



Hall County Regional Planning Commission

Wednesday, February 04, 2009
Regular Meeting

Item F6

Zoning Text Change (C-09-2009GI)

Insert a narrative here

Staff Contact:

Agenda Item 7

PLANNING DIRECTOR RECOMMENDATION TO REGIONAL PLANNING COMMISSION:

January 27, 2009

SUBJECT:

Concerning amendments to the Zoning Ordinance for the City of Grand Island and its 2 mile extra-territorial jurisdiction. Amendments to be considered pertain to the B2 General Business Zone, AC arterial Commercial Overlay Zone, and the M2 Heavy Manufacturing Zone regarding Recreational Vehicle spaces accessory to hotel/motel uses; and consideration of changes regarding Section 103 Wind Energy Systems. (C-09-2009GI)

PROPOSAL:

The proposed changes are attached.

All areas with changes are highlighted. Additions are *italicized and underlined* and deletions are in ~~strike out~~.

OVERVIEW:

Definitions

Recreational Vehicle Pad: *a space for parking a recreational vehicle within a campground or other allowed place consisting of no less than 800 square feet with a minimum width of 12 feet. Improvements included within the pad space include 1 hard surfaced improved parking space of not less than 180 square feet (20 x 9 or 18 x 10) and 2 hard surfaced improved parallel tire pads of not less than 2.5 feet by 24 feet*

Camper Pads Accessory Hotel/Motel Uses in the B2, AC and M2 zones subject to the following limitations:

(2) Recreational Vehicle Pads accessory to Hotel/Motel Uses with the following restrictions:

- a) Number of pads shall not exceed 10% of the number of sleeping rooms available at the hotel/motel to a maximum of 15 pads
- b) The hotel/motel shall continue to provide all required parking spaces.
- c) Water service shall not be provided at the pad
- d) Sewer service shall not be provided at the pad. A publicly accessible dump station must be available at the hotel/motel or within ½ mile of the hotel/motel.
- e) Pads shall not be located in any required setback
- f) All RV pads shall be provided with a landscape buffer yard or street yard as identified in the landscaping section of this code.
- g) Pads shall not be accessible from any public way.

Hotels and Motels are permitted in the B2-General Business, B3-Heavy Business, AC Arterial Commercial, M2-Heavy Manufacturing and M3-Mixed Use Manufacturing zones.

The B3 and M3 zones are in downtown and adjacent to the Union Pacific railroad tracks. The proposed changes were specifically not included for those zones due to parking constraints and access issues for campers. These proposed changes would not permit camper pads as accessory uses in the B3 and M3 zones.

It is not uncommon for hotels to offer services to people with campers. Allowing this accessory use may discourage campers from using spaces in parking lots for overnight camping. Hotels are already providing services to the traveling public and in a position to offer this additional service. Grand Island does not have enough camper spaces available and providing these may allow for increased usage of local facilities including but not limited to Stuhr Museum, Heartland Events Center, and the Heartland Shooting Park. These changes would also provide facilities during the state fair.

These changes were discussed at the January Planning Commission meeting and the Planning Commission felt that more needed to be done to define Recreational Vehicle Pad. The definition included here is based upon those discussions. Staff is also suggesting based on those discussions that hotels provide for sanitary dump stations as part of their permit. The dump station is not required on site but a publicly accessible station must be present within ½ mile of the site. This would allow several hotels to go together and put in a single station that they could all use.

Wind Energy Conservation Systems :

The zoning regulations adopted in 2004 allowed for the installation of wind energy systems. These regulations, however, are out of date and do not adequately address the needs and considerations of wind energy systems available in 2009. This was brought to our attention when we had an application for a small 5KW wind generator was proposed on a parcel of over 12 acres. The tower for this generator was proposed at 40' in height. Our current regulations would require that the tower set back 325' from the property line. The new regulations as proposed would require that the tower set back the height of the tower plus the underlying setback.

This set of regulations was provided by JEO Consulting, Inc. the company that worked on the 2004 update. They began using these regulations after our update. Staff has reviewed the regulations and modified them to fit the needs of Grand Island.

The new regulations also allow Small Wind Energy Conversion Systems (SWECS) in all zoning districts. The height of the tower is limited to 80' or the allowable height for a structure in residential districts or properties being use for residential purposes. The tower must be able to meet the setbacks. The minimum lot size for a SWECS is 20,000 square feet. This means that a SWECS will not be allowed on most residential lots in Grand Island.

One concern that staff has is how to regulate and enforce the noise sections of these changes. Leaving the noise levels off of these regulations and letting this be a regular noise ordinance violation was considered by staff. It is very difficult to enforce noise regulations because you have to be at the site when the noise is being made to measure the noise levels. In this case if the wind speed drops or the system shuts down and swings out of the wind the noise level will change and may drop below the 60db levels in

the regulations. (60 db is about as loud as an air conditioner outside at a distance of about 20 feet) ¹

Commercial Wind Energy Conversion Systems (WECS) are also allowed under these regulations. They would be a conditional use in the AG-2 Secondary Agriculture, TA Transitional Agriculture and the AG-SI Special Agriculture/Industrial zones. We are not proposing to allow these in the AG-1 Primary Agriculture zone due to the proximity of that zone to the Airport. A WECS would be any system that generates more than 100KW. These would need to meet all of the requirements in the regulations and receive a conditional use permit prior to beginning construction.

RECOMMENDATION:

That the Regional Planning Commission recommend that the Grand Island City Council **approve** the changes to the Grand Island Zoning Ordinance as requested.

_____ Chad Nability AICP, Planning Director

¹ Simonds, John Ormsbee, Earthscape : a manual of environmental planning, p 124
New York : McGraw-Hill, c1978

§36-8. Definitions

Recreational Vehicle Pad: a space for parking a recreational vehicle within a campground or other allowed place consisting of no less than 800 square feet with a minimum width of 12 feet. Improvements included within the pad space include 1 hard surfaced improved parking space of not less than 180 square feet (20 x 9 or 18 x 10) and 2 hard surfaced improved parallel tire pads of not less than 2.5 feet by 24 feet.

§36-68. (B-2) General Business Zone

Intent: The intent of this zoning district is to provide for the service, retail and wholesale needs of the general community. This zoning district will contain uses that have users and traffic from all areas of the community and trade areas, and therefore will have close proximity to the major traffic corridors of the City. Residential uses are permitted at the density of the (R-4) High Density Residential Zoning District.

(A) Permitted Principal Uses: The following principal uses are permitted in the (B-2) General Business Zoning District.

- (1) Stores and shops that conduct retail business, provided, all activities and display goods are carried on within an enclosed building except that green plants and shrubs may be displayed in the open, as per the Zoning Matrix [Attachment A hereto]
- (2) Office and office buildings for professional and personal service as found in the Zoning Matrix [Attachment A hereto]
- (3) Agencies as found in the Zoning Matrix [Attachment A hereto]
- (4) Dwelling units
- (5) Board and lodging houses, fraternity and sorority houses
- (6) Truck, bush and tree farming, provided, there is no display or sale at retail of such products on the premises
- (7) Public parks and recreational areas
- (8) Country clubs
- (9) Public, parochial and private schools having a curriculum equivalent to an elementary or higher educational level
- (10) Colleges offering courses of general instruction, including convents, monasteries, dormitories, and other related living structures when located on the same site as the college
- (11) Churches, synagogues, chapels, and similar places of religious worship and instruction of a quiet nature
- (12) Utility substations necessary to the functioning of the utility, but not including general business offices, maintenance facilities and other general system facilities, when located according to the yard space rules set forth in this section for dwellings and having a landscaped or masonry barrier on all sides. Buildings shall be of such exterior design as to harmonize with nearby properties
- (13) Public and quasi-public buildings for cultural use
- (14) Railway right-of-way but not including railway yards or facilities
- (15) Nonprofit community buildings and social welfare establishments
- (16) Hospitals, nursing homes, convalescent or rest homes
- (17) Radio and television stations (no antennae), private clubs and meeting halls
- (18) Vocational or trade schools, business colleges, art and music schools and conservatories, and other similar use
- (19) Preschools, nursery schools, day care centers, children's homes, and similar facilities
- (20) Group Care Home with less than eight (8) individuals
- (21) Elderly Home, Assisted Living
- (22) Stores and shops for the conduct of wholesale business, including sale of used merchandise
- (23) Outdoor sales and rental lots for new and used automobiles, boats, motor vehicles, trailers, manufactured homes, farm and construction machinery, etc.
- (24) Specific uses such as: archery range, billboards, drive-in theater, golf driving range, storage yard (no junk, salvage or wrecking)

(25) Manufacture, fabrication or assembly uses incidental to wholesale or retail sales wherein not more than 20% of the floor area is used

(26) Parking Lots

(27) Other uses as indicated in the Zoning Matrix [Attachment A hereto]

(B) **Conditional Uses:** The following uses are subject to any conditions listed in this chapter and are subject to other conditions relating to the placement of said use on a specific tract of ground in the (B-2) General Business Zoning District as approved by City Council.

(1) Recycling business

(2) Towers

(3) Other uses as indicated in the Zoning Matrix [Attachment A hereto]

(C) **Permitted Accessory Uses:**

(1) Building and uses accessory to the permitted principal use.

(2) **Recreational Vehicle Pads accessory to Hotel/Motel Uses with the following restrictions:**

a) Number of pads shall not exceed 10% of the number of sleeping rooms available at the hotel/motel to a maximum of 15 pads

b) The hotel/motel shall continue to provide all required parking spaces.

c) Water service shall not be provided at the pad

d) Sewer service shall not be provided at the pad. A publicly accessible dump station must be available at the hotel/motel or within ½ mile of the hotel/motel.

e) Pads shall not be located in any required setback

f) All RV pads shall be provided with a landscape buffer yard or street yard as identified in the landscaping section of this code.

g) Pads shall not be accessible from any public way.

(D) **Space Limitations:**

Uses		Minimum Setbacks						
		A	B	C	D	E		
	Minimum Parcel Area (feet)	Minimum Lot Width (feet)	Front Yard (feet)	Rear Yard (feet)	Side Yard (feet)	Street Side Yard (feet)	Maximum Ground Coverage	Maximum Building Height (feet)
Permitted Uses	3,000	30	10	0 ¹	0 ²	10	100%	55
Conditional Uses	3,000	30	10	0 ¹	0 ²	10	100%	55

¹ No rear yard setback is required if bounded by an alley, otherwise a setback of 10 feet is required.

² No side yard setback is required, but if provided, not less than five feet, or unless adjacent to a parcel whose zone requires a side yard setback, then five feet. When adjacent to a public alley, the setback is optional and may range from 0 feet to 5 feet.

(E) **Miscellaneous Provisions:**

(1) Supplementary regulations shall be complied with as defined herein

(2) Only one principal building shall be permitted on one zoning lot except as otherwise provided herein.

Amended by Ordinance No. 8947, effective 1-5-2005

Amended by Ordinance No 9151, effective 12-18-2007

§36-69. (AC) Arterial Commercial Overlay Zone

Intent: The intent of this zoning district is to provide an overlay of the (B-2) General Business Zoning District in order to require increased front setbacks, landscaping, and the limitation of some uses within areas along entrance corridors of the city. As the name implies, the overlay will be most commonly used along an arterial street corridor.

(A) Permitted Principal Uses: The following principal uses are permitted in the (AC) Arterial Commercial Overlay District

- (1) Agencies as found in the Zoning Matrix [Attachment A hereto]
- (2) Boarding and lodging houses, fraternity and sorority houses
- (3) Churches, synagogues, chapels, and similar places of religious worship and instruction of a quiet nature
- (4) Colleges offering courses of general instruction, including convents, monasteries, dormitories, and other related living structures when located on the same site as the college
- (5) Country clubs
- (6) Dwelling units
- (7) Elderly Home, Assisted Living
- (8) Group Care Home with less than eight (8) individuals
- (9) Hospitals, nursing homes, convalescent or rest homes
- (10) Manufacture, fabrication or assembly uses incidental to wholesale or retail sales wherein not more than 20% of the floor area is so used
- (11) Nonprofit community buildings and social welfare establishments
- (12) Office and office buildings for professional and personal service as found in the Zoning Matrix [Attachment A hereto]
- (13) Outdoor sales and rental lots for new or used automobiles, boats, motor vehicles, trailers, manufactured homes, farm and construction machinery, etc.
- (14) Preschools, nursery schools, day care centers, children's homes, and similar facilities
- (15) Public parks and recreational areas
- (16) Public, parochial and private schools having a curriculum equivalent to an elementary or higher educational level
- (17) Public and quasi-public buildings for cultural use
- (18) Radio and television stations (no antennae), private clubs and meeting halls
- (19) Railway right-of-way but not including railway yards or facilities
- (20) Specific uses such as: archery range, drive-in theatre, golf driving range
- (21) Stores and shops that conduct retail business, provided, all activities and display goods are carried on within an enclosed building except that green plants and shrubs may be displayed in the open, as per the Zoning Matrix (Attachment A hereto)
- (22) Stores and shops for the conduct of wholesale business, including sale of used merchandise.
- (23) Truck, bush and tree farming, provided, there is no display or sale at retail of such products on the premises
- (24) Utility substations necessary to the functioning of the utility, but not including general business offices, maintenance facilities and other general system facilities, when located according to the yard space rules set forth in this section for dwellings and having a landscaped or masonry barrier on all sides. Buildings shall be of such exterior design as to harmonize with nearby properties
- (25) Vocational or trade schools, business colleges, art and music schools and conservatories, and other similar uses
- (26) Other uses as indicated in the Zoning Matrix [Attachment A hereto]

(B) Conditional Uses: The following uses are subject to any conditions listed in this chapter and are subject to other conditions relating to the placement of said use on a specific tract of ground in the (AC) Arterial Commercial Overlay District as approved by City Council.

- (1) Towers
- (2) Campgrounds including those serving recreational vehicles subject to following conditions:
 - a) Developer shall submit a diagram of the proposed camp ground including a plot plan of the pads, landscaping plan, utility plan and interior street plan with the application for a conditional use permit
 - b) A minimum of one toilet and one lavatory for each sex shall be provided for the exclusive use of the park occupants. An additional toilet and lavatory for each sex shall be provided for each fifteen (15) sites or fraction thereof.
 - c) All RV pads shall be provided with a landscape buffer yard or street yard as identified in the landscaping section of this code.
 - d) Pads shall not be accessible from any public way.

A)

(C) Permitted Accessory Uses:

- (1) Buildings and uses accessory to the permitted principal uses
- (2) Automotive body repair may be accessory to new or used automotive sales or rental, provided, no outside storage of parts shall be permitted.

(3) Recreational Vehicle Pads accessory to Hotel/Motel Uses with the following restrictions:

- a) Number of pads shall not exceed 10% of the number of sleeping rooms available at the hotel/motel to a maximum of 15 pads
- b) The hotel/motel shall continue to provide all required parking spaces.
- c) Water service shall not be provided at the pad
- d) Sewer service shall not be provided at the pad. A publicly accessible dump station must be available at the hotel/motel or within ½ mile of the hotel/motel.
- e) Pads shall not be located in any required setback
- f) All RV pads shall be provided with a landscape buffer yard or street yard as identified in the landscaping section of this code.
- g) Pads shall not be accessible from any public way.

(D) Space Limitations:

Uses		Minimum Setbacks						
		A	B	C	D	E		
	Minimum Parcel Area (feet)	Minimum Lot Width (feet)	Front Yard (feet)	Rear Yard (feet)	Side Yard (feet)	Street Side Yard (feet)	Maximum Ground Coverage	Maximum Building Height (feet)
Permitted Uses	5,000	50	20	0 ¹	0 ²	10	80%	55
Conditional Uses	5,000	50	20	0 ¹	0 ²	10	80%	55

¹ No rear yard setback is required if bounded by an alley, otherwise a setback of 10 feet is required.

² No side yard setback is required, but if provided, not less than 5 feet, or unless adjacent to a parcel whose zone requires a side yard setback, then 5 feet.

(E) Procedure:

- (1) An application for an amendment to the arterial commercial zone on the Official Zoning Map shall follow all procedural requirements as set forth in this Section.

(F) Miscellaneous Provisions:

- (1) Supplementary regulations shall be complied with as defined herein.
- (2) Only one principal building shall be permitted on any one zoning lot except as otherwise provided herein.
- (3) Landscaping shall be provided and maintained within the 20 foot front yard setback. Landscaping shall mean lawn areas and may also include trees, shrubs, and flowers. Crushed or lava rock, gravel, bark chips, etc. shall not substitute for lawn area.
- (4) All improvements and uses shall be designed to direct primary vehicular and pedestrian traffic to arterial street access and reduce such traffic on adjacent non-arterial streets and alleys.

Amended by Ordinance No. 8947, effective 1-5-2005

§36-73. (M-2) Heavy Manufacturing Zone

Intent: The intent of this zoning district is to provide for the greatest amount of manufacturing, warehousing, wholesaling and business uses. Conditional use permits are required for those uses with more significant health and safety concerns.

(A) Permitted Principal Uses:

- (1) Administrative, executive, professional, research and similar office use having limited contact with the public
- (2) Agencies as found in the Zoning Matrix [Attachment A hereto]
- (3) Agriculture, including the raising of field crops, tree and bush crops, animals and fowl, but not including feed lots, poultry farms, and fur farms

- (4) Concrete or cement products manufacturing and batching plant
- (5) Contractors storage yard or plant
- (6) Gravel, sand or dirt removal, stockpiling, processing or distribution, and batching plant
- (7) Manufacture, processing, assembly, fabrication and/or storage of non-hazardous products and materials
- (8) Mortuaries, funeral homes, and funeral chapels
- (9) Office and office buildings for professional and personal services as found in the Zoning Matrix [Attachment A hereto]
- (10) Outdoor sales and rental lots for new or used automobiles, boats, motor vehicles, trailers, manufactured homes, farm and construction machinery
- (11) Radio and television stations, private clubs and meeting halls
- (12) Railway right-of-way, including yards and facilities
- (13) Stores and shops that conduct retail business, provided, all activities and display goods are carried on within an enclosed building except that green plants and shrubs may be displayed in the open, as per the Zoning Matrix [Attachment A hereto]
- (14) Stores and shops for the conduct of wholesale business, including sale of used merchandise
- (15) Truck, bush and tree farming, provided, there is no display or sale at retail of such products on the premises
- (16) Truck terminal, tractor, trailer, or truck storage, including maintenance facilities
- (17) Utility substations necessary to the functioning of the utility, but not including general business offices, maintenance facilities and other general system facilities, when located according to the yard space rules set forth in this section for dwellings and having a landscaped or masonry barrier on all sides. Buildings shall be of such exterior design as to harmonize with nearby properties
- (18) Vocational or trade schools, business colleges, art and music schools and conservatories, and other similar uses
- (19) Other uses found in the Zoning Matrix [Attachment A hereto]

(B) Conditional Uses: The following uses are subject to any conditions listed in this chapter and are subject to other conditions relating to the placement of said use on a specific tract of ground in the (M-2) Heavy Manufacturing Zoning District as approved by City Council.

- (1) Automobile wrecking yard
- (2) Acid or acid by-products manufacture
- (3) Ammonia bleaching powder, chlorine, peroxylin or celluloid manufacture
- (4) Explosives manufacture or storage
- (5) Garbage, refuse, offal or dead animal reduction or disposal area
- (6) Glue manufacture, fat rendering, distillation of bones or by-products
- (7) Meat packing plants, including poultry and animal slaughterhouses and abattoirs
- (8) Milling or smelting of ores
- (9) Petroleum refining
- (10) Motels and hotels
- (11) Petroleum refining
- (12) Stock or feed yards
- (13) Salvage yard
- (14) Tanning, curing, or storage of hides or skins
- (15) Towers

(C) Permitted Accessory Uses:

- (1) Buildings and uses accessory to the permitted principal uses
- (2) Recreational Vehicle Pads accessory to Hotel/Motel Uses with the following restrictions:
 - a) Number of pads shall not exceed 10% of the number of sleeping rooms available at the hotel/motel to a maximum of 15 pads
 - b) The hotel/motel shall continue to provide all required parking spaces.
 - c) Water service shall not be provided at the pad
 - d) Sewer service shall not be provided at the pad. A publicly accessible dump station must be available at the hotel/motel or within ½ mile of the hotel/motel.
 - e) Pads shall not be located in any required setback
 - f) All RV pads shall be provided with a landscape buffer yard or street yard as identified in the landscaping section of this code.

g) Pads shall not be accessible from any public way.

(D) Specifically Excluded Uses:

- (1) Any residential use
- (2) Manufactured homes, and manufactured home parks
- (3) Churches, schools, institutions and other public and semi-public uses except for trade and vocational schools

(E) Space Limitations:

Uses		Minimum Setbacks						
		A	B	C	D	E		
	Minimum Parcel Area (feet)	Minimum Lot Width (feet)	Front Yard (feet)	Rear Yard (feet)	Side Yard (feet)	Street Side Yard (feet)	Maximum Ground Coverage	Maximum Building Height (feet)
Permitted Uses	6,000	50	10	0 ¹	0 ²	10	65%	-
Conditional Uses	6,000	50	10	0 ¹	0 ²	10	65%	-

¹ None when bounded by an alley, otherwise 10 feet

² No required Side Yard Setback, but if provided, not less than 5 feet or unless adjacent to a parcel whose zone requires a side yard setback, then 5 feet. When adjacent to a public alley, the setback is optional and may range from 0 feet to 5 feet.

(F) Miscellaneous Provisions:

- (1) Supplementary regulations shall be complied with as defined herein
- (2) Only one principal building shall be permitted on one zoning lot except as otherwise provided herein.

Amended by Ordinance No. 8947, effective 1-5-2005

36-103 Wind Energy Conversion Systems

Definitions

The following are defined for the specific use of this section.

- A. **Aggregate Project** shall mean projects that are developed and operated in a coordinated fashion, but which have multiple entities separately owning one or more of the individual WECS within the larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity but are also part of the aggregated project.
- B. **Commercial WECS** shall mean a wind energy conversion system of equal to or greater than 100 kW in total name plate generating capacity.
- C. **Connector Line** shall mean any power conductor that carries electrical power from one or more wind turbines to the point of interconnection with the distribution system.
- D. **Hub Height** shall mean the distance from ground level as measured to the centerline of the rotor.
- E. **Fall Zone** shall mean the area, defined as the furthest distance from the tower base, in which a guyed or tubular tower will collapse in the event of a structural failure. This area may be less than the total height of the structure.
- F. **Meteorological Tower** shall mean, for purposes of this regulation, a tower which is erected primarily to measure wind speed and directions plus other data relevant to siting a Wind Energy Conversion System. Meteorological towers do not include towers and equipment used by airports, the Nebraska Department of Roads, or other applications to monitor weather conditions.
- G. **Property Line** shall mean the boundary line of the area over which the entity applying for a Wind Energy Conversion System permit has legal control for the purpose of installing, maintaining and operating a Wind Energy Conversion System.
- H. **Public Conservation lands** shall mean land owned in fee title by State or Federal agencies and managed specifically for conservation purposes, including but not limited to State Wildlife Management Areas, State Parks, federal Wildlife Refuges and Waterfowl Production Areas. For purposes of this regulation, public conservation lands will also include lands owned in fee title by non-profit conservation organizations, Public conservation lands will also include private lands upon which conservation easements have been sold to public agencies or non-profit conservation organizations.
- I. **Rotor Diameter** shall mean the diameter of the circle described by the moving rotor blades.
- J. **Small Wind Energy Conversion System (SWECS)** shall mean a wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than 100 kW and which is intended to primarily reduce on-site consumption of utility power.
- K. **Substations** shall mean any electrical facility to convert electricity produced by wind turbines to a higher or lower voltage for interconnection with transmission lines.
- L. **Total Height** shall mean the highest point, above ground level, reached by a rotor tip or any other part of the Wind Energy Conversion System.

- M. **Tower** shall mean the vertical structures, including the foundation, that support the electrical generator, rotor blades, or meteorological equipment.
- N. **Tower Height** shall mean the total height of the Wind Energy Conversion System, between the ground level at the base of the tower and the top of the tower, exclusive of the rotor blades.
- O. **Transmission Line** shall mean the electrical power lines that carry voltages of at least 69,000 volts (69 KV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers.
- P. **Wind Energy Conversion System (WECS)** shall mean an electrical generating facility comprised of one or more wind turbines and accessory facilities, including but not limited to: power lines, transformers, substations and meteorological towers that operate by converting the kinetic energy of wind into electrical energy, which may be used on-site or distributed into the electrical grid.
- Q. **Wind Turbines** shall mean any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy using airfoils or similar devices to capture the wind.

Small Wind Energy Conversion Systems

Purpose

It is the purpose of this regulation to promote the safe, effective and efficient use of wind energy systems installed to reduce the on-site consumption of utility supplied electricity.

Requirements

Small wind energy conversion systems shall be permitted as an Accessory Use within any district where the use is listed and allowed. Certain requirements as set forth below shall be met:

- A. Tower Height**
1. For all residential or residentially zoned properties tower height shall be limited to 80 feet or the maximum height for a structure in that district, tower must meet required setbacks.
 2. For non-residential or non-residentially zoned properties between 20,000 square feet and one acre tower height shall be limited to 80 feet or the maximum height for a structure in that district, tower must meet required setbacks.
 3. For non-residential or non-residentially zoned properties greater than one acre in size, there is no limitation on tower height, except that the tower must meet required setbacks.
- B. Minimum Lot Size**
1. Towers shall not be permitted on any lot of less than 20,000 square feet
- C. Setbacks**
1. No part of the wind system structure, including guy-wire anchors, may extend closer than 10 feet to the property lines of the installation site; tower must meet required underlying setbacks.
- D. Noise**
1. Small wind energy systems shall not exceed 60 dBA, as measured at the closest neighboring inhabited dwelling unit.

2. The noise level may be exceeded during short term events such as utility outages and/or severe wind storms, wind speeds of greater than 50 miles per hour.

E. Approved Wind Turbines

1. Small wind turbines must have been approved under the Emerging Technologies program of the California Energy Commission or any other small certification program recognized by the American Wind Energy Association.

F. Compliance with Building and Zoning Codes

1. Applications for small wind energy systems shall be accomplished by standard drawings of the wind turbine structure, including the tower base, and footings.
2. An engineering analysis of the tower showing compliance with official building code of the governing body and/or the State of Nebraska and certified by a licensed professional engineer shall also be submitted.

G. Compliance with FAA Regulations

1. Small wind energy conversion systems must comply with applicable FAA regulations, including any necessary approvals for installations close to airports.
2. No small wind energy system shall be installed until evidence has been given that the Central Nebraska Regional Airport has been informed of the applicant's intent to install a SWECS.

H. Compliance with National Electrical Code

1. Permit applications for small wind energy systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code and the National Electric Safety Code.

I. Utility Notification

1. No small wind energy system shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator.
2. Off-grid systems shall be exempt from this requirement.

Setbacks

All towers for SWECS shall adhere to the setbacks established in the following table:

Required Setbacks for SWECS Towers	
Property Lines	One times the total height plus underlying setback
Road Rights-of-Way*	One times the total height plus underlying setback
Other Rights-of-Way	One times the total height plus underlying setback

* The setback shall be measured from any future Rights-of-Way if a planned change or expanded Right-of-Way is known.

Commercial/Utility Grade Wind Energy Conversion Systems

Purpose

It is the purpose of this regulation to promote the safe, effective and efficient use of commercial/utility grade wind energy conversion systems within the City of Grand Island and its Extraterritorial Zoning Jurisdiction

Requirements

Commercial/Utility Grade wind energy systems shall be a Conditional Use within the AG-2 Secondary Agricultural District, the TA Transitional Agriculture District and the AG-SI Special Agriculture/Industrial Zone. The following requirements and information shall be met and supplied:

- A. The name(s) of project applicant.
- B. The name of the project owner.
- C. The legal description and address of the project.
- D. A description of the project including: 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.
- E. Site layout, including the location of property lines, wind turbines, feeder lines, and all related accessory structures. This site layout shall include distances and be drawn to scale.
- F. Certification by an Engineer competent in disciplines of WEC's.
- G. Documentation of land ownership or legal control of the property.
- H. The latitude and longitude of individual wind turbines; included with this shall be an area or zone in close proximity that meets all setbacks; where actual WEC will be considered.
- I. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other Wind Energy Conversion System, within 10 rotor distances of the proposed Wind Energy Conversion System not owned by the applicant.
- J. Location of migratory waterfowl flyways, wetlands, scenic, and natural areas within 1,320 feet of the proposed Wind Energy Conversion System.
- K. An Acoustical Analysis that certifies that the noise requirements within this regulation can be met
- L. The applicant shall supply the emergency management agency and/or fire departments with a basic emergency response plan.
- M. FAA and FCC permit, if necessary. Applicant shall submit permit or evidence that the permit has been filed with the appropriate agencies and that the Central Nebraska Regional Airport has been notified of the project.
- N. Evidence that there will be no inference with any commercial and/or public safety communication towers.
- O. Decommissioning Plan as required by this regulation.

Setbacks

All towers shall adhere to the setbacks established in the following table:

	Wind Turbine – Commercial/Utility WECS	Meteorological Towers
Property Lines	150 feet from property lines; however, the setback may be less when two adjoining property owners are within the aggregate project.	One times the tower height.
Neighboring Dwelling Units	1,000 feet	One times the tower height.
Road Rights-of-Way*	One-half the rotor diameter.	One times the tower height.
Other Rights-of-Way	NA	NA
Wildlife Management Areas and State Recreational Areas	600 feet	600 feet
Wetlands, USFW Types III, IV, and V	600 feet	600 feet
Other structures and cemeteries adjacent to the applicant's sites	One-half the rotor diameter.	One times the tower height.
Other existing WECS not owned by the applicant.	NA	NA

* The setback shall be measured from any future Rights-of-Way if a planned change or expanded Right-of-Way is known.

Special Safety and Design Standards

All towers shall adhere to the following safety and design standards:

- A. Clearance of rotor blades or airfoils must maintain a minimum of 12 feet of clearance between their lowest point and the ground.
- B. All Commercial/Utility WECS shall have a sign or signs posted on the tower, transformer and substation, warning of high voltage. Other signs shall be posted on the tower base or perimeter fencing with emergency contact information.
- C. All wind turbines, which are a part of a commercial/utility WECS, shall be installed with a tubular, monopole type tower.
- D. Consideration shall be given to painted aviation warnings on all towers less than 200 feet.
- E. Color and finish:
All wind turbines and towers that are part of a commercial/utility WECS shall be white, grey, or another non-obtrusive color. Blades may be black in order to facilitate deicing. Finishes shall be matte or non-reflective.
- F. Lighting:
Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by the FAA permits and regulations. Red strobe lights shall be used during nighttime illumination to reduce impacts on neighboring uses and migratory birds. Red pulsating incandescent lights should be avoided.
- G. Other signage:
All other signage shall comply with the sign regulations found in the City Code.
- H. Feeder Lines:
All communications and connector lines associated with the project distribution system installed as part of a WECS shall be buried. Where obstacles to the buried lines create a

need to go above ground, these lines may be placed above ground only to miss the obstacle.

- I. **Waste Disposal:**
Solid and Hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants, shall be removed from the site promptly and disposed of in accordance with all applicable local, state and federal regulations.

- J. **Discontinuation and Decommissioning:**
A WECS shall be considered a discontinued use after one year without energy production, unless a plan is developed and submitted to the Zoning Administrator outlining the steps and schedule for returning the WECS to service. All WECS and accessory facilities shall be completely removed to twelve feet below ground level within 180 days of the discontinuation of use. The 180 days may be extended if proof of weather delays is provided.

Each Commercial/Utility WECS shall have a Decommissioning plan outlining the anticipated means and cost of removing WECS at the end of their serviceable life or upon use being discontinued. The cost estimates shall be made by a competent party; such as a Professional Engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning. The plan shall also identify the financial resources that will be available to pay for decommissioning and removal of the WECS and accessory facilities. The initial plan shall be submitted with the application. An updated plan shall be filed with the City every 5 years.

- K. **Noise:**
No Commercial/Utility WECS shall exceed 50 dBA at the nearest structure or use occupied by humans.

- L. **Interference:**
The applicant shall not cause interference with power quality of area utility feeder circuits and shall not introduce noise to the connected electric distribution system. WECS shall not cause interference with any commercial or public safety electromagnetic communications, such as radio, telephone, microwaves, or television signals. The applicant shall notify all electric utilities and communication tower operators within five miles of the proposed WECS location upon application for permits.

- M. **Environmental Permits:**
The developer shall present evidence the project meets the environmental permitting requirements of all applicable state and federal agencies if such permits are required.

- N. **Drainage System:**
The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the WECS.

§36-103. Wind Energy Systems

In any zoning district, a conditional use permit may be granted to allow wind energy conversion system, including such devices as wind charger, windmill, or wind turbine; subject to the following conditions:

- ~~-(A) The distance from any tower support base to any tower support base of another wind energy device under other ownership shall be a minimum of five (5) rotor distances figured by the size of the largest rotor.~~
- ~~-(B) The wind energy system operation shall not cause interference to the radio and television reception on adjoining property.~~
- ~~-(C) To limit climbing access to the tower, a fence six (6) feet high with a locking portal shall be placed around the tower base or the tower climbing apparatus shall be limited to no more than twelve feet from the ground, or the tower may be mounted on a roof top.~~
- ~~-(D) The setback distances from all lot lines to any tower support base shall be determined according to the following setback table:~~

~~SETBACK TABLE~~

Rotor Diameter	Setback Distance	Minimum Lot Area[†]
5 feet	100 feet	1.0 Acre
10 feet	165 feet	2.5 Acres
15 feet	220 feet	4.5 Acres
20 feet	270 feet	6.75 Acres
25 feet	310 feet	9.0 Acres
30 feet	340 feet	10.75 Acres
35 feet or larger	365 feet	12.25 Acres

~~[†]Where there are several towers under single ownership the minimum lot areas may be adjusted down provided the minimum setback distances are met on all perimeter units. In addition, the landing areas for all internal towers and rotors shall be within the property owned by the operator.~~

~~-(E) Data pertaining to the machine's turbine safety and stability shall be filed with the application. Such data shall include turbine safety and acceptance results from tests conducted by a qualified individual or organization based upon standards set by the U.S. Department of Energy (DOE), Electric Power Research Institute (EPRI) Utility Wind Turbine Verification Program. (U.S. Department of Energy—EPRI Wind Turbine Verification Program Electric Power Research Institute—3412 Hillview Avenue, Palo Alto, California 94304.)~~

~~-(F) The application shall provide covenants, easements, or similar documentation from the abutting owners providing access to wind sufficient for its adequate operation, unless adequate accessibility to the wind is provided on the site.~~