

Box Elder County Land Use Management & Development Code

WIND ORDINANCE

Article 5: SMALL & LARGE WIND SYSTEMS

Chapter 5-4. Wind System Regulations

Box Elder Zoning Ordinance 339 as Adopted July 29, 2010

Part

1. General
2. Temporary Meteorological Towers (MET Towers)
3. Small Wind System
4. Large Wind System

PART 1

5-4-010. GENERAL

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5-4-010.1 Purpose.

The purpose of this Chapter is to provide policies, standards, requirements, and procedures to regulate and control the placement, construction, and modification of small wind energy systems, large wind energy systems, and wind metering towers and equipments as defined herein and ensure that all such facilities are consistent with the General Plan and are constructed and operated in a manner that will promote public health, safety, general welfare and the physical, social and economic development of the area.

5-4-1001.2 Scope.

The provisions of this chapter shall apply to all zoned and un-zoned areas of unincorporated Box Elder County.

5-4-030. Definitions.

- A. As used in this chapter:

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1. **Abandoned:** A wind energy system or project shall be considered abandoned when, once installed fails to operate for 24 months.
2. **Height:** The height of a wind turbine measured from natural grade to the tip of the rotor blade at its highest point.
3. **Large Wind Energy System:** All equipment, machinery, and structures utilized in connection with the conversion of wind to electricity, including but not limited to, storage, electrical collection and supply equipment, transformers, service and access roads, and one or more wind turbines which has a rated nameplate capacity greater than 100 kilowatts (kW).
4. **Rated Nameplate Capacity:** The maximum rated output of electric power production equipment shall be rated in Watts (W).
5. **Small Wind Energy System:** All equipment, machinery, and structures utilized in connection with the conversion of wind to electricity, including but not limited to, storage, electrical collection and supply equipment, transformers, service and access roads, and one or more wind turbines which has a rated nameplate capacity of 100 kilowatts or less.
6. **Temporary Meteorological Tower:** A temporary tower which shall remain in place for a period not exceeding three (3) years, housing, or supporting wind-measuring equipment used for the purpose of establishing the viability of wind-generated energy by measuring and monitoring wind velocity, direction, shear, duration, intensity, and regularity.

PART 2

5-4-010. TEMPORARY METEOROLOGICAL TOWERS (MET TOWERS).

Sections

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| 5-4-020.1 | Application for Temporary Meteorological Towers |
| 5-4-020.2 | Approval Standards |
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5-4-020.1 Application for Temporary Meteorological Towers.

Temporary meteorological tower installation shall be allowed in all zoning districts and un-zoned areas of unincorporated Box Elder County upon approval of the application and site plan by the Zoning Administrator. The application and site plan shall consist of the following:

- a. A site plan (drawn to scale) with:
 - i. The perimeter and dimensions of the property;
 - ii. The name and locations of all streets, roads, or highways on or contiguous to the property;
 - iii. The locations of all easements or rights-of-way on the property;
 - iv. The names and locations of all rivers, streams, or waterways on or contiguous to the property;
 - v. The use, location, and dimension of all structures on the property (include distance from all proposed structures to the property lines);
 - vi. A scale; and
 - vii. A north arrow.
- b. An application completed upon the form provided by the Zoning Administrator.

5-4-020.2 - Approval Standards.

The following standards shall apply to approval of meteorological tower applications:

- A. **Height.** All meteorological towers shall not exceed 262 feet (80 meters).
- B. **Setbacks.** Meteorological towers shall be set back at a distance equal to 110% of the total height of the system from all property lines and inhabited structures, overhead utility lines, and public roads or public right-of-ways.
- C. **Permits.** All necessary zoning certificates and permits shall be applied for and issued and all structural reviews shall be completed by the Zoning Administrator prior to issuance of permit.
- D. **Federal Aviation Administration (FAA).** The meteorological tower shall be constructed in conformity with all applicable FAA regulations and all FAA notices and approvals shall be received and submitted to the Zoning Administrator prior to issuance of permit.
- E. **Right-of-ways.** Applicants shall furnish evidence that applicable rights-of-way have been granted for access to the met tower across any private, state, or Bureau of Land Management (BLM) lands. For BLM right-of-way grants, applicants may furnish a

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copy of the signed BLM Right-of-Way Grant application together with evidence that applicable fees have been tendered to the BLM.

- F. **Easements.** The meteorological tower shall not physically obstruct or encumber any road, power line, or pipeline easement.

5-4-20.3 - Expiration and Extension.

- A. **Expiration.** The meteorological tower shall be in place for a period not exceeding three (3) years. Applicants shall provide the Zoning Administrator with 90 days prior written notice of removal of the tower.
- B. **Extension.** If the applicant desires to extend the tower usage period, a request for an extension must be submitted in writing 90 days prior to the expiration of the existing permit to the Zoning Administrator for consideration.

PART 3

5-4-030. SMALL WIND ENERGY SYSTEMS.

Sections

- 5-4-030.1. Land Use Authority Issued Permits.
- 5-4-030.2. Standard Criteria.
- 5-4-03 0.3. Siting Conditions and Property Maintenance.
- 5-4-030.4. Compliance with Laws, Ordinances, and Regulations.

5-4-030.1. Land Use Authority Issued Permits.

An application for a small wind energy system shall comply with the requirements of the Box Elder County Land Use Management & Development Code in this chapter and all other State and federal codes.

- A. **Permit Required.** Small wind energy systems shall be constructed as provided in this section by first obtaining a permit from the Zoning Administrator. The system in question must be approved by the Underwriter's Laboratory (UL listed).
- B. **Modifications.** Any physical modification to any existing and/or previously permitted small wind energy system that materially increases the size and/or type of

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wind turbines or other equipment shall require a new permit. Replacement of an already permitted turbine with a similar size and height will not require a new permit.

- C. **Expiration.** A permit issued pursuant to this ordinance shall expire if:
- a. The small wind energy system is not installed and functioning within twenty-four (24) months from the date the permit is issued; or
 - b. The small wind energy system is abandoned.
- D. **Violations.** It is unlawful for any person to construct, install, or operate a small wind energy system that is not in compliance with this ordinance or with any condition contained in a permit issued pursuant to this ordinance.
- E. **Administration and Enforcement.** This ordinance shall be administered and enforced by the Zoning Administrator or his designee party therein. The Zoning Administrator upon prior notice to owner and at reasonable business hours may enter any property for which a permit has been issued under this ordinance to conduct an inspection to determine whether the conditions stated in the permit have been met.

5-4-030.2. Standard Criteria.

- A. **Height.** The height of small wind energy systems shall not exceed 200 feet in height.
- B. **Setbacks.** Small wind energy systems shall be set back at a distance equal to 110% of the total height of the system from all property lines and inhabited structures, overhead utility lines, and public roads or public right-of-ways.
- C. **Minimum Blade Height.** The minimum blade height of the lowest extent of a turbine blade shall be 15 feet above the ground.
- D. **Color and Finish.** The small wind energy system shall be a neutral color that blends with the environment and complies with Federal Aviation Administration (FAA) standards.
- E. **Lighting.** Small wind energy systems shall be lighted as required by the FAA.

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Spotlights are prohibited unless required by the FAA. Lighting of the small wind energy system beyond FAA standards shall be directed downward and limited to that required for safety and operational purposes.

- F. **Signage and Advertising.** Signs and advertising shall be restricted to reasonable identification of the manufacturer, operator of the small wind energy system, utility, and safety signs.
- G. **Access.** All access doors, climbing apparatuses or access ways to towers and electrical equipment shall remain locked and inaccessible by the public.
- H. **Sound.** The small wind energy system shall not exceed 60 decibels from nearest property line and inhabited structure.
- I. **Airport Overlay.** The small wind energy system shall comply with the requirements outlined in the Airport Overlay Chapter of this Code.
- J. **Federal Aviation Administration (FAA).** The small wind energy system shall comply with the FAA standards, and the Zoning Administrator shall verify compliance before issuance of a permit.

5-4-030.3. Siting Conditions and Property Maintenance.

- A. **Land Clearing.** Clearing of natural vegetation shall be limited to that which is necessary for the safe construction, operation, and maintenance of the small wind energy system and as otherwise prescribed by applicable laws, regulations, and ordinances. Once the system is in operation, and land that has been disturbed is not necessary for the functioning of the system, such land shall be reclaimed with natural non-invasive vegetation within 60 days, weather permitting.
- B. **Soil Erosion.** Soil erosion is to be mitigated by the use of silt fencing, any accumulated product of which can be used in the site reclamation.
- C. **Wildlife and Habitat Impacts.** Small wind energy system applications may involve a consultation with Utah Division of Wildlife prior to issuance of permit. The applicant should contact the Division early in the planning phase to identify wildlife and/or wildlife habitat concerns and then continue to coordinate with the Division on these issues to avoid delays in permitting. A copy of the Utah Division of Wildlife consultation shall be submitted to the Box Elder County Planning and Zoning office

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before a permit can be issued.

- D. **Federal Wildlife Refuge.** All small wind energy systems applications are subject to review by the Federal Wildlife Refuge prior to issuance of permit. The applicant should contact the Refuge early in the planning phase to identify natural resource concerns and then continue to coordinate with the Refuge on natural resource issues to avoid delays in permitting. A copy of the Federal Wildlife Refuge review shall be submitted to the Box Elder County Planning and Zoning office before a permit can be issued.

- E. **System Conditions.** The applicant shall maintain the small wind energy system in good condition. Maintenance shall include, but not be limited to, painting, mechanical/electrical repairs, structural repairs, and security measures.

- F. **Removal and Decommissioning Requirements.** Any small wind energy system which has reached the end of its useful life or has been abandoned shall be removed. A small wind energy system shall be considered abandoned when it fails to operate for 24 months. Upon a Notice of Abandonment issued by the Zoning Administrator, the small wind energy system owner will have 60 days to provide sufficient evidence that the system has not been abandoned, or the Zoning Administrator shall have the authority to enter the owner's property and remove the system at the owner's expense. Once the system has been removed the owner is then responsible for land reclamation using the natural non-invasive vegetation that was removed or disturbed upon construction of the small wind energy system. To the greatest extent possible, the land shall be fully returned to its natural state within five years of the removal and decommissioning of the project.
 - a. **Exception.** Exceptions may be made for catastrophic circumstances such as natural disaster.

5-4-030.4. Compliance with Laws, Ordinances and Regulations.

- A. **Compliance.** The construction and operation of all such proposed small wind energy systems shall be consistent with all applicable local, state, and federal requirements, including all applicable safety, construction, environmental, electrical, communications, and FAA requirements.

- B. **Penalties.** Any violation of this Code shall constitute a Class C misdemeanor.

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PART 4

5-4-040 LARGE WIND ENERGY SYSTEMS. (Ordinance 356)

Sections

- 5-4-040.1. Land Use Authority Issued Permits.
- 5-4-040.2. Criteria Standards.
- 5-4-040.3. Siting Conditions and Property Maintenance.
- 5-4-040.4. Compliance with Laws, Ordinances, and Regulations.

5-4-040.1. Land Use Authority Issued Permits.

An application for a large wind energy system shall comply with the requirements of the Box Elder County Land Use Management & Development Code, this chapter and all other State and federal codes.

- A. Permit Required.** Large wind energy systems shall be constructed as provided in this section by first obtaining a conditional use permit from the Planning Commission (Also see Conditional Use Permit Section of this Code 2-2-100). Permit applications for large wind energy system expansions shall be based on the total rated capacity included in the existing large wind energy system. The system in question must be approved by the Underwriter's Laboratory (UL listed).
- B. Modifications.** Any physical modification to any existing and/or previously permitted large wind energy system that materially increases the size and/or type of wind turbines or other equipment shall require a new permit. Replacement of an already permitted turbine with a similar size and height will not require a new permit.
- C. Expiration.** A permit issued pursuant to this ordinance shall expire if:
 - a. The large wind energy system is not installed and functioning within twenty-four (24) months from the date the permit is issued; or
 - b. The large wind energy system is abandoned.
- D. Violations.** It is unlawful for any person to construct, install, or operate a large wind energy system that is not in compliance with this ordinance or with any condition contained in a permit issued pursuant to this ordinance.
- E. Administration and Enforcement.** This ordinance shall be administered and enforced by the Zoning Administrator or his designee party therein. The Zoning Administrator upon prior notice to owner and at reasonable business hours may enter any property for which a permit has been

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issued under this ordinance to conduct an inspection to determine whether the conditions stated in the permit have been met.

5-4-040.2. Criteria Standards.

- A. **Height.** The height of large wind energy systems shall not exceed 600 feet in height.
- B. **Setbacks.** Large wind energy systems shall be set back at a distance equal to 110% of the total height of the system from all property lines and inhabited structures, overhead utility lines, and public roads or public right-of-ways.
- C. **Setback Waivers.** The Planning Commission may consider and grant an exception to the minimum setbacks required if the following criteria are met:
 - a. A signed and recorded agreement of consent from any and all property owners abutting the property line affected by the setback waiver;
 - b. No public rights-of-way and/or utilities are adversely impacted by the setback waiver; and
 - c. The setback waiver does not create any increased health or safety concerns for the general public or any adjoining landowner.
- D. **Minimum Blade Height.** The minimum blade height of the lowest extent of a turbine blade shall be 30 feet above the ground.
- E. **Color and Finish.** The large wind energy system shall be a neutral color that blends with the environment and complies with Federal Aviation Administration (FAA) standards.
- F. **Lighting.** Large wind energy systems shall be lighted as required by the FAA. Spotlights are prohibited unless required by the FAA. Lighting of the large wind energy system beyond FAA standards shall be directed downward and limited to that required for safety and operational purposes.
- G. **Signage and Advertising.** Signs and advertising shall be restricted to reasonable identification of the manufacturer, operator of the large wind energy system, utility, and safety signs.

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- H. **Access.** All access doors, climbing apparatuses or access ways to towers and electrical equipment shall remain locked and inaccessible by the public.
- I. **Sound.** The large wind energy system shall not exceed 60 decibels from nearest property line and inhabited structure.
- J. **Airport Overlay.** The large wind energy system shall comply with the requirements outlined in the Airport Overlay Chapter of this Code.
- K. **Federal Aviation Administration (FAA).** The large wind energy system shall comply with the FAA standards, and the zoning administrator shall verify compliance before issuance of a permit.
- L. **Wind Study Required.** A wind study shall be required for large wind tower systems. In the event the applicant desires to maintain its proprietary interest in the wind data obtained from the wind study, the applicant may, at applicant's own cost and expense, have the wind data obtained from such a study evaluated by a private meteorologist that can confirm in a written report to the Zoning Administrator the existence of the wind resource and the viability of a large wind system. The County may retain the services of an independent, recognized expert to review the results of the wind resource study prior to acting on the application.

5-4-040.3. Siting Conditions and Property Maintenance

- A. **Land Clearing.** Clearing of natural vegetation shall be limited to that which is necessary for the safe construction, operation, and maintenance of the large wind energy system and as otherwise prescribed by applicable laws, regulations, and ordinances. Once the system is in operation, and land that has been disturbed is not necessary for the functioning of the system, such land shall be reclaimed with non-invasive vegetation within 60 days, weather permitting.
- B. **Soil Erosion.** Soil erosion shall be minimized by the use of silt fencing, any accumulated product of which can be used in the site reclamation. Any and all topsoil moved or removed will be stockpiled and preserved for present and future project area restoration. Soil from the right-of-way shall not enter any live stream or open water.

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- C. **Wildlife and Habitat Impacts.** Large wind energy system applications may involve a consultation with Utah Division of Wildlife prior to issuance of permit. The applicant should contact the Division early in the planning phase to identify wildlife and/or wildlife habitat concerns and then continue to coordinate with the Division on these concerns to avoid delays in permitting. A copy of the Utah Division of Wildlife consultation shall be submitted to the Box Elder County Planning and Zoning office before a permit can be issued.
- D. **Federal Wildlife Refuge.** All large wind energy systems application are subject to review by the Federal Wildlife Refuge prior to issuance of permit. The applicant should contact the Refuge early in the planning phase to identify natural resource concerns and then continue to coordinate with the Refuge on natural resource issues to avoid delays in permitting. A copy of the Federal Wildlife Refuge review shall be submitted to the Box Elder County Planning and Zoning office before a permit can be issued.
- E. **System Conditions.** The applicant shall maintain the large wind energy system in good condition. Maintenance shall include, but not be limited to, painting, mechanical/electrical repairs, structural repairs, and security measure.
- F. **Removal and Decommissioning Requirements.** Any large wind energy system which has reached the end of its useful life or has been abandoned shall be removed. A large wind energy system shall be considered abandoned when it fails to operate for 24 months. Upon a Notice of Abandonment issued by the Zoning Administrator, the large wind energy system owner will have 60 days to provide sufficient evidence that the system has not been abandoned, or the Zoning Administrator shall have the authority to enter the owner's property and remove the system at the owner's expense.
- i. **Exception.** Exceptions may be made for catastrophic circumstances such as natural disaster.
- G. **Reclamation.** Once the large wind energy system has been removed, the project owner is then responsible for land reclamation using the natural non-invasive vegetation that was removed or disturbed upon construction of the project. To the greatest extent possible, the land shall have returned to its natural state within five years of the removal and decommissioning of the project.

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5-4-040.4. Compliance with Laws, Ordinances and Regulations.

- A. **Compliance.** The construction and operation of all such proposed large wind energy systems shall be consistent with all applicable local, state, and federal requirements, including all applicable safety, construction, environmental, electrical, communications, and FAA requirements. Any person who fails to comply with any provision of this ordinance or a permit issued, pursuant to this ordinance, shall be subject to enforcement and penalties as allowed by applicable law.
- B. **Penalties.** Any violation of this Code shall constitute a Class C misdemeanor.