

**Comments Concerning  
DRAFT --- Renewable Energy Ordinance – October 2013 --- DRAFT  
From Friends of Antelope Valley Open Space**

**Before commenting on the specific ordinance we would like to ask the question:**

***Are industrial wind turbine installations appropriate for any areas of Los Angeles County?***

Controversy is raging all over the world concerning so called "green energy" produced by wind turbines. [The European Platform Against Windfarms now has 485 signatory organizations](#) from 22 European countries. In the UK, where fights are raging against industrial wind projects in Wales, Scotland, and elsewhere, [some 250 anti-wind groups have been formed](#). In Canada, [the province of Ontario alone has more than 50 anti-wind groups](#). The US has about [170 anti-wind groups](#).

We cannot ignore the alarms raised by these many groups. Before we begin a discussion of county standards concerning alternative energy, we must explore this larger issue and find answers to some basic common sense concerns:

**1. Do we need industrial-scale renewable energy to reach green energy goals?**

**The organization “Solar Done Right” (SolarDoneRight.org) makes the point that distributed (rooftop) solar can meet green energy goals without habitat destruction:**

“Habitat destruction threatens the diversity of life on our planet. Renewable energy strategies that damage habitat only make the problem worse. Distributed generation such as rooftop solar is the faster, cheaper, cleaner and more effective way of meeting our energy needs in the next century.”

**Germany leads the way in demonstrating the success of rooftop solar:**

In response to the *question Given The Urgency Of Climate Change, Isn't Rooftop Solar Deployment Too Slow is this answer:*

“Distributed generation (DG) installations increase rapidly with the right policies. Over half of Germany’s 53,000 megawatts (MW) of clean energy are generated by smaller installations owned by individuals, and that number is growing rapidly. Germany installed 3,000 MW of solar in Dec. 2011 alone. In Australia, over 500,000 homes have rooftop solar thanks to a successful feed-in-tariff. The US has been slow to adopt policies proven effective elsewhere, but even so California has installed 1,000 megawatts of rooftop solar. Not a single watt of large-scale industrial solar has come online since solar “fast-tracking” was implemented in 2005. **The NREL has identified**

**the potential for 80,000 MW of rooftop solar in California alone, far more than would be needed to reach even the most ambitious RPS/RESgoals.”**

Rooftop solar also supports small business owners and provides permanent jobs for the local workers who install and maintain the systems. This improves the local economy not only by providing permanent jobs but also by putting more dollars into the hands of consumers through savings on utility bills, dollars that translate into tax revenue for local government. Industrial-scale renewable installations send money out of the area to enrich out-of-state and in many cases, out-of-country corporations such as Canadian Power. Rooftop solar rewards LA County citizens through permanent job creation, direct savings and increased revenue for local government;

## **2. How much energy will be produced by industrial-scale wind turbines?**

**Wind energy companies routinely use the "rated capacity" of turbines in a way that is misleading. Los Angeles County should require full transparency on the topic of rated capacity versus predicted actual megawatt output in all official documents made available to its citizens concerning wind power energy generation.**

For example, according to NextEra, its "Blue Sky" project was a 225 Megawatt project. But what is not routinely explained to the public is that real average output will be far less than 225 megawatts. What did NextEra predict would be that actual percentage of output? Wind energy companies in Scotland claim a 30% average.

However, researchers for the John Muir Trust ([jmt.org](http://jmt.org)) concluded after a two year study that actual output is closer to 24%. Quoting the report "“It was a surprise to find out just how disappointingly wind turbines perform in a supposedly wind-ridden country like Scotland. Based on the data, for one third of the time wind output is less than 10% of capacity, compared to the 30% that is commonly claimed.”

Further, John Muir Trust head of policy Helen McDade said: “This report is a real eye-opener for anyone who has been wondering just how much power Scotland is getting from the fleet of wind turbines that have taken over many of our most beautiful mountains and hillsides.

“The answer appears to be not enough, and much less than is routinely claimed.”

In some areas of the United States, wind turbines must be turned off at night to avoid bat kills and during the day when radar detects flocks of migratory birds. How will these very possible limits on wind turbine use further decrease actual electrical output?

### 3. Will significant amounts of carbon dioxide emission be reduced?

Since the wind is intermittent, wind farms cannot replace fossil fuel electrical generation. And, when the wind does begin to blow, studies show that the power down and - when the wind dies down - eventual power up process of nearby fossil fuel plants, in many cases increased more carbon dioxide emission than was reduced by the wind farms.

Numerous studies illustrate this. One such study was conducted by the Bentek Energy, a Colorado-based energy analytics firm that analyzed actual emissions data from electric generation plants located in four regions including the California Independent System Operator.

Bennett and McBee looked at more than 300,000 hourly records from 2007 through 2009. Their results show that at best the figures given by wind energy corporations have vastly overstated wind's ability to decrease carbon dioxide.

In 2003, a paper presented at the International Energy Workshop in Laxenburg, Austria illustrated that incurably intermittent electricity produced by wind turbines "eliminates the major part of the expected positive effect of wind energy," and that **"In some cases the environmental gain from the wind energy use was lost almost totally."**

In 2004, the Irish Electricity Supply Board found that as the level of wind capacity increases, "the CO2 emissions actually increase as a direct result of having to cope with the variation of wind-power output."

In November 2009, Kent Hawkins, a Canadian electrical engineer, published a detailed analysis on the frequency with which gas-fired generators must be cycled on and off in order to back up wind power. Hawkins concludes that wind power is not an "effective CO2 mitigation" strategy "because of inefficiencies introduced by fast-ramping (inefficient) operation of gas turbines."

Before wind energy is allowed anywhere in LA County, the public needs to be informed of the actual amount of carbon dioxide emission - as a total percentage of other sources of emissions including tail-pipe emissions - that will be avoided by these facilities. These statistics must take into account the added emissions created by fossil fuel plants that must be "cycled" to accommodate wind power as well as carbon dioxide created during the manufacture, shipping, construction, operation, and maintenance of wind energy facilities.

#### **4. Is the actual amount of electricity produced and emission of carbon dioxide avoided worth the damage done to the environment and the lives of the citizens of Los Angeles County?**

Dangers to birds and bats are well documented. Nationwide, about 440,000 birds are killed at wind farms each year, according to the Wildlife Service.

Wind energy proponents claim that new technologies - larger turbines and bird diverters for example - greatly reduce this threat. However, studies do not support this assertion. The results of a 5-month study of the new giant turbines on New York's Tug Hill plateau documents that the annual toll for the complete facility is more than 16,000 birds and bats.

An average of 67 golden eagles have been killed every year for three decades by wind turbines in Altamont Pass. Turbines at the nearby DWP Pine Tree Installation in the Tehachapi Mountains are also killing birds at alarming rates, including the death of at least 6 golden eagles, prompting an on-going investigation. In addition, "About 1,595 birds, mostly migratory songbirds and medium-sized species such as California quail and western meadowlark, die each year at Pine Tree," according to the bird mortality report prepared for the DWP.

In regard to bird kills at Pine Tree, "Wind farms have been killing birds for decades and law enforcement has done nothing about it, so this investigation is long overdue," said Shawn Smallwood, an expert on raptor ecology and wind farms.

Are areas of Los Angeles County less valuable habitat for bird species than the Tehachapi Mountains and therefore less susceptible to bird kills from industrial-scale renewables? Concerning the Antelope Valley the answer to this is a resounding NO.

In fact, the Antelope Valley has been identified as a "Globally Important Bird Area" by the Audubon society. The purpose of the IBA Program is to set "science-based" priorities for habitat conservation to "promote positive action to safeguard vital bird habitats." According to the Audubon's IBA website, "IBA inventories provide a scientifically defensible method for prioritizing conservation activities and allocating limited conservation dollars to ensure the maximum benefit to birds." 8,000 IBAs have been identified worldwide. A subset have been given the status of "Globally Important Bird Areas." **These 424 worldwide sites have special status due to "global conservation concern."**

**One of these 424 areas is in Los Angeles County, in the Western Antelope Valley.** This site, **the Antelope Valley Important Bird Area** provides breeding, foraging and nesting habitat for Swainson's Hawk, Golden and Bald Eagles, Northern Harriers, Burrowing Owls, Le Conte's Thrasher, Tricolored Blackbirds, Prairie Falcons and other sensitive species including the California Condor.

## **Proposed Ordinance**

Regarding specific portions of the proposed ordinance, we would like to echo the remarks sent to the Department of Regional Planning concerning the draft ordinance by the Three Points Town Council and the Original Antelope Acres Town Council. In addition, we have the following concerns:

## **Viewshed Protection**

Like the groups mentioned above we are amazed that much higher standards are being applied to potential damage to the viewshed in high-income coastal areas than are being applied to potential damage to scenic views in the North Los Angeles County. Antelope Valley citizens currently enjoy scenic vistas of mountains and open desert, views that are already being negatively impacted from the flashing night time lights from wind installations in Kern County. In addition, people from all over the world travel to the Antelope Valley California Poppy Reserve State Park to view springtime wildflowers against the backdrops of the Angeles Forest and Tehachapi Mountains. **Are people whose quality of life is enhanced by these mountain and desert vistas and views of California native wildflowers no less worthy of protection?**

## **Setbacks**

In addition to the specific comments mentioned above, we would suggest that setbacks suggested in Table 22.52. TABLE 22.52.1660-A are far below standards expressed by ordinances throughout the country and the world particularly in areas already experiencing the effects of industrial-scale wind energy. Standards listed in the proposed ordinance translate to no more than 1,000 foot setbacks. This is far below standards in other parts of the country, particularly in areas that are already suffering impacts from the proliferation of industrial wind installations.

**Setbacks for industrial-scale wind energy should be at least 1 mile from all property lines.** In fact, in some areas, such as Umatilla County, Oregon, **minimum setbacks are 2 miles.** Here are setbacks from other areas of the country and the world:

- 2 miles – Umatilla County, Oregon
- 2,414 m (1.49 miles) from property lines – Moscow, Maine
- 2,100 m (1.30 miles) Denmark
- 2,000 m (1.24 miles) to habitations, and 5 km from 21 named agglomerations – Victorian Government, Australia
- 2,000 m (1.24 miles) Queensland, Australia
- 2,000 m (1.24 miles) from existing homes proposed in New South Wales, Australia
- 1,609 m (1 mile) from non-participating property lines – Frankfort, Maine
- 1,609 m (1 mile) buffer zone to homes – Hillsdale County, Michigan
- 1,500 m (4,900 feet) for a 150 m turbine (10x tip height) from rural residences – Ellis County, Kansas
- 1,500 m (4,900 feet) recommended by Medical Officer of Health – N. Carolina
- 1,219 m (4,000 ft) from property line – Rumford, Maine
- 1,219 m (4,000 ft) from occupied structures – Clifton, Maine

Finally, measuring setbacks in terms of turbine height does nothing to address noise and vibration impacts from wind turbines that are a serious threat to health and quality of life for nearby residents. There is no guarantee that shorter turbines make less noise than taller turbines, negating the validity of measuring setbacks in terms of turbine height.

These threats to health and quality of life are real and disproportionately affect rural residents, as documented in peer reviewed articles from all over the world. According to researcher Carmen Krough in her article, "Industrial Wind Turbine Development and Loss of Social Justice" published in the *Bulletin of Science Technology & Society* in July 2011,

"Based on several years of investigation, my research demonstrates that IWTs [Industrial Wind Turbines] were initially welcomed into communities. The reported adverse impacts were unexpected ... In addition to physiological and psychological symptoms there are individuals reporting adverse impacts, including reduced well-being, degraded living conditions, and adverse societal and economic impacts. These adverse impacts culminate in expressions of a loss of fairness and social justice."

**Based on Krough's research, it may be that even 1 mile setbacks are inadequate, as revealed by her peer reviewed article:**

"... residents living within 2 km [1.24 miles] of a turbine installation reporting lower overall quality of life, physical quality of life, and environmental quality of life. Those exposed to turbine noise also reported significantly lower sleep quality ..."

We urge planners for the Los Angeles Department of Regional Planning to carefully weigh the many important issues regarding industrial-scale wind and solar and create an ordinance that

- Protects the remaining scarce native habitat in Los Angeles County
- Guarantees health, safety and social justice for all residents
- Promotes distributed solar that reduces greenhouse gasses, grows the economy and benefits all citizens without destroying wildlife and obliterating scenic vistas