



# WIND ENERGY CONVERSION SYSTEMS (WECS)

TA-22-00031

*Planning Commission*



The Lawrence Douglas County Planning Commission directed Planning staff to review the existing regulations for Wind Energy Conversion Systems (or WECS) in January of 2022.

This came from an interest in better aligning the wind-regulations with that of the recently adopted solar-regulations.

At this time C-WECS and P-WECS are a permitted use in Douglas County and are regulated by the code that was adopted in 2016.



Staff & the Ad Hoc members visited with many professionals in an effort to better understand how the scope and impact of this land-use. Such as:

Kansas Department of Wildlife and Parks

Kansas Department of Health and Environment

Douglas County Emergency Management

FAA Regional Planning Engineer

Black & Veatch Engineers & Environmentalist

Evergy Representative

Kansas Corporation Commission Representative

C-WECS Project Developers

C-WECS Project Managers (visited active Wind Farms in other counties)



# History of Public Engagement



Public Comments have been received on this topic for nearly two years.

Staff held an Open House and Community meeting in January of 2023 following the release of "Draft #1"

Draft 1 public comment was analyzed by the Ad Hoc Committee. Based on feedback from the community and additional recommendations from experts, "Draft #2 was published September 26, 2023.

Four community meetings were held in October of 2023

The Ad Hoc Committee has acted as a liaison to the community and participated in on-going conversations on the topic of wind energy for the past 6 months.



## 2016

These existing regulations at a glance include:

- 5 definitions including all regulations on “Small” WECS
- Identify a CUP to establish the WECS Project
  - Notice sent to those 1,000 ft from project boundary
  - Brief list of standards associated with the Application.
- Design Standards include:
  - Setback of 110% of the height of tower plus length of blade, and 1500’ from dwellings.
  - No maximum height standards – min. clearance 100’.
  - No sound standards, no road maintenance plan, shadow flicker standards, lighting standards
- A decommissioning plan to take place within 18 months of abandonment
  - Does not define Security amount to be secured.

## Proposed Revisions

These proposed regulations include, but are not limited to:

- 20+ definitions
- Personal - Wind Energy Conversion System (P-WECS)
  - Max height: 75 feet, Setback: 150% height
  - Regulate maximum power rating on site, allow net metering.
- Commercial - Wind Energy Conversion System (C-WECS)
  - A thorough, comprehensive application which would include assessments of the proposed
  - Notice sent to those 2 miles from project boundary.
- C-WECS Design Standards / Performance Standards
  - Turbines setback differentiates between Participating landowners dwellings & Non-Participating property lines.
  - Permitted height regulated, 600’
  - Ongoing performance standards including noise, shadow flicker, lighting, and environmental impact, and infrastructure impact including mitigation techniques.
- A decommissioning plan to take place within 90 days



12-306-44.01 Definitions

12-306-44.02 Personal - Wind Energy Conversion System (P-WECS)

12-306-44.03 Commercial - Wind Energy Conversion System (C-WECS)

12-306-44.03.01 Key Considerations

12-306-44.03.02 Contents of Application

12-306-44.03.03 Design Standard

12-306-44.03.04 Performance Standards

12-306-44.03.05 Building Permit Issuance

12-306-44.03.06 Revisions to Approved Plan

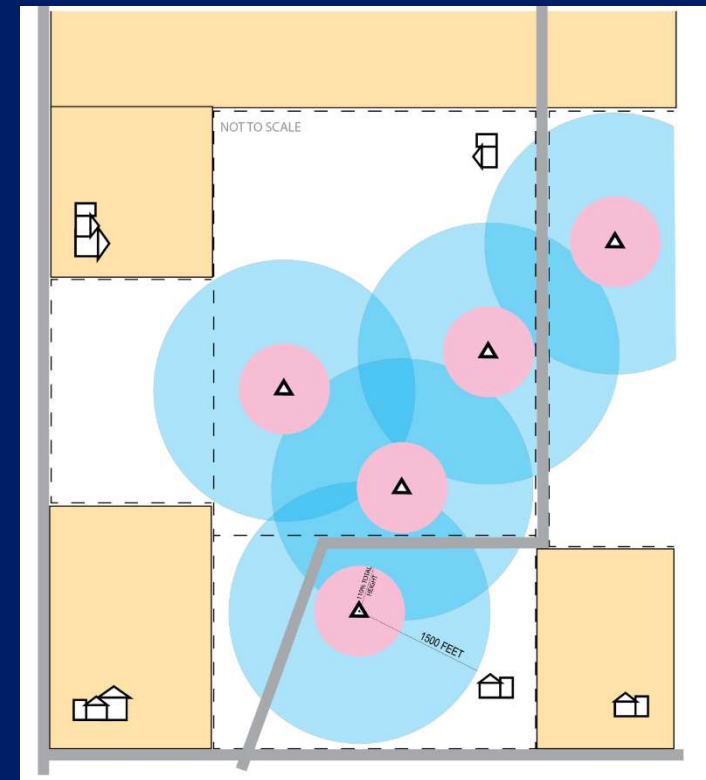
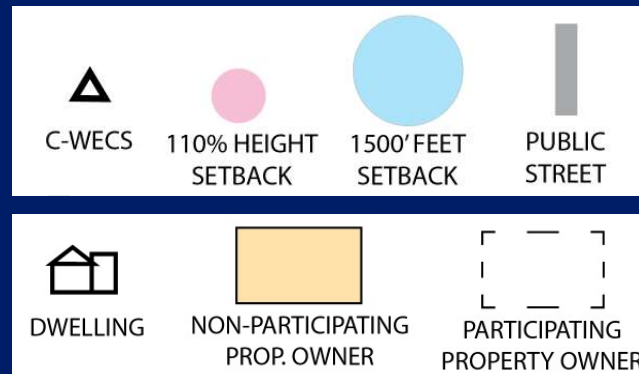
12-306-44.03.07 Abandonment, Decommissioning and Reclamation Plan



## 12-306-44.03.03 Design Standard

### Setbacks (Not to scale, example)

- Participating vs
- Non-Participating Landowner

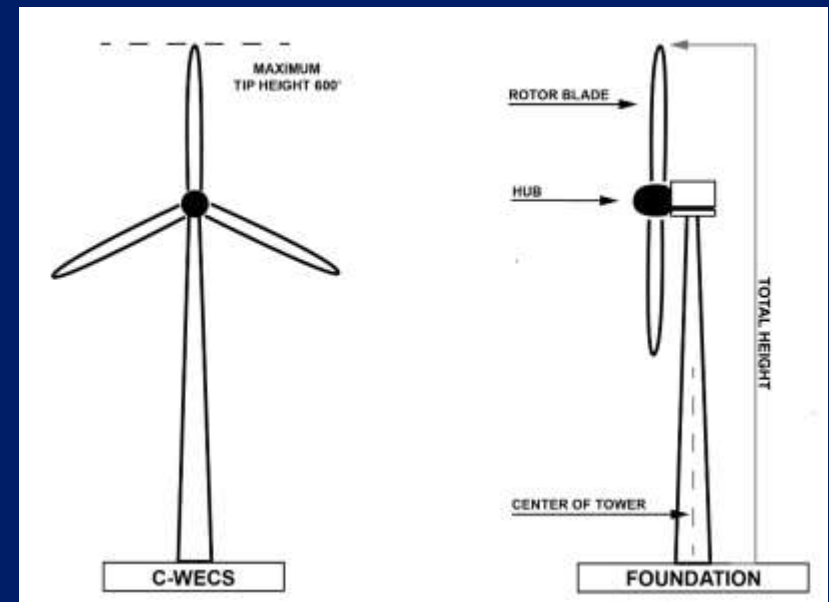




## 12-306-44.03.03 Design Standard

### **Permitted Height** (Not to scale, example)

- 600 feet, as measured at tip height



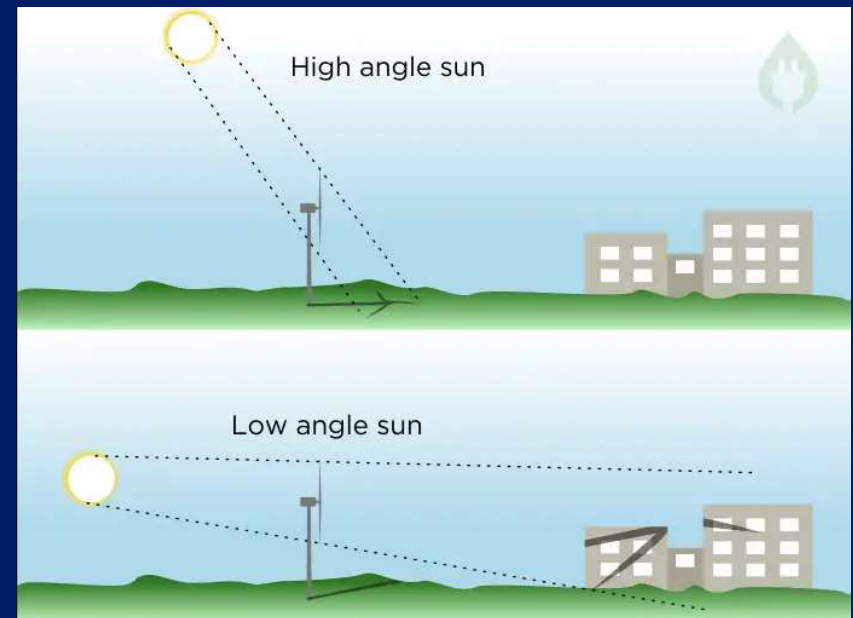




## 12-306-44.03.04 Performance Standard

### **Shadow Flicker** (Not to scale, example)

- Turbines shall be sited in manner that minimizes Shadow Flicker
- No more than 15 hours per year and no more than 15 minutes per day to any Non-Participating Occupied Structure.

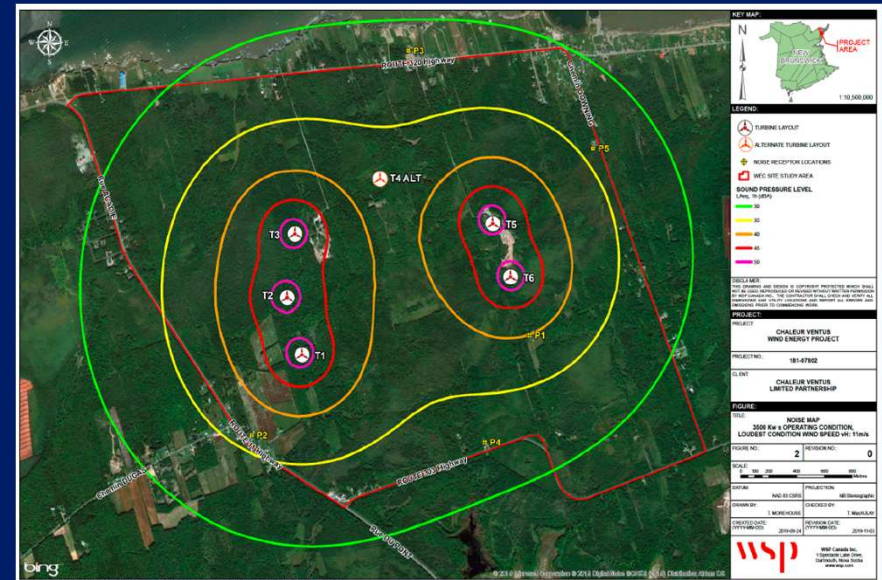




## 12-306-44.03.04 Performance Standard

### Noise Impact (Not to scale, example)

- No pure tones.
- 50 dBA at non-participating property owners property line.
- 45 dBA at occupied structure.





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- Does the proposed text amendment correct an error or inconsistency in the Zoning Regulations or meet the challenge of an existing condition?
- Does the proposed text amendment advance a clear public purpose?
- Does the proposed amendment affect the adequacy of existing or planned facilities and services?
- Does the proposed text amendment result in reasonably compatible land use relationships?
- Will the proposed text amendment advance the interests of rural Douglas County as a whole, not solely those having immediate interest in the affected area?
- Is the proposed text amendment consistent with the Comprehensive Plan and the stated purpose of the Douglas County Zoning Regulations?



## Section 12-306-44.01 Definitions

Applicant. The party(ies), company(ies), or entity(ies) responsible for the construction, operation, maintenance, and decommissioning of a Personal - Wind Energy Conversion System, a Commercial - Wind Energy Conversion System, or a Commercial - Wind Energy Conversion System Project. (See also Operator)

Operator. The party(ies), company(ies), or entity(ies) responsible for the construction, operation, maintenance, and decommissioning of a Personal - Wind Energy Conversion System, a Commercial - Wind Energy Conversion System, or a Commercial - Wind Energy Conversion System Project. (See also Applicant)

Participating Landowner. Property owners who have entered into leases or other monetary arrangements with an Applicant or Operator, and their successors, heirs, executors, and assigns, whereby they have reasonable expectation to benefit from approval, construction, and operation of a C-WECS Project. Any person(s) who is not a participating landowner shall be referred to as a non-participating landowner.

**Section 12-306-44.03.02 Contents of Application,** subsection (a.)(1)(a.) "Applicant information" For each party, company or entity responsible for construction, operation, maintenance and decommission of the C-WECS project, provide the name, point-of-contact, physical address, email address, phone number, and identify which part of the Project they will be responsible for.

**12-306-44.03.07 Abandonment, Decommissioning and Reclamation Plan,** subsection (c)(3)

Within 6 months of notification of abandonment and the need for reclamation, unless amended or vacated through the hearing process described in this section, the C-WECS shall be removed from the property and the property restored by the Operator. The post-decommissioning storm water runoff plan shall be implemented.



**Section 12-306-44.03.04 Performance Standards**, subsection (f.) “Aviation and Federal Aviation Administration Impact.” (1) Airports and airstrips (a) **The C-WECS Project, and the operation thereof**, shall not interfere with the operations of the Lawrence Regional Airport or any approved airport or airstrip, both public and private, within Douglas County and the surrounding region, **as determined by the then applicable regulations of the Federal Aviation Administration, including but not limited to, 14 CFR Part 77.**



## **Section 12-306-44.01 Definitions**

Mitigation Plan, an incorporated document within the application that shall be applied to avoid, reduce, or eliminate impacts related to the project. The mitigation commitments and measures shall be approved by the Board of County Commissioners.

Further Clarification Requests by County Zoning & Codes, Heritage Office, Sustainability:

**Section 12-306-44.03.04 Performance Standards**, subsection (d.)(2)(d.) "Environmental Impact" C-WECS Projects should avoid areas which may adversely affect native lands and animals.

- Request: Staff recommend further clarifying this item. All areas within Douglas County contain an amount of what could be considered "native land and animals", for which the introduction of a foreign object may cause a disturbance. Staff suggest further specifying how to determine what areas should be avoided and/or what is considered an "adverse effect."

**Section 12-306-44.03.04 Performance Standards**, subsection (d.)(6)(a.) "Environmental Impact" C-WECS Projects shall avoid areas that would impact important cultural, historical, or archeological features.

- Request: Clarification is needed to define what makes a cultural, historical, or archeological feature "important." Staff recommend defining how importance should be measured or tracked to fairly evaluate and understand the impact of a C-WECS Project.



Staff recommends, approving text amendment, TA-22-00031, revising the *Zoning and Land Use Regulations for the Unincorporated Territory of Douglas County, Kansas* amending Section 12-306-44 *Wind Energy Conservation Systems* including recommended text changes in the attached memos and forwarding it to the Douglas County Board of County Commissioners.





Per Section 12-307-5.05 Douglas County Zoning and Land Use Regulations, the Planning Commission shall hold a public hearing on the proposed text amendment, review the proposed text amendment in accordance with the review and decision-making criteria of subsection (f) and recommend in writing that the [Board of County Commissioners]

- Approve,
- Approve with modifications,
- Deny the proposed amendment, or
- Defer (with specific changes and date)