

TOPIC	Summary Statement	Potential Action for Discussion
Setback to Dwelling	<p>Current language requires a 1,000 foot setback to the property line of existing dwellings not associated with the project. The large variation of lot size in the AG district means some dwellings may sit upon a very large parcel with the dwelling at the far end while others may sit on a much smaller parcel with the dwelling located close to the property line. Measuring to the dwelling is a more consistent method. A setback of specific distance does not take into account differences in height of the turbines. For example, the visual impact of a 300 foot turbine is different than a 475 foot turbine. So many communities have include both a minimum setback and a setback based on height and used the greater distance. The increased distance reduces the visual impact, shadow flicker impact and the risk of ice throw. While distance does reduce noise, the primary measure for noise should be a noise standard (see below). The setback assists in noise reduction, but it will only be pertinent for noise reduction where the ambient background noise might be higher already, such as along a highway. The noise standard will be the primary measure for addressing any noise impacts.</p>	<p>Require that:</p> <ol style="list-style-type: none"> <li>1) The setback shall be 1,000 feet or 3 times the hub height plus the rotor radius, whichever is greater, to <u>the closest exterior wall</u> of any non-participating dwelling unit.</li> <li>2) For non-participating dwelling unit on a lot of less than 10 acres, then the setback of 1,000 feet or 3 times the hub height plus the rotor radius, whichever is greater, shall be measured to the <u>property line</u>.</li> <li>3) The setback shall be 1,000 feet to the closest exterior wall of any participating dwelling unit.</li> </ol>
Setback to Right of Way	<p>The purpose of this requirement is to provide for a “worst case scenario” of a tower falling over as a tree does when felled. In general towers are highly unlikely to fall over in this manner, and when failures have occurred they rather occur as a collapse of the tower. There are over 45,000 CWECS in the United States and there are less than a dozen incidents of a complete collapse event, according to industry experts. The setback of the full CWECS height is recommended by the County Engineer to be maintained when adjacent to public right-of-way in order to assure public safety and clear passage of traffic.</p>	<p>Require that setbacks to any public or private roadways shall be no less than the hub height plus the rotor radius of the CWECS.</p>

<p>Setback to Special Permit Boundary</p>	<p>This setback is necessary for circumstances where there is not an existing dwelling on the adjacent non-participating property. If the adjacent lot is primarily for residential use (less than 10 acres) then the setback to the vacant lot should be larger.</p>	<p>Require that:</p> <ol style="list-style-type: none"> <li>1) Setbacks to the external boundary of the special permit area shall be no less than the hub height plus the rotor radius of the CWECs, 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 district.</li> <li>2) For a vacant non-participating lot of less than 10 acres, then the setback shall be 1,000 feet or 3 times the hub height plus the rotor radius, whichever is greater, measured to the property line.</li> </ol>
<p>Noise</p>	<p>Noise from wind turbines has been shown to be a significant concern and source of investigation. Recent research papers and studies on wind turbine noise and potential health impacts indicate that noise from wind turbines causes annoyance which can lead to sleep disturbance. In considering how to establish wind turbine noise level limits for dwellings, the Lincoln/Lancaster County Health Department (LLCHD) only considered potential negative public health impacts. In addition, the LLCHD believes that all persons should be afforded, regardless of lease agreements, the same level of public health protection.</p>	<p>No CWECs or combination of CWECs machine(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:</p> <ul style="list-style-type: none"> <li>- From the hours of 7 am to 10 pm:             <ul style="list-style-type: none"> <li>o Forty (40) dBA maximum 10 minute Leq or;</li> <li>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.</li> </ul> </li> <li>- From the hours of 10 pm to 7 am:             <ul style="list-style-type: none"> <li>o Thirty-seven (37) dBA maximum 10 minute Leq or;</li> <li>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.</li> </ul> </li> </ul>

<p>Noise Studies</p>	<p>The purpose of noise studies is to provide data that will be used to assess potential public health impacts and compliance with the noise limits established in the county resolution.</p>	<p>A pre-construction noise study on property with a dwelling within one mile of a tower support base shall be required. The protocol and methodology for such studies shall be submitted to the Lincoln-Lancaster County Health Department for review and approval. The results of such studies shall be submitted to the Lincoln-Lancaster County Health Department for review.</p> <p>Prior to the commencement of construction of any CW ECS machine, pre-construction noise monitoring may be conducted to determine ambient sound levels in accordance with procedures acceptable to the Lincoln-Lancaster County Health Department.</p> <p>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.</p>
<p>Noise Complaints</p>	<p>Noise complaints post-construction must be considered to be a potential outcome with a procedure established on how to address noise complaints. A process is proposed that directs complaints to the Lancaster County Board for their consideration</p>	<p>All noise complaints regarding the operation of any CW ECS 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.</p>