49.Alternative & Renewable Energy Systems

(1) Alternative & Renewable Energy Systems for commercial generation purposes shall require a development permit application which shall include the following information where applicable:

(a) The manufacturers specifications indicating:

i. the rated DC output in kilowatts;

ii. safety features and sound characteristics;

iii. type and material used; and

iv. certification mark as per Alberta STANDATA LEG-ECR2, if applicable.

(2) Any private ground-mounted alternative or renewable energy systems in a hamlet shall be located and screened, by landforms, natural vegetation or other means to minimize its visual impact on adjacent residences, public roads, trails or other public areas. Ground-mounted renewable energy systems for a commercial solar generation facility are prohibited in hamlets.

(3) Any ground-mounted alternative or renewable energy systems in any district (excluding Hamlets) may be required to be located and screened by landforms, natural vegetation or other means to minimize the visual impact on adjacent residences, public roads, trails or other public areas. All ground-mounted systems require a development permit.

(4) Upon abandonment or termination of any alternative or renewable energy system's use, the entire facility and all components associated with the system, including towers or support structures, shall be removed and the site restored to its pre-construction condition.

(5) Upon abandonment or termination of any geothermal energy system, closure of all facilities and wells; removal of all above-ground components and gravel (if not maintained for other uses); recontouring the surface; and revegetation are required.

(6) All plumbing, reservoirs, pumps and other equipment associated with solar or geo-thermal heating or cooling systems shall require plumbing, electrical and building permits as required and must meet all applicable provincial plumbing, electrical and building code and any other municipal requirements.

(7) Alternative & Renewable Energy Systems can be applied to grid-connected or stand-alone configurations in agricultural, residential, commercial, and industrial applications.

(8) Only private use alternative and renewable energy systems are permitted in residential areas.

(9) Any necessary Safety Codes permits must be obtained.

Solar Energy Systems

(1) Applications for a private use solar energy system with ground-mounted arrays may be considered in any district except the Manufactured Home District (MHD).

(2) Solar energy systems with ground-mounted arrays and associated equipment will require a development permit and will need to meet setbacks for the district.

(3) Solar arrays may be installed on the roof of any building or may be ground mounted in a rear or side yard. Private use roof installed solar arrays will not require a development permit.

(4) Approval from the Alberta Utilities Commission (AUC) and any other provincial or federal agency or utility company is required prior to the operation of any grid-connected solar energy system as required.

(5) Before granting a development permit where the use is discretionary, the development authority shall notify, in writing, property owners within a one (1) mile distance of the proposed site and give adjacent property owners twenty-one (21) days to provide written comments to the Development Officer with respect to the proposed facility. The development authority will consider the comments received from the property owners that are within our authority to consider prior to making a decision on the development permit application.

(6) The Development Authority may require the applicant to provide a Basic Environmental Review prepared by a qualified professional.

(7) If the solar energy system with a ground-mounted array is decommissioned, the applicant is required to return the project location to the same or better land capability it had before the project started. For example, topsoil, altered drainage systems, or compacted soil resulting from construction, operation, or decommissioning of the site should be mitigated. A decommissioning and or mitigation plan may be required.

(8) If a solar array is being mounted on a tower/pole, the applicant will have to adhere to the height requirements of the applicable district as stated in the Bylaw.

(9) There shall be no aboveground portion of an alternative energy structure located in the front yard. A solar array may be ground mounted in a side yard, provided the structure complies with the minimum side yard setback requirements of the District.

(10) A solar array that is mounted on a wall may project a maximum of:

(a) 1.5 m (5 ft.) from the surface of that wall, when the wall is facing a rear lot line; and

(b) in all other cases, 0.6 m (2 ft.) from the surface of that wall.

(11) If a roof mounted solar array requires raising of the top of the array for alignment, the top of the array shall not project above the highest roofline by more than 0.3 meters (1 ft.). The solar array must not extend beyond the outermost edge of the roof.

(12) Safety code permits are required.

(13) Solar collectors must be located so that glare is not directed at adjacent sites and does not affect traffic safety.

Wind Energy Conversion Systems

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

- "Blade" means an element of a WECS rotor that forms an aerodynamic surface to extract energy from the wind.
- "Blade Clearance" means the minimum distance from grade to the bottom of the rotor's arc.
- "Grade for WECS" means the elevation of the finished ground surface at the completion of the building or structure, excluding minor variances.
- "Horizontal Axis Rotor" means a WECS where the rotor is mounted on an axis parallel to the earth's surface.
- "Rotor's Arc" means the total path traveled by a WECS' blade.
- "Total Tower Height" means the height of the tower from grade to the furthest vertical extension of the rotor.
- "Tower" means the structure that supports the rotor or other energy collection device of the WECS above the ground.
- "Vertical Axis Rotor" means a WECS where the rotor is mounted on an axis perpendicular to the earth's surface.
- "Wind Energy Conversion System" (WECS) means an aggregation of parts, including the base, supporting structure, tower, generator, rotor, blades, etc., in such configuration as necessary to convert wind energy into mechanical or electrical energy.

(1) The intent of the following procedures and standards is to provide for the development of wind energy conversion systems (WECS) in a manner that minimizes impacts on both the environment and resident/landowners within the County.

(2) Development Standards for a Wind Energy Conversion System.

(a) Minimum setbacks:

i. A WECS shall be located so that the outside of the Rotor's Arc is a minimum of 7.6 m (25 ft.) from the vertical projection of the parcel boundary;

ii. A WECS shall be located a distance of at least 0.8 km (0.5 mile) from a dwelling not belonging to the owner of the land on which the WECS is located. This includes an undeveloped parcel that has been subdivided for residential purposes;

1. The current owner of a dwelling or subdivided residential property not belonging to the owner of the land on which a proposed WECS is located may waive the 0.8 km (0.5 mile) required setback by providing notice in writing to the Development Authority.

iii. All other uses: as per the Development Authority; and

iv. Road allowances: as per the respective district requirements.

(b) Minimum blade clearance is 7.6 m (25 ft.);

(c) Tower access shall be protected by means acceptable to the Development Authority and may include such things as a locked fence and anti-climbing devices;

(d) Subject to the requirements of any other federal or provincial regulation the WECS shall have a non-reflective, matte finish in a color satisfactory to Development Authority;

(e) All power lines on the WECS site shall be underground unless otherwise approved by the Development Authority; and

(f) A road use agreement will be required during the construction phase.

(3) Approval Process for a Wind Energy Conversion System.

(a) All development permit applications for a WECS shall be accompanied by:

i. A scaled site plan showing existing features and development, the location of the proposed WECS, related facilities, and access roads;

ii. A visual representation of the proposed WECS including scaled elevations and digital representations;

iii. An Impact Assessment (IA), shall be required by the Development Authority to address things such as visual impacts, noise, and nuisance;

iv. A Decommissioning Plan outlining how the WECS site will be reclaimed after it discontinues producing power; and

v. Any other information that the Development Authority determines is pertinent to the decision making process.

(b) Prior to making a decision on a development permit application, the Development Authority may require the applicant to provide an opportunity for the general public to view and comment on the proposal. At the discretion of Development Authority, the consultation may consist of a public meeting and/or mail-outs to residents / landowners. The Development Authority will determine all details concerning notification, advertising, and the format for gathering public input; and

(c) In addition to public consultation, the Development Authority may refer the application to any agency or stakeholder it determines may be affected by the proposal.

(4) A private wind energy conversion system may be considered as a discretionary use in any Land Use District. They will be subject to height restrictions of the district; they cannot exceed one and half times the height restrictions.