Section 58 Small Wind Energy System

58.1 For the purpose of this section, the following definitions apply:

a. *BLADE* means an element of a wind energy system rotor, which acts as a single airfoil, thereby extracting kinetic energy directly from the wind;

b. *ROTOR'S ARC* means the largest circumferential path travelled by a blade;

c. *TOTAL HEIGHT* means the height from the grade at the base of the building on which a Small Wind Energy System is mounted to the highest vertical extension of a Small Wind Energy System. In the case of a Small Wind Energy System with a horizontal axis rotor, total height includes the distance from grade to the top of the tower, plus the distance from the top of the tower to the highest point of the rotor's arc; and

d. *TOWER* means the structure which supports the rotor.

58.2 A Small Wind Energy System may only be located on the roof of a building.

58.3 Small Wind Energy Systems shall require a development permit.

58.4 In addition to the requirements of Section 17.2, applications for Small Wind Energy Systems shall include the following information where applicable:

a. The manufacturer's specifications indicating:

i) The Small Wind Energy System's rated output in kilowatts;

ii) Safety features and sound characteristics;

iii) Type of material used in tower, blade, and/or rotor construction; and

iv) CSA approval;

b. Potential for electromagnetic interference;

c. Nature and function of over speed controls which are provided;

d. Specifications on the foundations and/or anchor design, including location and anchoring of any guy wires; and/or

e. Information demonstrating that the system will be used primarily to reduce on-site consumption of electricity.

58.5 Prior to making a decision on a development application for a Small Wind Energy System, the Development Authority may refer and consider the input of the following agencies and departments:

a. Alberta Energy and Utilities Board;

b. Transport Canada; and/or

c. Navigation Canada.

58.6 The total height of a Small Wind Energy System may exceed the maximum building height of the district by a maximum of 2.0m.

58.7 Small Wind Energy Systems shall comply with the following standards:

a. There shall be a limit of one (1) small wind energy system per lot;

b. The system's tower shall be located and screened by landforms, natural vegetation or other means to minimize visual impacts on neighbouring residences and public roads, public trails and other public areas;

c. The system's tower and supporting structures shall be painted a single, neutral, non-reflective, non-glossy (for example, earth-tones, gray, black) that, to the extent possible, visually blends the system with the surrounding natural and built environments;

d. The system shall be equipped with manual and automatic over speed controls. The conformance of rotor and over speed control design and fabrication to good engineering practices shall be certified by a licensed mechanical, structural or civil engineer;

e. The system shall be operated such that no electro-magnetic interference is caused;

f. The system's maximum power shall not exceed 3 kW;

g. Wind turbines shall not exceed 60 dBA, or in excess of 5 dBA above the background noise, whichever is greater. The level, however, may be exceeded during short-term events including utility outages and severe windstorms; and

h. Brand names or advertising associated with the system or the system's installation shall not be visible from any public place.