

Note: Changes from June 8<sup>th</sup> Public Comment Draft are highlighted in yellow. Changes include:

- Changed "machine" to "turbine" and to references to "hub height plus the rotor radius" to "turbine height" throughout the draft.
- In Section (b) clarified that the nameplate must be legible from the right-of-way.
- In Section (c) added that the revocation of the special permit is another potential reason for removal of the tower within one year.
- Clarified in Section (e) that turbines may not adversely impact State or Federal threatened or endangered species, such as saline wetlands, or rare natural resources such as native prairie.
- In Section (f) clarified sentence to views from prominent environmental areas should be protected from "noise and visual impacts" rather than stating protected from "nearby intrusion."
- Clarified in Section (g) the setback was to the turbine base and distance from a public street is measured at the right-of-way line.
- In Section (h) changed that if the non-participating lot owner is left with "little land" to "less than 3 acres of land" outside of the CW ECS or noise impact area. This was to provide a measurable amount of land that was not impacted. Three acres is the minimum amount of land for a dwelling unit served by individual sewer service. Also clarified the reference to "noise impact area." This section was also moved to after the setback section as it was more appropriate to address after the setbacks were stated.
- Section (j) was revised to add details on what type of pre-construction noise study would be required by the Health Department.
- There are additional minor wording changes to improve readability without changing the meaning.

### **13.018 Commercial Wind Energy Conversion System (CW ECS).**

A Commercial Wind Energy Conversion System (CW ECS) may be allowed in the AG District by special permit under the conditions listed below:

(a) In cases where CW ECS wind turbines are part of a unified plan, parcels which are separated from one another only by the presence of public right-of-way may be combined into one special permit application. When a special permit covers multiple premises, the lease or easement holder may sign the application rather than the lot owner.

~~(a) Each CW ECS machine shall be no less than 1,000 feet from any property line of a dwelling unit not associated with the project.~~

~~(b) The distance from all external boundary lot lines and/or right of way lines of the special permit to any tower support base of the CW ECS shall be equal to the height of the tower plus the rotor radius.~~

~~(c) Each CW ECS machine, including all equipment, shall have a sound emission rating of no more than 35 dBA. Noise levels caused from the CW ECS turbine(s) shall not exceed 35 dBA at the property line of any dwellings within a one mile radius of a CW ECS turbine. A noise study, incorporating both A and C weighted noise impacts on property within one mile may be required. Noise rating shall conform to International Electrotechnical Commission (IEC) standards unless otherwise directed by a government agency.~~

~~(d) (b) Turbines~~ shall meet all FAA requirements, including but not limited to lighting and radar interference issues. Strobe lighting shall be avoided if alternative lighting is allowed. Color and finish shall be white, gray or another non-obtrusive, non-reflective finish. There shall be no advertising, logo,

or other symbols painted on the turbine other than those required by the FAA or other governing body. Each turbine shall have onsite a name plate which is clearly legible from the public right-of-way and contains contact information of the operator of the wind facility.

~~(e)~~ All applicable electrical, building, utility tie-in codes and other government regulations shall apply.

~~(f)~~ The distance from any tower base of a CWECs to any tower support base of another CWECs under other ownership shall be spaced a minimum of five (5) rotor diameters distance figured by the size of the largest rotor.

~~(g)~~ (c) Each application shall have a decommissioning plan outlining the means, procedures and cost of removing the turbine(s) and all related supporting infrastructure and a bond or equivalent enforceable resource to guarantee removal and restoration upon discontinuance, decommissioning or abandonment. Each tower shall be removed within one year of decommissioning or revocation of the special permit. Upon removal of the tower, there shall be four feet of soil between the ground level and former tower's cement base.

~~(h)~~ Said CWECs shall meet all Federal, State and local rules and regulations.

(d) Any proposed turbine which is within half mile of any non-participating dwelling shall provide shadow flicker modeling data showing the expected effect of shadow flicker on non-participating properties. Shadow flicker shall not fall upon any non-participating dwelling, or other building which is occupied by humans, for more than 30 minutes in any one day, nor a total of 30 hours per any calendar year. If shadow flicker exceeds these limits, measures shall be taken to reduce the effects of shadow flicker on buildings, which may include shutting the turbine down during periods of shadow flicker.

(e) Construction and operation shall not adversely impact identified State or Federal threatened or endangered species such as saline wetlands, or rare natural resources such as native prairie and grasslands.

(f) No turbine shall obstruct or impair an identified view corridor or scenic vista of public value, as mapped on the Capitol View Corridors map in the Lincoln/ Lancaster County Comprehensive Plan. The views from prominent environmental areas, such as Nine Mile Prairie and Spring Creek Prairie, shall also be protected from adverse visual or noise impacts. Any application which, upon initial review, poses a possible impact to these views will be required to be relocated or provide view shed mapping, and visual simulations from key observation points for review.

(g) Setbacks to the turbine base:

- 1) For a non-participating lot of less than 10 acres, the setback shall be 1,000 feet or 3 times the turbine height (hub height plus the rotor radius), whichever is greater, measured to the property line.

- 2) For non-participating lot of 10 acres or greater, when there is a dwelling unit on the lot, the setback shall be 1,000 feet or 3 times the turbine height, whichever is greater, measured to the closest exterior wall of the dwelling unit.
- 3) For participating dwelling units, the setback shall be 1,000 feet to the closest exterior wall of the dwelling.
- 4) The setback to any public right-of-way or private roadway shall be no less than the turbine height.
- 5) Setbacks to the external boundary of the special permit area shall be no less than the turbine height, except that the owner of the adjacent property may sign an agreement allowing that setback to be reduced to the rotor radius plus the setback of the zoning district.

(h) Any single turbine shall not impact a non-participating lot, (vacant or occupied, of any size), to the extent that, because of the location of turbine, the lot owner is left with less than 3 acres of land outside of the CWECs setbacks or the noise impact area in Section (i) below, unless they are part of an agreement with the CWECs owner/operator.

(i) Noise: No CWECs or combination of CWECs turbine(s) shall be located as to cause an exceedance of the following as measured at the closest exterior wall of any dwelling located on the property. For both participating and nonparticipating properties:

- (1) From the hours of 7 am to 10 pm:
  - o Forty (40) dBA maximum 10 minute Leq or;
  - o Three (3) dBA maximum 10 minute Leq above background level as determined by a pre-construction noise study. The background level shall be a Leq measured over a representative 15 hour period.
- (2) From the hours of 10 pm to 7 am:
  - o Thirty-seven (37) dBA maximum 10 minute Leq or;
  - o Three (3) dBA maximum 10 minute Leq above background level as determined by a pre-construction noise study. The background level shall be a Leq measured over a representative 9 hour period.

(j) A professional pre-construction noise study shall be conducted which includes all property with a dwelling within one mile of a tower support base. The protocol and methodology for such studies shall be submitted to the Lincoln-Lancaster County Health Department for review and approval. Such studies shall include noise modeling for all four seasons and include typical and worst case scenarios for noise propagation. The complete results and full study report shall be submitted to the Lincoln-Lancaster County Health Department for review.

(k) Prior to the commencement of construction of any turbine, pre-construction noise monitoring may be conducted to determine ambient sound levels in accordance with procedures acceptable to the Lincoln-Lancaster County Health Department.

(l) Prior to the commencement of construction of any turbine, the applicant shall enter into an agreement with the County Engineer regarding use of County roads during construction.

(m) At the discretion of the County Board, post-construction noise level measurements may be required to be performed in accordance with procedures acceptable to the Lincoln-Lancaster County Health Department.

(n) All noise complaints regarding the operation of any CWECs shall be referred to the County Board. The County Board shall determine if noise monitoring shall be required to determine whether a violation has occurred.