

# ***UTAH MODEL WIND ORDINANCE***

## **SMALL AND LARGE WIND SYSTEMS ORDINANCE**

### **1.0 Purpose**

The purpose of this [model] ordinance is to establish minimum requirements and regulations for the placement, construction, and modification of small wind energy systems, large wind energy systems, and wind metering towers and equipment as defined herein, while promoting the safe, effective, and efficient use of such systems. This ordinance does not address roof-mounted or building-integrated wind energy systems.

### **2.0 Definitions**

**Abandoned:** A wind energy system or project shall be considered abandoned when, once installed it fails to operate for 24 consecutive months. Exceptions may be made for catastrophic circumstances such as a natural disaster or “force majeure.”

**Height:** The height of a wind turbine measured from natural grade to the tip of the rotor blade at its highest point.

**Land Use Authority:** A person, board, commission, agency, or other body designated by the local legislative body to act upon a land-use application.

**Large Wind Energy System:** All equipment, machinery, and structures utilized in connection with the conversion of wind to electricity. This includes, but is 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).

**Rated Nameplate Capacity:** The maximum rated output of electric power production equipment. This output is typically specified by the manufacturer with a "nameplate" on the equipment rated in Watts (W) or British Thermal Units (BTUs). Due to the nature of wind energy systems, Watts will be used as the standard unit in this ordinance.

**Small Wind Energy System:** All equipment, machinery, and structures utilized in connection with the conversion of wind to electricity. This includes, but is not limited to, storage equipment, electrical collection and supply equipment, transformers, service and access roads, and one or more wind turbines that has a rated nameplate capacity of 100 kW or less.

**Special Use Permit:** A permit provided by the land-use authority for nonconforming small wind energy systems (e.g., a small wind energy system that does not meet the criteria for small energy wind systems set forth by this ordinance).

**Temporary Meteorological Tower:** A temporary tower, housing, and associated 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.

**Zoning:** Ordinances and bylaws adopted by cities and towns to regulate the use of land, buildings, and structures to the full extent of the independent constitutional powers of cities and towns to protect the health, safety, and general welfare of their present and future inhabitants.

## **3.0 General Requirements -- Small Wind Energy System**

### **3.1 Design Standards**

#### **3.1.1 Height**

The height of small wind energy systems shall not exceed 200 feet without prior approval from the Land Use Authority.

#### **3.1.2 Setbacks**

Small wind energy systems shall be set back at a distance equal to 110% of the height of the system from all inhabited structures, overhead utility lines, and public roads or public right-of-ways.

#### **3.1.3 Setback Waivers**

The Land Use Authority designated to approve the permit shall consider an exception to the minimum setbacks required if the following criteria are met:

- (a) a signed agreement of consent from abutting property owner(s), and
- (b) the public right-of-ways and power lines are not impacted by the location.

#### **3.1.4 Minimum Blade Height**

The minimum height of the lowest extent of a turbine blade shall be 15 feet above the ground.

#### **3.1.5 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. Gray, beige, and white are recommended.

#### **3.1.6 Lighting**

Small wind energy systems shall be lighted as required by the FAA. 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.

#### **3.1.7 Signage and Advertising**

Signs and advertising shall be restricted to reasonable identification of the manufacturer, operator of the small wind energy system, and utility, and safety signs.

#### **3.1.8 Access**

All access doors, climbing apparatuses, or access ways to towers and electrical equipment shall remain locked and inaccessible by the public.

#### **3.1.9 Sound**

The small wind energy system and associated equipment shall comply with the existing noise or sound ordinance. *(If no sound ordinance is in place, the American Wind Energy Association recommends 60dBa from the nearest inhabited structure).*

### **3.2 Siting Conditions and Property Maintenance**

#### **3.2.1 Land Clearing, Soil Erosion, Wildlife and Habitat Impacts**

It is recommended that any project be reviewed by the Utah Division of Wildlife prior to groundbreaking. If the Land Use Authority has standards for land clearing, soil erosion control, or habitat impact mitigation and/or habitat reclamation, those same standards should apply. If the Land Use

Authority does not have previously prescribed standards, the following is recommended for adoption. 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 is otherwise prescribed by applicable laws, regulations, and ordinances. Once the system is operational, any land that has been disturbed and is not necessary for the functioning of the system shall be reclaimed with natural vegetation within 60 days, weather permitting. Soil erosion is to be mitigated by the use of silt fencing, any accumulated product of which can be used in the site reclamation.

### **3.2.2 Minimum Lot Size**

Small wind energy systems that are less than 80 feet in height may be constructed on lots one acre or less. If the small wind energy system is greater than 80 feet in height, the system must be constructed on a lot greater than one acre.

### **3.2.3 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.

### **3.2.4 Removal and Decommissioning Requirements**

Any small wind energy system that 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 consecutive months. Upon a Notice of Abandonment issued by the Land Use Authority, the small wind energy system owner will have 60 days to provide sufficient evidence that the system has not been abandoned, or the Land Use Authority 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 vegetation that was removed or disturbed upon construction of the project. 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. Exceptions may be made for catastrophic circumstances such as a natural disaster or "force majeure."

## **3.3 Land Use Authority Issued Permits**

### **3.3.1 Permits**

Small wind energy systems shall be constructed as provided in this section by first obtaining a permit from the appropriate Land Use Authority. The system in question must be approved by the Underwriters Laboratories (UL listed).

### **3.3.2 Modifications**

Any physical modification to an existing and permitted small wind energy system that materially increases the size and/or type of wind turbines or other equipment shall require a permit modification under this ordinance. Replacement of an already permitted turbine with a similar size and height will not require a permit modification.

### **3.3.3 Special Use Permits**

A Special Use Permit (SUP) may be granted in the case where a proposed small wind energy system or project does not satisfy the standard criteria of the permit set forth under this ordinance. The applicant must then seek review of the proposed project and petition the Land Use Authority for a Special Use Permit. This SUP variance from the standard permit criteria will only be applicable to that specific

nonconforming project.

### **3.3.4 Expiration**

A permit issued pursuant to this ordinance shall expire if:

- (a) the small wind energy system is not installed and functioning within 24 months from the date the permit is issued; or
- (b) the small wind energy system is abandoned.

### **3.3.5 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. Small wind energy systems installed prior to the adoption of this ordinance are exempt.

### **3.3.6 Administration and Enforcement**

This ordinance shall be administered and enforced by the Land Use Authority or designated party therein. The Land Use Authority, 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.

### **3.4 Compliance with Laws, Ordinances, and Regulations**

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.

## **4.0 General Requirements -- Large Wind Energy Systems and Projects**

### **4.1 Design Standards**

#### **4.1.1 Height**

The height of large wind energy systems shall not exceed 600 feet in height without prior approval from the Land Use Authority.

#### **4.1.2 Setbacks**

Large wind energy systems shall be set back a distance equal to 110% of the height of the system from all inhabited structures, overhead utility lines, and public roads or public right-of-ways.

#### **4.1.3 Setback Waivers**

The Land Use Authority designated to approve the permit shall consider an exception to the minimum setbacks required if the following criteria are met:

- (a) a signed agreement of consent from abutting property owner(s), and
- (b) the public right-of-ways and power lines are not impacted by the location.

#### **4.1.4 Minimum Blade Height**

The minimum height of the lowest extent of a turbine blade shall be 30 feet above the ground.

#### **4.1.5 Color and Finish**

The large wind energy system shall be a neutral color that blends with the environment and complies with FAA standards. Gray, beige, and white are recommended.

#### **4.1.6 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.

#### **4.1.7 Signage and Advertising**

Signs and advertising shall be restricted to reasonable identification of the manufacturer, operator of the large wind energy system and utility, and safety signs.

#### **4.1.8 Access**

All access doors, climbing apparatuses, or access ways to towers and electrical equipment shall remain locked and inaccessible by the public.

#### **4.1.9 Sound**

The large wind energy system and associated equipment shall comply with the existing noise or sound ordinance.

### **4.2 Siting Conditions and Property Maintenance**

#### **4.2.1 Land Clearing, Soil Erosion, Wildlife and Habitat Impacts**

It is recommended that any project be reviewed by the Utah Division of Wildlife prior to groundbreaking. If the Land Use Authority has standards for land clearing, soil erosion control, or habitat impact mitigation and/or habitat reclamation, those same standards should apply. If the Land Use Authority does not have previously prescribed standards, the following is recommended for adoption. 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 is otherwise prescribed by applicable laws, regulations, and ordinances. Once the system is operational, any land that has been disturbed and is not necessary for the functioning of the system shall be reclaimed with natural vegetation within 60 days, weather permitting. Soil erosion is to be mitigated 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 project shall not enter any live stream or open water.

#### **4.2.2 System Conditions**

The applicant shall maintain the large wind energy system and project in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and security measures.

#### **4.2.3 Removal and Decommissioning Requirements**

Any large wind energy system or project that has reached the end of its useful life or has been abandoned shall be removed. A large wind energy system or project shall be considered abandoned when it fails to operate for 24 consecutive months. Upon a Notice of Abandonment issued by the Land Use Authority, the large wind energy system or project owner will have 60 days to provide sufficient evidence that the system has not been abandoned or the Land Use Authority shall have the authority to enter the owner's property and remove the system(s) at the owner's expense. Exceptions may be made for catastrophic circumstances such as a natural disaster or "force majeure."

#### **4.2.4 Reclamation**

Once the system has been removed the project owner is then responsible for land reclamation using the natural 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.

#### **4.3 Land Use Authority Issued Permits**

A large wind energy system shall be constructed as provided in this section by first obtaining a permit from the Land Use Authority. Permit applications for project expansions shall be based on the total rated nameplate capacity included in the existing project. The system in question must be approved by the Underwriters Laboratory (UL listed).

##### **4.3.1 Modifications**

Any physical modification to an existing and permitted large wind energy system that materially increases the size and/or type of wind turbines or other equipment shall require a permit modification under this ordinance. Replacement of an already permitted turbine with a similar size and height will not require a permit modification.

##### **4.3.2 Special Use Permits**

A Special Use Permit (SUP) may be granted in the case where a proposed large wind energy system or project does not satisfy the standard criteria of the permit set forth under this ordinance. The applicant must then seek review of, and petition the Land Use Authority for a Special Use Permit. This SUP variance from the standard permit criteria will only be applicable to that specific nonconforming project.

##### **4.3.3 Expiration**

A permit issued pursuant to this ordinance shall expire if:

- (a) the large wind energy system or project is not installed and functioning within 60 months from the date the permit is issued; or
- (b) the large wind energy system or project is abandoned.

##### **4.3.4 Violations**

It is unlawful for any person to construct, install, or operate a large wind energy system or project that is not in compliance with this ordinance or with any condition contained in a permit issued pursuant to this ordinance. Large wind energy systems installed prior to the adoption of this ordinance are exempt.

##### **4.3.5 Administration and Enforcement**

This ordinance shall be administered and enforced by the Land Use Authority or designated party therein. The Land Use Authority, 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.

#### **4.4 Compliance with Laws, Ordinances, and Regulations**

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.

## **5.0 General Requirements -- Temporary Meteorological Towers (Met Towers)**

### **5.1 Permitted Use by Rule**

Temporary met tower installations shall be considered a permitted use in all zoning districts where the following requirements and site plan criteria are submitted to the Land Use Authority prior to commencing any installation or construction.

- (a) A site plan drawn at an appropriate scale with:
  - (i) the perimeter and dimensions of the property;
  - (ii) the names 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) All necessary zoning certificates and permits shall be applied for and issued, and all structural reviews shall be completed by the Land Use Authority prior to construction.
- (c) The met tower shall be constructed in conformity with all applicable FAA regulations and all FAA notices and approvals shall be received and submitted to the Land Use Authority prior to any construction.
- (d) Applicants shall furnish evidence that applicable right-of-ways 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 copy of the signed BLM Right-of-Way Grant application together with evidence that applicable fees have been tendered to the BLM.
- (e) The met tower shall be in place for a period not exceeding three years. Applicants shall provide the Land Use Authority with 90 days prior written notice of removal of the tower.
- (f) In the event the applicant desires to relocate the met tower, the applicant shall receive prior written approval from the Land Use Authority and furnish coordinates for the new tower location.
- (g) If the applicant desires to extend the met tower usage period, a request for an extension must be submitted in writing 90 days prior to the expiration of the permit to the Land Use Authority for consideration.
- (h) The met tower shall not physically obstruct or encumber any road, power line, or pipeline easement.