles of the wind farms.** In fact, a large percentage stated that they would not buy a home within 5 miles of the turbines. As the study noted, any reduction in property values would, in turn, **lead to a fall in property tax collections** in the affected towns; the drop in these tax collections would be in the millions annually. If the tax rates were raised to maintain revenue, this would shift some of the property tax burden to business, other sources or a total loss.

Russell Bounds, one of Garrett County's (Maryland) leading realtors in large property transactions, has already lost sales in the area of proposed wind farms. He has stated that huge industrial wind farms "would be devastating not only to the real estate values in the Pleasant Valley view shed, especially to neighboring properties, **but would also negatively affect the entire county economy, since so much of that economy is tied up with tourism drawn by the county's natural views.**" Mr. Bounds has recently testified at a Maryland Public Service Commission wind hearing that, over the last several years, he has had at least 25 people who expressed interest in buying land in the area targeted by wind developers. However, when he advised them about the plans for the wind facilities, **not one of those people expressed any further interest.**

The wind industry will not create many local jobs

This is a cruel untruth, especially in economically depressed areas. Very few permanent jobs will likely be created—perhaps a couple of low wage maintenance employees. According to a report by the National Renewable Energy Lab on wind farm jobs, **the national average is one maintenance employee for every 12-15 turbines.** A 20 turbine wind farm in Meyersdale, Pennsylvania now employs only two maintenance employees. Forty miles south, the Mountaineer wind facility in West Virginia, with over 45 turbines, employs three to four workers. For two wind farms proposed for Western Maryland (Clipper Windpower and Synergics Wind Energy, both LLCs), the developers have pledged to pay each of their maintenance employees little more than \$18,000 annually, less than a living wage for a family of four in this country. The collective capital value of their facilities, however, is projected to be in the neighborhood of \$140 million....

During wind farm construction, a few security guards, concrete and aggregate suppliers and some local earth moving crews will be hired for a few months, **while the bulk of construction is typically completed by primarily foreign labor,** since the turbines are often manufactured in Europe with warranties serviced by the manufacturer. A recent study by the Iowa Department of Natural Resources on the "Top of Iowa" windplant showed that, **of the 200 total construction jobs, only 20 were local—and all disappeared within six months.**

Decommission

Once the wind machines become obsolete, it will require they be decommissioned and removed; however, in the Antelope Ridge Wind Farm proposal the following is indicated.

1. *Horizon is stating the removal of the turbine foundation will only be down 36" while the remaining 9 feet of the pad will be left in the ground and covered over. Removal of the turbine foundation needs to be completely removed in areas of agricultural farming since the 36" depth is an area that would be considered compacted and crop growth would be jeopardized. In addition the concrete needs to be reconstituted by crushing at an off site location so the material can be reused for roadway material. To fill a landfill or on site canyon with this debris is not in the best interest of anyone and will contaminate the area with material that will never bio degrade.*
2. *Horizon has not provided any funds for hazardous waste in there decommission plan. Horizon claims that the facility will not generate large amounts of hazardous material contamination. Per section G of there proposal there will be 36,600 gallons of gear oil contained within the wind towers, 144,600 gallons of substation oil, and 9,300 gallons of ethylene glycol within the wind farm. In addition with the large amount of heavy equipment used in the decommissioning there is a chance of diesel and oil spills. Funds need to be budgeted for these issues in the cost overview.*
3. *The decommission proposal includes a scrap credit of \$4,883,685 computes to \$134.03 per ton which is a highly inflated amount, even if the steel is prepared it would not bring that value on today's market. In years, past scrap was as low as \$25 per ton and could well be at that level when the time comes to scrap the towers. In order to provide a bond that will cover the true cost, the scrap credit needs to be removed entirely since there is no way to predict the actual value.*
4. *The estimate of 4 truck loads per tower for steel removal equates to each truck must carry 50 tons which obviously means the towers will be kept basically intact as a result they will not be sold as prepared scrap. It is interesting to find it requires 9 trucks loads to deliver each wind tower to the site, but it is claimed that it will take 4 truck loads to haul them away. It is also planned to landfill the fiberglass propellers which will never biodegrade, some other process needs to be developed for disposal.*
5. *The cost of \$11,758,808 plus a hazardous waste budget is the amount that needs to be bonded since as indicated there is no way of knowing what scrap will be worth at the time of decommissioning wherein in the chance Horizon Wind does not choose to undertake the decommissioning, the county will be left holding the bag with a shortfall of 4.8 million they have deducted as a scrap credit.*

Summary

The reality is that wind farms consists of mammoth industrial factories often targeted for areas which pride themselves on their natural beauty. This inherent incompatibility makes for a hard sell. Consequently, the wind industry has commandeered the terms "windmill" and "wind farm" to make its outsized machinery more attractive to rural areas.

Press releases describing "wind farms" occasionally state the turbines' size in meters, causing some readers to think that a 125 meter turbine is really only 125 feet—and not over 400 feet. More often, they will only refer to the height of the turbine tower, not mentioning the size of the enormous propeller blades. However, a turbine tower which is 265 feet tall with ***a propeller blade that is 135 foot long is 400 feet tall.*** Even when they concede the actual size, they maintain wind facilities won't be intrusive because the turbines will be hidden in the trees, ***as if trees over 400 feet tall exist on forested ridges.***

Watch for this classic bait-and-switch technique

Wind developers will often initially propose a facility consisting of a number of "smaller" turbines, typically 1.5 MW 340-400 foot machines. When the public begins to realize the threat to its basic qualities of life, and rushes to oppose the project, the wind developer will appear to offer appeasement—***in the form of lesser numbers of turbines but 10-15 percent larger (430-465 foot—2.5 MW) with a much greater rotor sweep (the propeller blade will be more than 310 feet long).*** The developer will claim this is possible because of "newer technology." It is more likely, however, that this is a cynical ploy to make the industry seem more congenial to the communities it seeks to exploit, always "ready to compromise." ***In fact, however, this is a tactical move that will actually increase industry profits while playing havoc with the community.***

In the Horizon proposal for Antelope Ridge they continually state the view shed will not be seriously impacted by 90 and 100 meter (295 & 328 feet) wind towers while in fact the wind towers will actually be 475 feet (140 meters).

Perhaps there are laws and regulatory measures which would severely penalize wind developers for making promotional claims they did not deliver once their facility was built. But there doesn't appear to be any such proscriptions. No negative consequences seem to attach to the industry ***for making a cascade of promises that unlikely will be fulfilled***, such as providing significant new jobs and local revenues while contributing to US energy independence; such as improving air quality by reducing current levels of fossil fuel combustion; such as causing no nuisances and actually enhancing nearby property values.

What, for example, would the penalty be in most jurisdictions if the wind developer's promises about the amount of local taxes a community would receive failed to materialize because of an arcane legal tax offset known only to skilled accountants? Or, what is the sanction against the ridiculous claim that scores of thousands of homes can be "powered" by an unreliable energy source that at best functions 30 percent of the time?

Richard Courtney with the Center of Science and Public Policy states that the

“siting criteria for massive industrial wind plants are akin to making larger closets for the emperor with no clothes. It's much like giving a second story burglary ring both a ladder and an alibi.”

Wind power needs to be curtailed and the current funding and tax breaks need to be applied to more reliable and responsible technology. Clearly polluting our countryside with inept, massive wind towers is not the solution.

I am petitioning our local officials and legislators to stop the destruction of the scenic beauty of Oregon and the fantasy that wind power provides anything of true value to save our environment.

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