

Schedule C

Land Use Bylaw: Commercial October 26, 2022

7.ZZ Commercial Alternate Energy Development

Jurisdiction

The Province of Alberta and its agencies, regulates large scale / commercial energy projects. Under Sections 619 and 620 of the Municipal Government Act (MGA), the County's regulatory role is very limited. The MGA (Sec. 619(2)) is very clear that "A licence, permit, approval or other authorization granted by the NRCB, ERCB, AER, AEUB or AUC prevails ..." over "... any statutory plan, land use bylaw, subdivision decision or development decision ..." of a municipality.

Purpose

The purpose of this section is to establish local standards for Commercial Alternate Energy (CAE) developments, including but not limited to solar, wind, biofuel, geo-thermal, fuel cell, micro-hydro, and other energy producing technologies whose purpose is to produce energy for the commercial market.

Provincial or Other Approvals

7.ZZ.1 Where Provincial or Federal Government or other Agency approval has been received for a CAE, a copy of the said approval and supporting documents, shall be submitted to the County. The supporting information provided to the Province, Federal Government or other Agency may be used to satisfy some or all the requirements of the County.

Protection of Agricultural Lands

7.ZZ.2 In compliance with the Agricultural Goals (1.5(a)), Objectives (2.1.1 and 2.1.2) and Policies (1 & 7) of the Municipal Development Plan. The:

- a. siting of an CAE should take place on lands considered to be low agricultural production, or on poor agricultural land; and,
- b. the use of high-quality agricultural soils should be discouraged.

General Requirements

7.ZZ.3 A development permit application shall be made for every title upon which the CAE is proposed.

7.ZZ.4 A site plan(s) shall be required for each title but a single, master set of supporting documents may be submitted for the overall project.

Public Consultation

7.ZZ.5 Prior to the submission of a development permit application the Applicant shall:

- a. Arrange and host at least one (1) open house or public meeting, in the general area of the site proposed for the development;
- b. Advertise the time, date, and place of the open house or public meeting:
 - i. in a newspaper circulating in the area of the proposed development, with the advertisement appear a minimum of two (2) weeks in advance of the public meeting,
 - ii. mail a written notice of the time, date, and place of the open house to all landowners within the area proposed for the development, and all landowners within 2 km (1.2 miles) of the boundary of the area proposed for the development;
- c. The information provided at the public meeting shall be all the information that would be required as part of a Development Permit application for the proposal;
- d. Opportunities for questions and input from the public shall be allowed;
- e. A summary of the presentation and the public input shall be recorded.

7.ZZ.6 If public consultation was held as part of the Provincial approval process, the Applicant may submit the details of that consultation to the County to satisfy the requirements of Section 7.ZZ.5.

Safety

7.ZZ.7 All applications shall include:

- a. An emergency response plan,
- b. A detailed safety plan identifying any special rescue needs for workers that is beyond the local emergency responders' equipment and training capability.

7.ZZ.8 All applicable Safety Codes permits are required to be obtained.

Transmission Lines

- 7.ZZ.9 All collector lines, (less than 69kV) on the site of a CAE generating electrical power, shall be underground, except where the Development Authority approves otherwise.

Colour and Finishes

- 7.ZZ.10 The buildings, supporting structures, and accessory buildings shall be painted or coated in in non-reflective and non-glossy tones and / or colours which minimize the obtrusive impact of a CAE.
- 7.ZZ.11 No brand names, lettering or advertising shall appear on buildings, towers, blades, support structures or accessory buildings and structures.
- 7.ZZ.12 The lettering or imagery that may appear on the lowest 3 m (10 ft.) of a tower or building of a CAE are the manufacturer's identification and contact information, the operator's identification and contact information, emergency contact information, and municipal symbol.

County Standards

- 7.ZZ.13 All roads, approaches, culverts, fences, or other County infrastructure to be replaced, constructed, upgraded, or reconstructed, shall be built to the County's standards current at the time of construction.

Noise

- 7.ZZ.14 During construction, operation, and decommissioning the sound level from any CAE shall not exceed 60dB(A), or more than 5dB(A) above the background noise, whichever is lower, as measured at the exterior of the closest inhabited Dwelling.
- 7.ZZ.15 The CAE can utilize berms, deflectors, sound blankets, walls, vegetation, fences, buildings, or other sound mitigative measures or any combination of these items to achieve the sounds levels described in 7.ZZ 14.

Referral

- 7.ZZ.16 Prior to deciding upon an application for a CAE, the Development Authority may refer for the review, comment, and any input provided from any of the following entities:
- a. Alberta Utilities Commission,
 - b. Alberta Transportation,
 - c. Transport Canada,
 - d. NavCanada,

- e. Alberta Electrical Systems Operator,
- f. Adjoining municipal boundary if the application area is within 2 km (1.2 miles) of the municipal boundary, and,
- g. any other person, departments, agency, commission, or government the Development Authority deems necessary.

Decommissioning

7.ZZ.17 Decommissioning and reclamation shall take place in compliance with the applicable provincial standards of the day the site is decommissioned. If no standards are in place at the time of a development permit application, the Applicant shall provide a plan outlining how the site will be decommissioned and reclaimed to the site's predevelopment state as part of the Development Permit application. The decommissioning plan shall include information on the following:

- a. Treatment of buildings, footings, foundations, structures, and wires;
- b. Reclamation of access roads, driveways, pathways, storm ponds, drainage systems, and other similar disturbances;
- c. The type and suitability vegetation and / or ground cover to be planted and / or seeded;
- d. Notice to be given to landowners and the County;
- e. Containment of hazardous materials;
- f. Site security;
- g. Haul routes for disposal materials;
- h. Control of noise, dust, particulates, and weeds;
- i. Discussion of the timetable for decommissioning plan.

Financial Security

7.ZZ.18 As a condition of development approval, the County may require financial security, in the form satisfactory to the Development Authority, to ensure the Reclamation / Decommissioning Plan is implemented and to cover assignment and bankruptcy. The condition may include a periodic review of the security to ensure the amount is sufficient to implement the Reclamation / Decommissioning Plan.

Discontinuance

7.ZZ.19 Should an Alternate Energy Development discontinue producing power for a minimum of two consecutive years, or two cumulative years over a five-year period, the operator shall provide a report on the status of the System to the County. A review of the status report by the County may result in the request for the System to be decommissioned. Failure to comply with a decommissioning request may result in the issuance of a stop order by the County in accordance with the provision of the Municipal Government Act.

Solar Energy Conversion Systems

Applications

7.ZZ.20 Development Permit applications for a solar collector system shall be accompanied by the following information:

- a. A plan showing the location of overhead and / or underground utilities on or adjacent to the subject lands;
- b. Location and identification of environmentally sensitive areas on the project lands;
- c. A detailed site plan showing:
 - a. the titled parcel(s),
 - ii. the location of the system on the parcel(s),
 - iii. the required setbacks,
 - iv. existing structures, if any,
 - v. the existing or proposed approach(es), and,
 - vi. the orientation of the solar collectors;
- d. The application shall also include details regarding:
 - i. the system type,
 - ii. number of structures,
 - iii. height of structures,
 - iv. energy process,
 - v. grid connection,
 - vi. rated output in megawatts,
 - vii. signage,
 - viii. public safety,
 - ix. security measures,
 - x. a site suitability analysis,
 - xi. topography,
 - xii. soil characteristics,
 - xiii. agricultural capability,
 - xiv. potential impacts on agricultural land

- xv. stormwater management plan,
- xvi. surface drainage plan,
- xvii. the results of the public consultation process,
- xviii. weed control plan and,
- xix. an environmental impact assessment prepared by a qualified professional demonstrating site suitability, impact mitigation and reclamation requirements;

Glare

- 7.ZZ.21 Solar panels must be located such that they do not create glare on neighbouring properties or public roadways.

Projections

- 7.ZZ.22 Solar collectors mounted to the roof of a building or structure shall not extend beyond the outermost edge of the roof.

Height and Setbacks

- 7.ZZ.23 The maximum heights and setbacks of building mounted or ground mounted solar collection systems shall be subject to the height and setback requirements of the applicable Land Use District.

Fire Protection

- 7.ZZ.24 The spacing and height of solar collectors shall be designed to provide access for firefighting.

Density

- 7.ZZ.25 The location of and maximum number of solar collectors per Title may be regulated by the Development Authority.

Wind Energy Conversion Systems (WECS)

Applications

- 7.ZZ.26 An individual development permit application shall be submitted for each titled parcel.
- 7.ZZ.27 Development Permit applications for a wind energy conversion system shall be accompanied by the following information:

- a. An accurate site plan showing and labeling the information outlined in this section and the location of overhead and / or underground utilities on or adjacent to the subject lands;
- b. A digital version of the site plan showing the exact location and base elevation of each WECS in UTM coordinates with NAD datum, Zone X;
- c. A visual representation of the WECS project including scale elevations, photographs and / or digital projections of the project showing height, rotor diameter, colour and landscape;
- d. A digital version of the site plan showing the exact location and base elevation of each WECS in UTM coordinates and NAD datum, Zone AA;
- e. The specifications indicating:
 - i. the type of material used in tower, blade, and rotor construction,
 - ii. grid connections and size of any substations,
 - iv. signage,
 - v. security measures,
 - vi. site suitability analysis,
 - vii. topography,
 - viii. soil characteristics,
 - ix. agricultural capability,
 - x. potential impacts on agricultural land
 - xi. stormwater management plan,
 - xii. surface drainage plan,
 - xiii. the location of any dwellings or structures on the property,
 - xiv. setbacks,
 - xv. weed control plan and,
 - xvi. an environmental impact assessment prepared by a qualified professional demonstrating site suitability, impact mitigation and reclamation requirements;
- f. The manufacturer's specifications indicating:
 - i. the proposed systems rated output in megawatts,
 - ii. the safety features,
 - iii. the type of material used in the tower, blade, and rotor construction,
 - iv. foundation design and / or anchor design, including the location and anchoring of any guy wires;
- g. An analysis of the potential for noise and shadow / flicker effect, both at the site of the installation, at the boundary of the property containing the development, and at any habitable residence within 2 km (1.2 miles) of any WECS in accordance with Alberta Utilities Commission Rule 12;

- h. The results of the public consultation process;
- i. The potential for electromagnetic interference;
- j. The nature and function of over speed controls which are provided;
- k. The status of the Applicant's circulation to NavCanada, Transport Canada, Alberta Utilities Commission, and any other government department or agency required for provincial approval;
- l. Information on public safety;
- m. Identification of any roads to be used or constructed for use during construction of the project and any impacts to the existing road system including required approaches from public roads;
- n. A copy of the Wire Service Provider (WSP) approval if the WECS is proposed to be connected to the provincial power grid;

Density

- 7.ZZ.28 The Development Authority may approve one or more Individual WECS structures on a titled parcel having regard for:
- a. The proximity to other adjacent land uses;
 - b. The overall density of the WECS project;
 - c. A consideration of the cumulative effect of all WECS approved or proposed within 5 km (3 miles) of the proposal;
 - d. The underlying utilities;
 - e. The information received through the circulation process, public consultation process and through the redistricting public hearing.

Setbacks

- 7.ZZ.29 The setback distance between a WECS and a dwelling, within and without the project boundary, shall be as established by the Alberta Utilities Commission through the calculations of AUC Rule 12.
- 7.ZZ.30 The WECS's tower shall be setback from the boundary of all County road rights of way (developed or undeveloped), a minimum distance equal to the total height of the tower plus 10 percent.

- 7.ZZ.31 A WECS shall be setback not less than 7.5 m (24.6 ft.) from all other property lines, as measured from the rotor's arc (rotor diameter).
- 7.ZZ.32 If the tower utilizes guy wire anchors, the anchors, but not the tower, may be located no closer than 3.0 m (10 ft.) to the property lines.

Minimum Blade Clearance

- 7.ZZ.33 The minimum vertical blade clearance from grade shall be 7.6 m (25 ft.) for a WECS employing a horizontal rotor.

Tower Access and Safety

- 7.ZZ.34 To ensure public safety, the Development Authority may require that:
- a. If the tower is climbable, a security fence with a lockable gate, not less than 1.9 (6 ft.) in height, shall be installed around a WECS tower;
 - b. No ladder or permanent tower access device shall be located less than 3.7 m (12 ft.) from grade;
 - c. A locked device shall be installed on the tower to preclude access to the top of the tower;
 - d. Additional access control features or such additional safety mechanisms or procedures may be required by the Development Authority;
 - e. The use of tubular towers, with locked door access, will preclude the above requirements.

Speed Control

- 7.ZZ.35 The system shall be equipped with manual and automatic over speed controls.
- 7.ZZ.36 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.

Electro-magnetism

- 7.ZZ.37 The system shall be operated such that any electro-magnetic interference is dealt with as per the permit issued by the AUC. If electro-magnetic interference is determined during operation, the developer will work with the affected stakeholder(s) to mitigate any issues.

Other Energy Systems

Application

- 7.ZZ.38 Development Permit applications for all other types of Alternate Energy production systems shall be accompanied by the following information:
- a. An accurate site plan showing and labelling:
 - i. the legal location(s) of the proposed system,
 - ii. the location of the proposed system on the property or properties in relation to property lines and existing or proposed buildings or structures,
 - iii. the location of the existing or proposed access,
 - iv. the identification of any sensitive environmental features,
 - v. the topography of the site,
 - vi. the method of exporting the energy off site – power lines, pipelines, vehicles, etc.
 - b. Detailed information on the type of facility, structure, or system of the energy process involved
 - c. The manufacture's specifications, indicating (if applicable)
 - i. the rated output in megawatts or gigajoules, and,
 - ii. the safety features;
 - d. Any information regarding public safety;
 - e. Information or verification of:
 - i. the volume of water, if required,
 - ii. the source of the water, if required,
 - iii. the reclamation process of any water utilized by the system,
 - iv. the stormwater management system, if required,
 - v. the method of disposal of any waste material generated by the system,
 - vi. the generation and mitigation of any noise, vibration, odour, light, particulate that results from the production process;
 - f. An analysis of the potential fire, explosive, or other hazards of the proposed system;
 - g. A Traffic Impact Assessment or other information / analysis of traffic volumes and any impacts to the local road system;

Setbacks

- 7.ZZ.39 The buildings and structures of non-solar and non-wind based Alternate Energy Development(s) shall comply with all the setbacks established in the District in which it is located with the following modifications:
- a. A minimum of 250 m (820 ft.) from any residential dwelling, food establishment, institutional use or public use, facility or building;
 - b. A minimum of 100 m (328 ft.) from the boundary of any creek, stream, river, lake shore or water body.

Geothermal Systems

- 7.ZZ.40 All geothermal systems shall be Closed Loop systems. Open Loop systems (pump & dump) are not allowed.
- 7.ZZ.41 Must comply with CSA-C448 and subsequent amendments. Exceptions may be allowed, at the discretion of the Development Authority, provided documented proof is provided showing that the exception meets or exceeds CSA-C448 standard.
- 7.ZZ.42 Installations must be stamped by a qualified Professional Engineer registered under the "Engineering, Geological, or Geophysical Professions Act" of Alberta or have the system and installer certified by the Canadian GeoExchange Coalition (CGC) or other future governing body having jurisdiction within the Province of Alberta.
- 7.ZZ.43 Heat-transfer fluids within a geothermal system shall be of the most environmentally friendly type available at the time of installation ~~such as propylene glycol~~. In no case may an ethylene glycol-based fluid be used nor shall any flammable or combustible agent such as methanol, ethanol, natural gas, or propane be used.

Conditions of Approval for Any CAE

- 7.ZZ.44 Depending on the type of CAE proposed, the Development Authority shall consider, as limited by Sections 619 and 620 of the Municipal Government Act, or not as the case may be, in addition to any other conditions authorized under other sections of this Bylaw or Statutory Plan, attaching conditions related to any of the following:
- a. Entering into a development agreement with the County in accordance with the Municipal Government Act;

- b. Preparing by qualified professionals and at the Applicant's expense, all the necessary studies, maps, diagrams, reports, and analysis, whether printed and / or digital, required in support to their application;
- c. Confining all surface drainage on site and protecting any adjacent water bodies from run-off;
- d. Treating any wastewater on site and / or disposing of any wastewater as required by the County;
- e. Disposing of any non-wastewater liquids in accordance with the requirements of the County;
- f. Storing / containing all feedstock and materials within buildings or containment facilities;
- g. Disposing of any other waste materials;
- h. Restricting vehicle / truck traffic, whether owned or contracted by the Applicant, that transport construction material, raw material or feedstock or finished / processed goods associated with the development to designated haul routes and times through an agreement and the provision of securities;
- i. Dust control measures;
- j. Sound control measures;
- k. Installing underground all energy transmission (whether electrical, liquid or gas) lines from the site to the applicable collection point;
- l. Securing all necessary approvals from any other agency with jurisdiction on the type of CAED proposed and providing the County with a copy of the approval required;
- m. Identifying and providing for a staged or phased development;
- n. Placing restrictions on parts or elements of the proposed development, such as but not limited to locations, heights, colours, densities, setbacks, etc.;
- o. Constructing or paying for the construction of any new or the upgrading of any existing municipal infrastructure related to the project, such as but not limited to roads, approaches, signage, water lines, and sewage lines;
- p. Requiring ground cover, weed control, grading, soil erosion control emergency / fire suppression, and drainage measures;

- q. Specifying time periods to:
 - i. start, suspend, and complete construction activities,
 - ii. trigger decommissioning activities;
- r. Providing for the amenity of the site or development through improvements such as landscaping, berming, and buffering; and,
- s. Any other condition or conditions necessary to give form and effect to the project.