# WHATCOM COUNTY COUNCIL AGENDA BILL

<table>
<thead>
<tr>
<th>CLEARANCES</th>
<th>Initial</th>
<th>Date</th>
<th>Date Received in Council Office</th>
<th>Agenda Date</th>
<th>Assigned to:</th>
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</thead>
<tbody>
<tr>
<td>Originator: Alex Cleanthes</td>
<td>ACC</td>
<td>10/10/12</td>
<td></td>
<td>10/23/2012</td>
<td>Introduction</td>
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<tr>
<td>Division Head: Wain Harrison</td>
<td>W/H</td>
<td>10/11/12</td>
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<td>11/7/2012</td>
<td>Public Hearing</td>
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<tr>
<td>Dept. Head: Sam Ryan</td>
<td>WS FOR JPB</td>
<td>10-11-12</td>
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<td>Prosecutor: Royce Buckingham</td>
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<td>Purchasing/Budget: Brad Bennett</td>
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<td>Executive: Jack Louws</td>
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**TITLE OF DOCUMENT:** Wind Energy Systems

**ATTACHMENTS:**

(1) Council’s Ordinance

**SEPA review required?** ( ) Yes ( ) NO

**SEPA review completed?** ( ) Yes ( ) NO

**Should Clerk schedule a hearing?** ( ) Yes ( ) NO

**Requested Date:** November 7, 2012

**SUMMARY STATEMENT OR LEGAL NOTICE LANGUAGE:** (If this item is an ordinance or requires a public hearing, you must provide the language for use in the required public notice. Be specific and cite RCW or WCC as appropriate. Be clear in explaining the intent of the action.)

Amendments to Whatcom County Code 20.14 Wind Energy Systems. The proposal allows for a range of Wind Energy System (WES) sizes with regulations pertaining to setbacks, appearance, sound levels and measurement, abandonment and complaint issues.

**COMMITTEE ACTION:**

**COUNCIL ACTION:**

10/23/2012: Introduced
11/07/2012: Council Adopted 5-1, Mann opposed and Weimer absent

Ord. 2012-041

**Related County Contract #:**

**Related File Numbers:**

**Ordinance or Resolution Number:**

Ord. 2012-041

**Please Note:** Once adopted and signed, ordinances and resolutions are available for viewing and printing on the County’s website at: www.co.whatcom.wa.us/council.
ORDINANCE NO. 2012-041

AMENDING WCC TITLE 20.14, WIND ENERGY SYSTEMS

WHEREAS, ORD2008-043 adopted development regulations for Wind Energy Systems in unincorporated Whatcom County.

WHEREAS, The Whatcom County Council adopted emergency ordinance 2010-015 prohibiting the application for wind energy systems greater than 500 kw and the application for multiple wind energy systems with a cumulative rated output greater than 100 kw.

WHEREAS, ORD2010-018 established a moratorium on wind energy systems greater than 500 kw and the application for multiple wind energy systems with a cumulative rated output greater than 100 kw.

WHEREAS, In accordance with RCW 36.70A.106 Whatcom County Planning and Development Services notified the Department of Commerce of proposed amendments to WCC 20.14 on Nov 3, 2010.

WHEREAS, The Whatcom County SEPA official issued a Determination of Nonsignificance (DNS) on April 13, 2011.

WHEREAS, the Planning Commission held a public hearing on May 26, 2011 and voted 6-1 for a recommendation of approval for the proposed amendments to WCC 20.14, Wind Energy Systems.

WHEREAS, the Whatcom County Council held a number of work sessions between 2011 and 2012 as well as public hearings on May 8 and November 7, 2012 regarding revisions to the Wind Energy chapter of the Whatcom County Code.

FINDINGS OF FACT AND REASONS FOR ACTION

1. The Whatcom County Council in response to the moratorium organized a Wind Energy Work Group. The work group was comprised of citizens, renewable energy professionals, Whatcom County staff and elected officials.


3. The Wind Energy Work Group discussed issues such as setbacks, noise, shadow flicker and siting of windmills near residential development.
4. The results of the Wind Energy Work Group were two proposed ordinances, one from Councilmember Brenner and one from Council member Mann. The Whatcom County Council was unable to reach consensus on an ordinance and requested the Whatcom Planning Commission to review the proposals and make a recommendation.

5. The Whatcom County Planning Commission held work sessions on and a public hearing on the results of the Wind Energy Work group on November 18, 2010, and December 9, 2010 respectively.

6. At the December 9, 2010 hearing the Planning Commission was unable to find consensus between Councilmember Brenner and Mann’s proposals. The Planning Commission requested that staff begin to re-evaluate the current ordinance and make improvements based on concerns raised by the public and discussion at the Planning Commission work session and public hearing.

7. Planning staff held two more work sessions on updating WCC 20.14. Those work sessions were held on January 13 and March 24, 2011.

8. Citizens and Planning Commissioners identified the following as issues to be addressed during the work sessions; permitting and zoning, setback requirements, pre and post monitoring of sound, height limitations, blade throw, shadow flicker, animal habitat impacts, and decommissioning.


10. A legal notice for the May 26, 2011 Whatcom County Planning Commission public hearing was publishing on May 15, 2011


12. The Whatcom County Council has held a number sessions between 2011 and 2012 on the proposed ordinance to amend WCC 20.14 Wind Energy Systems.

13. At the work sessions issues such as, permits, zoning, setback requirement, sound level measurement, height limitations, general safety, blade tip height requirements, ice throw, blade throw, flicker analysis, establishing a complaint process, and abandonment of the systems were discussed.


**CONCLUSION**

The proposal meets all of the legal requirements as noted within the
Findings of Fact and Reasons for Action. The proposed amendment is compatible with the Growth Management Act, Whatcom County Comprehensive Plan Goals and Policies, along with policies within Whatcom County’s County Wide Planning Policies. Approval of this amendment is in the public interest.

NOW, THEREFORE, BE IT ORDAINED by the Whatcom County Council that:

Section 1. The Official Whatcom County Zoning Ordinance (Title 20) is hereby amended as shown in Exhibit A.

ADOPTED the 7th day of November, 2012.

WHATCOM COUNTY COUNCIL
WHATCOM COUNTY, WASHINGTON

Dana Brown Davis, Council Clerk

Kathy Kershner, Council Chairperson

APPROVED as to form:

Civil Deputy Prosecutor

Approved: ( ) Denied

Jack Louws, Executive

Date: 11/8/2012
Chapter 20.14
WIND-ENERGY SYSTEMS

Sections:
20.14.010 Purpose.
20.14.050 General requirements for wind energy systems.
20.14.060 Sound levels and measurement.
20.14.080 Federal, state and local requirements.

20.14.010 Purpose.
The purpose of this chapter is to facilitate the installation and construction of wind energy systems in Whatcom County for private landowners, subject to reasonable restrictions. (Ord. 2008-043 § 1, 2008).

20.14.020 Definitions:
As used in this chapter, the following terms shall have the meanings indicated:

“County” shall mean the Whatcom County government.

“FAA” shall mean the Federal Aviation Administration.

“MET tower” or “meteorological tower” means a structure designed to support the gathering of wind energy resource data, and includes the tower, base plate, anchors, guy cables and hardware, anemometers (wind-speed indicators), wind direction vanes, booms to hold equipment-anemometers and vanes, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resource at a given location.

“Small wind energy system (SWES)” means a wind energy conversion system, with a rated output up to and including 100 kW, consisting of: wind turbine, tower, base and associated control or conversion electronics, as well as all anchors, guy cables and hardware.

“Tower height” means the distance measured from the grade plane (WCC 20.97.162) to the hub height of the wind turbine. This structure may be freestanding, guyed, or a monopole.

“Wind energy system (WES)” means a wind energy conversion system, consisting of: wind turbine, tower, base and associated control or conversion electronics, as well as all anchors, guy cables and hardware.
"Wind turbine" means the parts of the wind system including the blades, generator and tail. (Ord. 2008-043 § 1, 2008).


The requirements set forth in this chapter shall govern the siting of wind-energy systems used to generate mechanical or electrical energy to perform work, and which may be connected to the utility grid pursuant to Chapter 50.60 RCW, Net-Metering of Electricity, serve as an independent source of energy, or serve as part of a hybrid system.

The requirements of this chapter shall apply to all wind-energy systems (WES) proposed after the effective date of the ordinance codified in this chapter. Any WES for which a required permit has been properly issued prior to the effective date of the ordinance codified in this chapter shall not be required to meet the requirements of this chapter; provided, however, that any such pre-existing WES that is not producing energy for a continuous period of 12 months shall meet the requirements of this chapter prior to recommencing production of energy. No modification that increases the height of the system or significantly increases its output shall be allowed without full compliance with this chapter. (Ord. 2008-043 § 1, 2008).


.041 Permits and Zoning.

<table>
<thead>
<tr>
<th>System Type</th>
<th>Required Permit</th>
<th>Zones</th>
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<tbody>
<tr>
<td>MET-tower</td>
<td>Outright-permitted¹</td>
<td>All—for up-to-24 months</td>
</tr>
<tr>
<td>One-SWES</td>
<td>Outright-permitted¹</td>
<td>All</td>
</tr>
<tr>
<td>WES with a rated output of 101 kW up to and including 500 kW</td>
<td>Administrative-permit²</td>
<td>Rural, AG, CF., RF., HII</td>
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<tr>
<td>Multiple SWES per parcel with a cumulative rated output of up to and including 100 kW</td>
<td>Administrative-permit²</td>
<td>All</td>
</tr>
<tr>
<td>WES greater than 500 kW</td>
<td>Conditional-use-permit³</td>
<td>AG., CF., RF., HII</td>
</tr>
<tr>
<td>Multiple WES per parcel with a cumulative rated output above 100 kW</td>
<td>Conditional-use-permit³</td>
<td>AG., CF., RF., HII</td>
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</tbody>
</table>

¹—WES and MET-towers are required to be in compliance with but not limited to WCC Title 15, Buildings and Construction, and acquire the necessary building permit.

²—Administrative permit, WCC 20.84.235.
A WES may be considered either as a principal or accessory use. A different existing use or an existing structure on the same lot shall not preclude the installation of a WES or a part of such facility on such lot. Any WES that is constructed and installed in accordance with the provisions of this chapter shall not be deemed to constitute the expansion of a nonconforming use or structure. (Ord. 2008-043 § 1, 2008)

20.14.050 General requirements for wind energy systems.

.051 Visual Appearance — Lighting — Power Lines.

(1) Wind turbines shall be painted a nonreflective, nonobtrusive color such as the manufacturer's default color option or a color that conforms to the environment and architecture of the community, unless FAA standards require otherwise. The zoning administrator may require a photo of a WES, of the same model as that proposed in the landowner's application, adjacent to a building or some other object illustrating scale (e.g., manufacturer's photo).

(2) At WES sites, the design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the WES to the natural setting and the existing environment.

(3) No WES shall be artificially lighted, except to the extent required by the FAA or other applicable authority.

(4) No WES shall be used for displaying any advertising, except for reasonable identification of the manufacturer or operator of the wind turbine.

(5) Electrical controls, control wiring and power lines shall be wireless or underground, except where WES wiring is brought together for connection to the transmission or distribution network adjacent to that network.

.052 Setbacks and Height Limits.

The following setback requirements shall apply to all WES and MET towers:

(1) If the system does not exceed the height limitation of the zone in which it is proposed, it is exempt from the setback requirements of this chapter, provided, that all parts of the system meet the setback requirements of the underlying zone (WCC 20.80.200), except within the AG, CF and RF Zones.

(2) The tower height of a WES shall not exceed 100 feet or the maximum allowed by zoning, whichever is greater. MET towers cannot exceed a maximum height of 100 feet except in the Agricultural, Rural Forestry and Commercial Forestry Zones. Wind energy systems with towers taller than 100 feet must obtain an administrative permit, except within the AG, CF and RF Zones.
(a) All systems greater than 100 feet must provide in writing that the height requested is the minimum height necessary for the WES to operate efficiently, and demonstrate the need for the system to be 30 feet above any obstruction within 500 feet.

(3) Property Lines. Each tower shall be set back from the nearest property line a distance no less than 1.2 times its tower height, to a maximum of the tower height plus 20 feet, unless appropriate easements are secured from adjacent property owners, or other acceptable mitigation is approved by the zoning administrator or hearing examiner.

(4) Communication and Electrical Lines. Each WES shall be set back from the nearest aboveground public or private nonparticipating utility a distance no less than 1.2 times its tower height, up to a maximum of the tower height plus 20 feet, determined from the existing power line or telephone line.

(5) Setbacks shall be measured to the outer edge of the base of the WES structure towers. Guy cables and other accessory support structures may be located within setback areas. (Ord. 2008-043 § 1, 2008).

20.14.060 Sound levels and measurement.

Audible sound due to WES operations shall not exceed 65 dBA for any period of time, when measured at the property line of any abutting property containing an occupied building on the date of approval of any WES siting permit. The level, however, may be exceeded during short-term events such as utility outages and/or severe windstorms. (Ord. 2008-043 § 1, 2008).


(1) The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than 15 feet, as measured at the lowest point of the arc of the blades.

(2) Wind turbine towers shall not provide step bolts or a ladder readily accessible to the public and shall be a minimum height of 10 feet above ground level.

(3) All electrical equipment shall be safely and appropriately enclosed from unintentional access by means such as barrier fencing, equipment cabinetry or similar. All access doors to wind turbine towers and electrical equipment shall remain locked until access is necessary.

(4) Appropriate warning signage (e.g., electrical hazards) shall be placed on wind turbine towers, electrical equipment, and WES.

(5) All WES shall be equipped with overspeed controls to limit rotation of blades to a speed below the designed limits of the system. No changes or alterations from the certified design shall be permitted unless accompanied by a licensed professional engineer's statement of certification.

(6) Any WES found to be unsafe by the building official shall be repaired by the landowner to meet federal, state and local safety standards or removed within three months. (Ord. 2008-043 § 1, 2008).
20.14.080 Federal, state and local requirements.

1. WES shall comply with all current adopted Whatcom County codes and ordinances, including but not limited to WCC Titles 15, 16, and 23.

2. WES must comply with regulations of the Federal Aviation Administration (FAA), along with requirements within WCC 20.80.675. Height limitations surrounding airports.
   
   (a) If necessary, an applicant may be required to submit the following information for analysis of airspace obstructions in relation to WCC 20.80.675: mean sea level (MSL) of adjacent airports, MSL of proposed site, Euclidean distance from adjacent airports to proposed site, and total elevation of WES and structure.

3. All WES electrical systems shall comply with requirements per the Washington State Department of Labor and Industries and the current adopted edition of the National Electrical Code (NEC).

4. All WES with the intention to tie to their respective utility provider’s grid system shall meet the requirements of Chapter 80.60 RCW, Net Metering of Electricity. (Ord. 2008-043 § 1, 2008).