

CITY OF EL PASO, TEXAS
AGENDA ITEM DEPARTMENT HEAD'S SUMMARY FORM

DEPARTMENT: Planning & Inspections Department
AGENDA DATE: Introduction 12/22/15; Public Hearing 1/12/16
CONTACT PERSON/PHONE: Larry F. Nichols, (915) 212-1550
Arturo Rubio, (915) 212-1613
Jeff Howell, (915) 212-1607
DISTRICT(S) AFFECTED: All Districts

SUBJECT:

An Ordinance amending Title 20 (Zoning), Chapter 20.10 (Supplemental Use Regulations) Section 20.10.200 (Energy Conversion Systems) Subsection B. (Wind-Driven Generators Or Wind-Driven Pumps) to revise and add location and height requirements. The penalty is as provided for in Chapter 20.24 of the El Paso City Code. **(All Districts)**

BACKGROUND / DISCUSSION:

City Plan Commission (CPC) recommended approval (6-0) on December 17, 2015.

PRIOR COUNCIL ACTION:

Direction to research and prepare an ordinance was given to Staff on November 23, 2015.

AMOUNT AND SOURCE OF FUNDING:

N/A

BOARD / COMMISSION ACTION:

City Plan Commission (CPC) recommended approval (6-0) on December 17, 2015.

*****REQUIRED AUTHORIZATION*****

LEGAL: (if required) N/A

FINANCE: (if required) N/A

DEPARTMENT HEAD: Larry F. Nichols, Director
Planning & Inspections Department



APPROVED FOR AGENDA:

CITY MANAGER: _____ **DATE:** _____

MEMORANDUM

DATE: January 11, 2016

TO: The Honorable Mayor and City Council
Tomas Gonzalez, City Manager

FROM: Larry F. Nichols, Director of Planning & Inspections Department
Arturo Rubio, Lead Planner, Planning & Inspections Department
Jeff Howell, Senior Planner, Planning & Inspections Department

SUBJECT: Title 20 (Zoning) Amendment

City Plan Commission (CPC) recommended approval (6-0) on December 17, 2015.

No communication in support or opposition has been received.

Attachments: Proposed Ordinance

ORDINANCE NO. _____

AN ORDINANCE AMENDING TITLE 20 (ZONING), CHAPTER 20.10 (SUPPLEMENTAL USE REGULATIONS) SECTION 20.10.200 (ENERGY CONVERSION SYSTEMS) SUBSECTION B. (WIND-DRIVEN GENERATORS OR WIND-DRIVEN PUMPS) TO REVISE AND ADD LOCATION AND HEIGHT REQUIREMENTS. THE PENALTY IS AS PROVIDED FOR IN CHAPTER 20.24 OF THE EL PASO CITY CODE.

WHEREAS, Title 20 (Zoning) of the El Paso City Code, Chapter 20.10 regulates wind energy conversion systems; and,

WHEREAS, it is necessary to revise and add location and height requirements as relevant to wind energy conversion systems to provide alternative energy regulations which currently offer limited flexibility or are non-existent in the El Paso City Code for clean wind energy, to promote the effective and efficient use of Wind Energy Conversion Systems, and to facilitate economic opportunities for local residents and business owners consistent with the public health, safety and general welfare of the community; and,

WHEREAS, a public hearing regarding the proposed amendment was held before the City Plan Commission, and the Commission recommended approval of the amendment; and,

WHEREAS, the El Paso City Council has determined that this amendment is in the best interest of the public and will promote the public health, safety and welfare of the City;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EL PASO:

SECTION 1. That Title 20 (Zoning), Chapter 20.10 (Supplemental Use Regulations), Section 20.10.200 (Energy Conversion Systems), Subsection B. (Wind-Driven Generators or Wind –Driven Pumps) of the El Paso City Code be amended as follows:

B. Wind-driven generators or wind-driven pumps, where permitted, are subject to the following conditions:

1. Must be located in the rear yard for all residential Zoning Districts R-1, R-2, R-2A, R-3, R-3A, R-4, R-5, A-1, A-2, A-3, A-4, A-O and residential special districts P-R I, P-R II, SRR, and P-MD;

2. Shall be in compliance with the guidelines of the Federal Aviation Administration and shall not exceed eighty feet in height in commercial C-1, C-2, C-3, C-4 and manufacturing M1-M-2, M-3 zoning districts and not to exceed thirty five feet in height in residential R-1, R-2, R-2A, R-3, R-3A, R-4, R-5, A-1, A-2, A-3, A-4, A-O and residential special districts P-R I, P-R II, SRR, and P-MD;

SECTION 2. Except as expressly herein amended, Title 20, Zoning, of the El Paso City Code shall remain in full force and effect.

ORDINANCE NO. _____

ADOPTED this _____ day of _____ 2016.

CITY OF EL PASO

ATTEST:

Oscar Leeser
Mayor

Richarda Duffy Momsen
City Clerk

APPROVED AS TO FORM:

APPROVED AS TO CONTENT:

Brie L. Franco
Assistant City Attorney

Larry F. Nichols, Director
Planning & Inspections Department

ORDINANCE NO. _____



Title 20 Zoning Code Amendments

Background History

- **Energy Conversion Systems**

Wind-driven generators or wind-driven pumps

Special Permit (Dick Poe 6330 Montana) PZST15-00032

Strategic Goal #3 Promote the Visual Image of El Paso

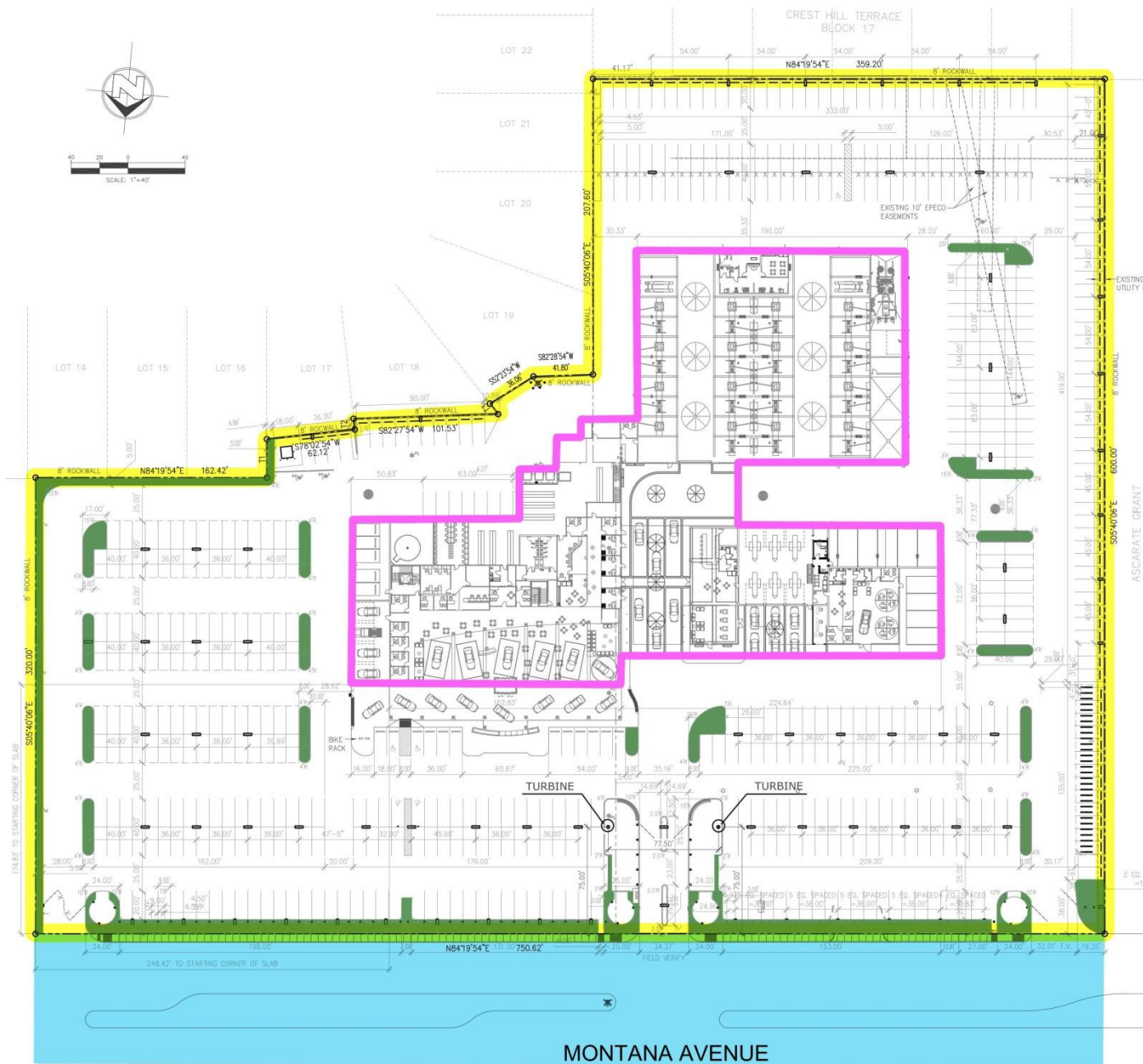
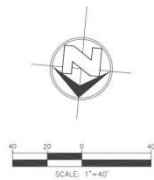
3.1 Provide Business Friendly Permitting and Inspection Processes

3.2 Improve the Visual Impression of the Community



PZST15-00032

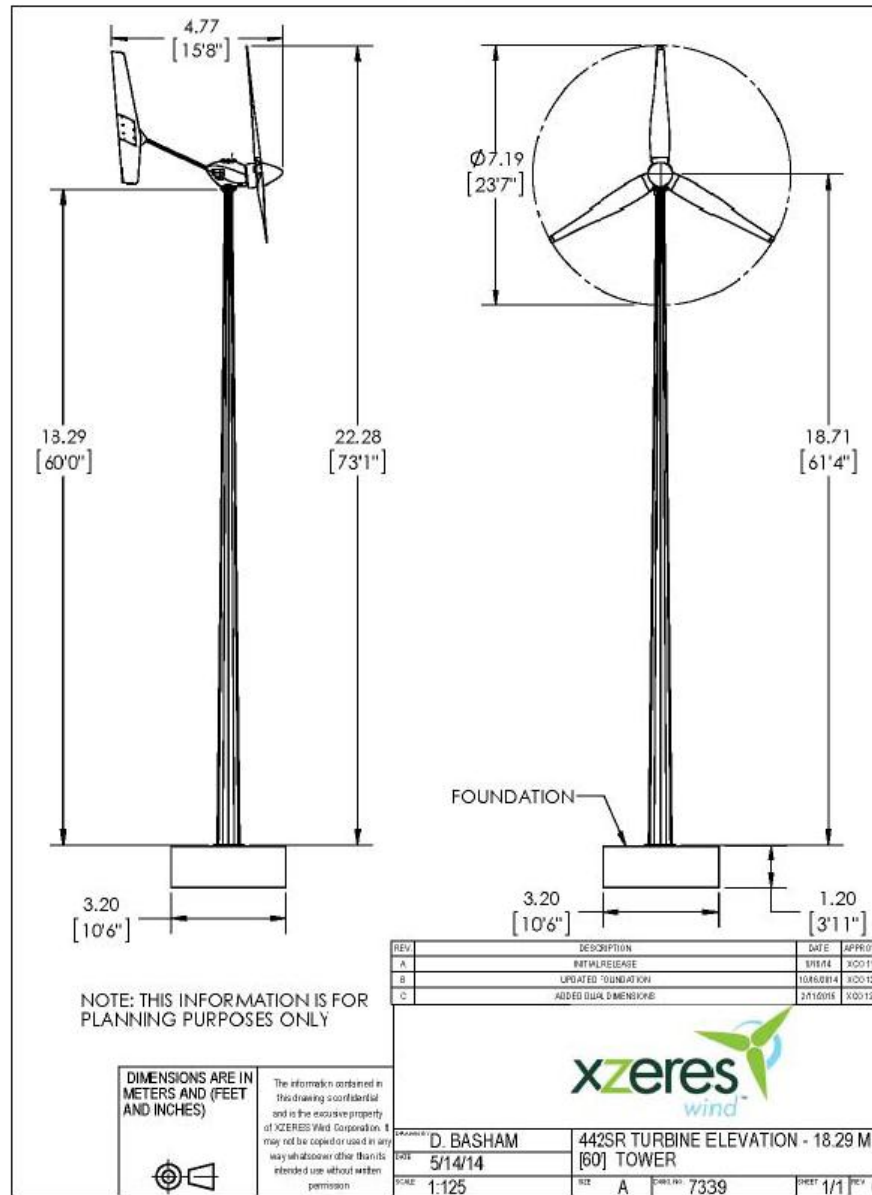




"Delivering Outstanding Services"



Wind Turbine





Title 20 Zoning Code Amendments

- **Energy Conversion Systems**
Wind-driven generators or wind-driven pumps
- **The CPC recommended unanimous approval 6-0 (Amendment and Special Permit)**
- **There was no communication from the public in support or opposition to the proposed amendment.**

Strategic Goal #3 Promote the Visual Image of El Paso

3.1 Provide Business Friendly Permitting and Inspection Processes

3.2 Improve the Visual Impression of the Community

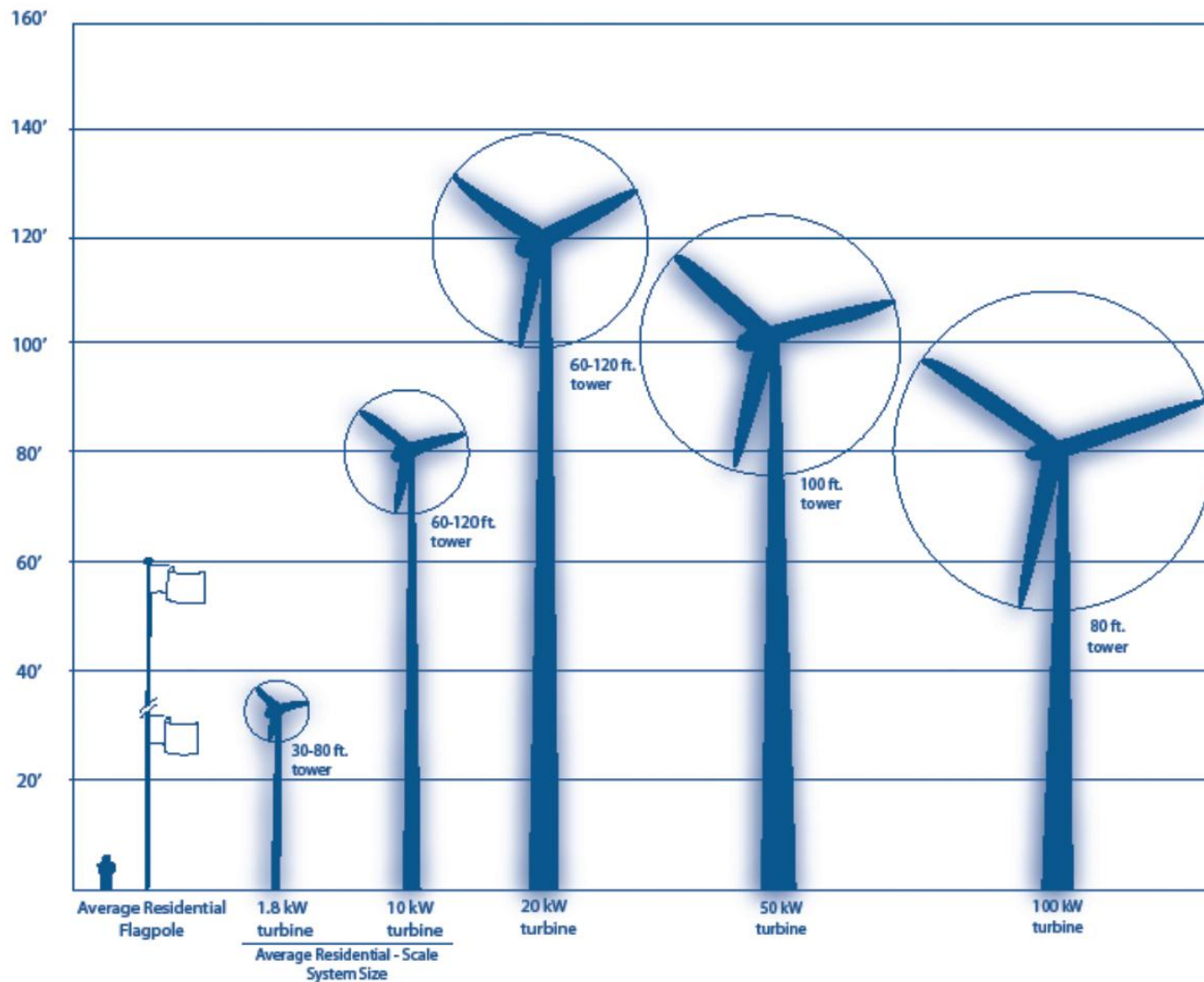


Energy Conversion Systems: Wind-driven generators





Energy Conversion Systems: Wind-driven generators



"Delivering Outstanding Services"



Energy Conversion Systems:

The section pertaining to Energy Conversion Systems (wind power) is proposed to be revised.

- **Current regulations offers limited flexibility or are non-existent in the El Paso City Code for clean energy, to promote the effective and efficient use of Wind Energy Conversion Systems**
- **Facilitate economic opportunities for local residents and business owners consistent with the public health, safety and general welfare of the community.**



Energy Conversion Systems: Wind-driven generators

Revisions include regulations pertaining to:

- Location
- Heights

20.10.200 - Energy conversion systems.

B. Wind-driven generators or wind-driven pumps, where permitted, are subject to the following conditions:

1. Must be located in the rear yard **for all residential Zoning Districts R-1, R-2, R-2A, R-3, R-3A, R-4, R-5, A-1, A-2, A-3, A-4, A-O and residential special districts P-R I, P-R II, SRR, and P-MD;**
2. **Shall be in compliance with the guidelines of the Federal Aviation Administration and shall not exceed ~~forty-five~~ eighty feet in height in commercial C-1, C-2, C-3 and C-4 and manufacturing zoning districts M-1, M-2 and M-3 and not to exceed 35 feet in height in residential R-1, R-2, R-2A, R-3, R-3A, R-4, R-5, A-1, A-2, A-3, A-4, A-O and residential special districts P-R I, P-R II, SRR, and P-MD;**



Research

Researched six Texas Cities to include San Antonio, Houston, Austin, Laredo, Galveston, Dallas, as well as three Colorado cities, U.S. Department of Energy and The American Planning Association.



U.S Department of Energy

Zoning, Permitting, and Covenant Requirements

Height Issue -- Some jurisdictions restrict the height of the structures permitted in residentially zoned areas, although variances are often obtainable. Most zoning ordinances have a height limit of 35 feet.



<http://energy.gov/energysaver/planning-small-wind-electric-system>



El Paso

Wind

1. Must be located in the rear yard;
2. Shall not exceed forty-five feet in height;
3. Any propeller blades or similar devices shall come no closer than ten feet to the ground or to any structure, and shall have clearance from any overhead wires in accordance with electric utility company requirements;
4. No portion of the system shall project over any property line or required front, side, or side street setback;
5. The structural integrity of every wind-driven generator and pump, regardless of height, shall be designed and sealed by a registered professional engineer in the state of Texas;
6. The construction of wind-driven generator and pump foundations must comply with the building code of the city;
7. Noise and vibration levels must be in compliance with Title 9 (Health and Safety) of this Code



San Antonio

Wind

1. Applicability. The purpose of this section is to provide standards for small wind energy systems consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than 100kW and which is intended to primarily reduce on-site consumption of utility power.
2. Site Development Standards:
 - a. Setbacks. A fall zone setback shall be established at a distance of 1.25 times the height of the tower from any property line, right-of-way, access easement, fire lane, sign, overhead utility or from another tower used for a small wind energy system. For example, a one hundred-foot tall tower shall be set back one hundred twenty-five feet from the property line or any overhead utility lines. No part of the wind system structure, including guy wire anchors, may extend closer than ten (10) feet to the property boundaries of the installation site. In lieu of the minimum setback distance, a no-build easement may be acquired from adjacent properties to fulfill the distance requirement.
 - b. Minimum Lot Size. A minimum of one-half (½) acre is required for use as a small wind energy system.
 - c. Heights. Minimum ground clearance of twelve (12) feet for rotor blades or airfoils. For properties less than two acres, total height shall be limited to eighty (80) feet. For properties greater than two (2) acres, there is no limitation on tower height except as imposed by the Federal Aviation Administration (FAA) or City of San Antonio Aviation Department.
 - d. Lighting, including lighting intensity and frequency of strobe, shall adhere to, but not exceed requirements established by the FAA.
 - e. Signage shall be limited to appropriate warnings and turbine manufacturer and owner on nacelle. Additional signage is prohibited.
 - f. On-site power lines shall be buried.
 - g. Noise. Small wind energy systems shall not exceed fifty (50) dBA, as measured at the closest neighboring inhabited dwelling. The level, however, may be exceeded during short-term events such as utility outages and/or severe wind storms.
 - h. All Municipal Code provisions not specified in this subsection are required, including, but not limited, to tree preservation, traffic impact analysis and historic preservation.
3. Permitted Use. Small wind energy systems shall be permitted ("P") by right in the following zoning districts C-3, L, I-1, I-2, MI-1, MI-2, O-2, ED, FR, QD and SGD. Small wind energy systems shall require specific use authorization ("S") in all residential base zoning districts and neighborhood preservation districts as well as the following districts: NC, C-1, C-2, O-1, D, RD, UD, MH, MXD, FBZD and TOD.
4. Submittal Requirements. A building permit is required. Plans shall contain the following:
 - a. A plot plan, drawn to scale, of the property indicating the location of all structures, the proposed location of the tower, the distances of the tower to structures on the property as well as distances to the property lines as well as any roads, electric lines and/ or overhead utility lines.
 - b. A description of the number, type, name plate generating capacity, tower height, rotor diameter and total height of all wind turbines and means of interconnecting with the electrical grid.
 - c. Drawings or blueprints of the tower and the tower footings in conjunction with the application for building permit for a wind system.
 - d. Structural engineering analysis of a tower and its foundation.
 - e. Manufacturer's recommended installations, if any.
 - f. Documentation of land ownership and/or legal authority to construct on the property.
 - g. All permits for wind generation facilities shall be routed to the City of San Antonio Aviation Department for review and approval.
5. Compliance With Other Regulations:
 - a. Coordination with the City of San Antonio Aviation Department is required if within the boundaries of the AHOD. In addition, coordination with the Federal Aviation Administration (FAA) required if a tower is taller than two hundred (200) feet or within three and three-quarter (¾) miles of a commercial runway regardless of height. In such cases, all required forms shall be submitted to the FAA, from which they will make a determination as to whether there will be any restrictions placed on the tower or its location.
 - b. Building permit applications for small wind energy systems shall be accompanied by a line drawing of electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the city's adopted electric code. An electrical inspector will inspect and approve of the system before it is allowed to generate.
 - c. Interconnection with CPS Energy is required. No small wind energy system shall be installed until evidence has been given that CPS Energy has been informed of the customer's intent to install an interconnected customer-owned generator.
 - d. An engineer shall certify that the wind turbine does not interfere with any electromagnetic telecommunications such as radio, telephone, microwaves or television signals.
 - e. The City of San Antonio shall not enforce any deed covenants or restrictions regarding wind turbines or generators.
 - f. Compliance with City of San Antonio codes not addressed in this subsection is required including but not limited to the building code and electric code.



Houston, Austin, Laredo, Galveston, and Dallas

Wind

No regulations on Wind



Lamar, CO

Wind

- (1) The minimum distance from any lot line to any tower, pole or other support structure of the wind energy conversion system shall be established by the following minimum standards:
5'=100 up to 40'=385' setback
- (2) The WECS shall not be located in any required yard.
- (3) The WECS shall not cause interference to microwave communications or radio and television reception in the area. Noise levels measured at the lot line shall not exceed sixty (60) dBA in a residential zone.
- (4) To limit climbing access to a WECS tower or other support structure, a six-foot-high fence with locking portal shall be placed around the WECS support, or if a tower is utilized, the tower climbing apparatus shall be limited to no lower than twelve (12) feet from the ground, or the WECS support may be mounted on a rooftop.
- (5) All blades of a WECS shall be constructed of nonmetallic substances. If the applicant can prove, in writing, that no electromagnetic interference will result, a metal content of up to twentyfive percent (25%) will be acceptable.
- (6) The WECS shall be located in compliance with the guidelines of the federal aviation regulations with regard to airport approach and clearance around VOR and DVOR stations.
- (7) Height of the WECS shall not exceed the maximum height restriction in the zone where it is located by more than twenty (20) feet. The height of the WECS shall be measured at the center of the blade diameter.
- (8) Data pertaining to the WECS' safety and structural integrity shall be certified by a licensed engineer and filed with the building permit application. The tower or support and top adaptor shall meet the restrictions specified in the building code.
- (9) The WECS, if interconnected to a utility system, shall meet the requirements for interconnection and operation as set forth in the electric utility's current service regulations applicable to WECS.
- (10) A plot plan shall be submitted with the application for the building permit showing the proposed location and height of the WECS, fencing and all existing buildings within two hundred (200) feet of the exterior lot line.
- (11) The owner/operator shall provide covenants, easements or similar documentation to assure sufficient wind to operate the WECS unless adequate accessibility to the wind is provided by the site.
- (12) The owner/operator shall certify that the WECS does not violate any covenants of record.
- (13) The applicant shall provide a certificate of liability insurance. Annually, the owner/operator shall present evidence to the Zoning Administrator that the liability insurance is still in effect.



Denver, CO

Wind

A wind energy conversion system may operate on any zone lot that is not adjacent to and does not have a single-unit dwelling or two-unit dwelling use. A wind energy conversion system may be permitted according to Section 12.4.2, Zoning Permit Review with Informational Notice, and subject to compliance with the following conditions:

1. The applicant is the owner of the property and has submitted a site plan of the property which shows the location of the proposed system.
2. The proposed system, including guy wires and blades, shall not encroach into any setback space, and in no event shall be within 10 feet of the front zone lot line.
3. The proposed system, including blades, shall extend no further than 35 feet above the highest point of existing buildings on the zone lot or any building within 100 feet of the zone lot or 60 feet above the ground, whichever is higher, provided, however that in no event may the system extend more than 75 feet above the building on which it is mounted.
4. All power transmission lines shall be located underground or inside a structure.
5. Climbing access to the structure shall be limited by means of a fence six feet high around the tower base with a locking gate or by limiting tower climbing apparatus to no lower than 13 feet from the ground, and that at least one sign shall be posted at the base of the tower with the following warning: "WARNING Wind Energy Electrical Generating System".
6. Any system with a capacity in excess of 100 kilowatts shall not be located along the major axis of an existing microwave communications link where the operation of the system is likely to produce an unacceptable level of electromagnetic interference.
7. The proposed system shall not create a detrimental effect on nearby properties through electromagnetic interference, physical appearances or noise, either by loudness or frequency.
8. The proposed system shall not substantially or permanently injure the appropriate use of adjacent conforming property



Lakewood, CO

Wind

A. A wind-powered electric generator located on a single-family, duplex, or attached dwelling unit lot shall be subject to the following:

1. No wind-powered electric generator shall exceed 60 feet in height measured from ground level to the top of the blade diameter.
2. No wind-powered electric generator blade shall be located closer than 15 feet above the finished grade of the surrounding property.
3. No wind-powered electric generator or portion thereof may extend or encroach into the accessory building setbacks or onto any adjacent property.
4. Sound produced by the turbine under normal operating conditions, as measured at the nearest property line and at ground level of any adjacent property improved with a dwelling unit at the time of the issuance of a building permit, shall not exceed 55 dBA sound level for any period of time, except during short-term events out of the owner's control, such as utility outages or strong windstorms.
5. A turbine and tower shall be of a neutral color.
6. All electrical wiring shall be located underground and within the tower.
7. A wind-powered electric generator shall be subject to the minor site plan process, as described in Article 2.

B. A wind-powered electric generator located on a lot other than those specific listed in Section 17.5.5.3:A shall be subject to the following:

1. No ground-mounted wind-powered electric generator shall exceed 60 feet in height measured from ground level to the top of the blade diameter.
2. All roof mounted wind-powered electric generators shall comply with the dimensional requirements of the zone district in which it is located.
3. No wind-powered electric generator or portion thereof may extend or encroach into the building setbacks or onto any adjacent property.
4. Sound produced by the turbine under normal operating conditions, as measured at the property line of any adjacent property improved with a dwelling unit at the time of the issuance of a building permit, shall not exceed 55 dBA sound levels for any period of time. The 55 dBA sound level may be exceeded during short-term events out of the owner's control such as utility outages or strong windstorms.
5. A turbine and tower shall be of a neutral color.
6. All electrical wiring shall be underground or contained within the building to which the generator is attached.
7. A wind-powered electric generator shall be subject to the minor site plan process, as described in Article 2.