



## Community Development Department

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### MEMORANDUM

June 11, 2008

To: Deschutes Board of County Commissioners  
From: Chris Bedsaul, Associate Planner  
Subject: Using wind for generating electricity in Deschutes County.

#### USE OF WIND POWER

The use of the wind's power is both old and new. From moving everything from large and small sailing ships across the oceans of the world, pumping water out of the ground and producing electricity for personal or commercial purposes. The use of wind powered structures, such as "windmills" or turbines has been used for many years prior to creation of any governmental regulations that may restrict their use.

The American Wind Energy Association (AWEA) located in Washington D.C. provides nationwide information on the use and operation of micro to major commercial wind power producing facilities. My research of AWEA and other internet data sources has determined there are various zoning ordinances created by Counties and Cities throughout the country for the regulation of personal use wind powered turbines for generating electricity. Almost all of the zoning ordinances I reviewed contain regulations regarding minimum lot size, setback distances, noise levels, tower height limits based upon property size, clearance of the turbine blades above the ground, safety issues regarding FAA, restoration requirements due to abandonment, maximum tower heights up to 75 feet for residential purposes, visual impacts and prohibition of advertisement signage. According to AWEA, the 35-foot height limit in many zoning ordinances dates back to the early 1900's as the typical height that firefighting engines could pump water, and this restriction is clearly not applicable for today's modern fire fighting equipment that may respond to the site of a residential wind powered turbine mounted on the top of a metal pole or lattice-work structure.

AWEA and wind powered turbine manufacturers recommend that an electricity producing wind turbine blade be at a minimum height of 25 to 30 feet ABOVE any physical barriers such as trees, buildings, bluffs or other obstructions within 300-500 feet from the tower supporting the wind turbine.

## REGULATING WIND POWER IN DESCHUTES COUNTY

A "structure" is defined in Deschutes County Development Code as "something constructed or built having a fixed base on, or fixed connection to, the ground or another structure. A wind powered turbine is typically installed on the top of a metal mono-pole or lattice-work tower that is attached to the ground by a fixed base typically made of concrete and, therefore, is a "structure".

The Deschutes County Code (DCC) currently has language that regulates utility facilities, including major structures owned or operated by a public, private or electric cooperative for the generation, transmission, distribution or processing of its products. The small-scale wind powered turbine, generating electricity for personal use, is not defined as a utility facility structure and, therefore, is subject to height restrictions in any zone.

DCC requires a 30-foot maximum height for "structures" in all zones. However, an exception to this limitation may be approved up to 36 feet subject to certain conditions as described in DCC 18.120.040. "Structures" associated with telephone or power transmission lines, public schools, structures necessary for public safety and flag poles may exceed the 36-foot height limitation based upon a site plan review process, except in Landscape Management and Airport Safety Combining zones. No variance to the maximum structure height of 36 feet is available in the code.

## OREGON COUNTY OR DLCD REGULATIONS ON WIND POWER

The Deschutes County Planning Director recently requested any information that other County Planning Directors throughout Oregon may have regarding existing Development Codes that may regulate small-scale wind powered turbines, or Code language that would have an outright permitted use or an exemption for various types of wind powered structures. Four (4) County Planning Directors responded to Catherine's request for information with the following comments;

Clackamas County indicated that "Generally, we don't have height restrictions in our non-urban zones. We also have a general exception to height limits (ZDO 904.01), for, and among other things, windmills, transmission towers, and solar collection apparatus..."

Lincoln County indicated a general exception to the building height limit for "... towers, aerials, flag poles, wind generators and other similar objects". Lincoln County regulates residential wind generators as accessory uses and permits them outright in conjunction with a dwelling, unless they are connected to the grid (through a "buy-back" arrangement with the utility company) in which case, the County calls them a utility facility and they are subject to conditional use review.

Morrow County indicated that the County has not done any work on this issue and also will be facing those same limitations and concerns.

Union County indicated that it sounds like we (Oregon Counties) are all in the same position (crafting regulations related to wind turbines). Union County actually had administrative and Planning Commission appeals on one of these (wind turbines) resulting in the Board of Commissioners requesting a specific ordinance. Union County

also noted that AOC staff in Salem will be developing a model ordinance for small wind turbines through a grant received from ODOE.

Gilliam and Umatilla Counties did not respond, however, both Counties have a development code that regulates Wind Power Generation Facility Siting Requirements for commercial production of power. The use of small personal wind powered turbine structures does not appear to be regulated in these Counties, other than through a building permit process.

DLCD was requested to provide comments on the statewide regulation and/or use of wind turbines for personal power generation, but did not respond prior to this memo.

The Association of Oregon Counties (AOC) has been issued a grant by the Oregon Department of Energy for the creation of a state-wide template Ordinance regarding the recognition and regulation of small-scale wind turbine electric power generation. AOC will complete this template Ordinance prior to December 2008.

#### OPTIONS FOR DESCHUTES COUNTY TO CONSIDER REGULATING WIND POWER STRUCTURES FOR PERSONAL USE

1. No change in the DCC and continued height restriction of 36 feet for personal use wind power structures.

Effect: Will continue to significantly limit the use of and/or location(s) for the efficient operation of wind powered structures for generating electricity for personal/residential use.

2. Require an applicant to initiate a DCC Text Amendment to allow the use.

Effect: This option would place a financial burden on an applicant when compared to the installation cost of a single location for a personal use wind powered turbine and tower structure. However, it would cover the costs of creating the policy necessary for the use.

3. The BOCC determines there is a County-wide interest in promoting and regulating the siting of wind powered structures for personal use generated electricity and direct CDD to conduct a legislative process to amend the code.

Effect: Permitting wind power structures for personal use electric power generation would require a code Amendment. A Comprehensive Plan Amendment would also be required to recognize the County-wide importance of wind power generating facilities for personal use. Financial impacts to CDD for staff time in completing a Text and Comprehensive Plan Amendment cannot be determined.

4. Wait for AOC to create model ordinance and then direct CDD staff to conduct the process to adopt the language.

Effect: Costs to CDD are reduced.