



TOWN OF STRATFORD

RESOLUTION

No. PH001-09 The Development Bylaw #29 - B (Part III) an amendment to Development Bylaw #29 - 2nd Reading

Motion Carried √
Motion Lost _____
Motion Withdrawn _____

Council Chambers
Town Hall

January 14, 2009

Committee	<u>Planning & Heritage</u>
Moved by Councillor	<u>Gary Clow</u>
Seconded by Councillor	<u>Emile Gallant</u>

WHEREAS pursuant to the Provincial Planning Act and under Section 24 of the Development Bylaw, A public meeting was held on November 18, 2008 to present the proposed amendments to the Development Bylaw #29-B text attached to this Resolution; and

WHEREAS at the Public Meeting (November 18, 2008) some comments were raised and noted regarding the proposed bylaw; and

WHEREAS the comments from the Public Meeting were discussed at the Planning and Heritage Committee meeting on November 24, 2008.

WHEREAS. the Committee agreed that the proposed document now meets the requirements for amending the Development Bylaw;

BE IT RESOLVED that Bylaw # 29-B (On-Site Small Wind Energy Systems), a Bylaw to amend Bylaw #29, the Stratford Zoning and Subdivision Control (Development) Bylaw, be hereby read and approved the second time. Bylaw #29- B(attached) shall be called “ Part III.)

This Resolution bears the recommendation of the Planning & Heritage Committee as discussed at a meeting held on November 24, 2008

TOWN OF STRATFORD

ZONING AND SUBDIVISION CONTROL (DEVELOPMENT) BYLAW AMENDMENT

BYLAW NUMBER 29-B (PART III)

A Bylaw to amend the **The Development Bylaw # 29**, in order to allow and set provisions for establishing on-site small wind energy systems within the Town's boundaries

BE IT ENACTED by the Council of the Town of Stratford that

PART III as "On-Site Small Wind Energy Systems" be added to the Stratford Zoning and Subdivision (Development) Control Bylaw, Bylaw # 29 as follows:

PART III) ON-SITE SMALL WIND ENERGY SYSTEMS

(1) Intent and Purpose:

It is the purpose of this regulation to promote the safe, effective and efficient use of small wind energy systems to reduce the on-site consumption of utility-supplied electricity, while providing reasonable controls to protect public health and safety without significantly increasing the cost or decreasing the efficiency of a wind energy system.

The Town of Stratford recognizes that small wind turbines are non-polluting, help reduce the Town's reliance on fossil fuels, help reduce public utility electrical demand and contribute to the efficiency of the utility grid.

The Town of Stratford further recognizes that small wind turbines are substantially different from commercial wind farms and from commercial cellular or radio towers as they are designed to supply electrical power for the owner and are not typically revenue-generating ventures.

This regulation requires the Town of Stratford to approve an application for a small wind energy system by right if the criteria below are met, and authorizes the Town to charge a one time development permit fee per application for small wind energy system. If any portion of the proposed small wind system does not meet the requirements set under this bylaw, a variance will be required.

(2) Definitions:

Wind Energy System

A Wind Energy System consists of a wind turbine, a tower, and associated control or conversion electronics to convert wind mechanical energy to electricity.

On-site Wind Energy System (OWES):

An On-site Wind Energy System consisting of a wind turbine, a tower, and associated control or conversion electronics, which is intended to provide electrical power for on-site use only and is not intended or used to produce power for resale or distribution. An OWES might be connected to the local utility grid or be off-grid. On-site wind energy systems are classified as follows:

a) Micro SOWES:

A wind energy conversion system, which has a rated capacity of less than 5 KW

b) Small SOWES:

A wind energy conversion system, which has a rated capacity of between 5 and 30 KW

c) Medium SOWES:

A wind energy conversion system, which has a rated capacity of between 30 and 100 KW

Commercial Wind Energy System (CWES):

A Commercial Wind Energy System is a system, which is intended to produce electricity for resale or distribution purposes. A commercial wind energy system could consist of a single freestanding windmill or a cluster of a number of windmills situated in the same location called a wind farm.

Turbine:

The parts of a wind system including the rotor, generator and tail.

Total System Height:

The height from ground level to the tip of the rotor at its highest point.

Wind Turbine Tower:

The guyed or freestanding structure that supports a wind turbine generator.

Wind Turbine Tower Height:

The height above grade of the fixed portion of the wind turbine tower, excluding the wind turbine and rotor.

Off-grid:

A stand-alone generating system not connected to or in any way dependent on the utility grid.

Behind the meter:

A generating system producing power for use on a grid-connected property, but which system may or may not be capable of sending power back into the utility grid.

(3) Permitted Use:

Establishment of micro wind energy systems (with a rated capacity not more than 5 KW) shall be permitted in all land zones subject to meeting all requirements of this section and any other relevant provisions of this bylaw.

No person shall erect, construct or install a wind energy system without first obtaining a development permit from the Town. All SWES(s) shall be constructed and operated in a manner that minimizes any adverse visual, safety and environmental impacts.

If a SWES meets the following criteria, the Town shall approve an application for installation of the SWES by right without a public hearing. For those proposed small wind energy systems that do not meet the above criteria, a zoning variance will be required.

3.1 Special Development Permits and Agreements:

Council may issue a Special Development Permit for establishing an on-site SWES with a rated capacity between 5 and 100 KW, except for an individual single family residential unit in R1 zone, subject to a written development agreement signed by the applicant pursuant to such terms and conditions, as Council deems necessary. Prior to the issuance of a special development permit, Council shall ensure that:

- I. The development does not cause any hardship to surrounding property owners due to excessive noise, safety issues, traffic congestion or any other potential disturbance;
- II. The development is deemed appropriate and complements the scale of the existing development;
- III. Property owners within 200 m (600 feet) of the subject SWES are notified in writing of details of the proposed development and asked to provide their comments;
- IV. All other relevant provisions of this Bylaw and provincial Planning Act and related national regulations are met.

3.2 Shared Wind Energy Systems

An on-site SWES with a rated capacity between 5 and 100 KW shared by multiple Single Family Dwellings in R1 zone may be permitted subject to meeting the requirements of Section 3.1 “Special Development Permit and Agreement”.

3.3 Wall or Roof-Mounted Systems:

Considering wind energy fast pace technology emerging new structures, materials and specifications, every small wind energy system fixed to a building shall be considered individually.

- I. A structural engineering analysis of such a wind turbine during installation and operation shall be provided and certified by a licensed professional engineer including requirements if the turbine is to be installed on any Duplex and multi unit dwelling.
- II. The Wall or Roof mounted turbine height shall be no higher than 5 ft above the building height.

3.4 Wind Turbine Tower Height:

The Wind Turbine Tower Height is subject to the setback requirements below, and provided that the application includes evidence that the proposed height does not exceed the height recommended by the manufacturer or distributor of the system.

3.5 Set-back:

- I. The turbine base shall be no closer to the property line than the 2.1 times height of the wind turbine
- II. No part of the wind system structure, including guy wire anchors, may extend closer than one meter (3 ft) to the property boundaries of the installation site;
- III. In residential zones the freestanding turbine structure must be pre-designed and erected without guy wire requirement;
- IV. Additionally, the outer and innermost guy wires must be marked and clearly visible to a height of two meters (6 ft) above the guy wire anchors;

The Town Council may waive setback requirements from adjacent properties if such adjacent property owner agrees to grant an easement binding on the current and future owners.

In addition to satisfying the minimum setback requirement in Section 3.5 above, the minimum distance of a freestanding wind turbine from an inhabited dwelling shall meet the setback requirements for the noise generated (see section 3.6 below).

3.6 Noise:

- I. The mean value of the sound pressure level from any wind energy systems shall not exceed more than 5 decibels (dBA) above background sound, as measured at the exterior of the closest existing or potential neighboring inhabited dwelling (at the time of installation or during operation), for wind speeds below 10 m/s and except during short-term events such as utility outages and/or severe wind storms.
- II. Notwithstanding the above noise regulation appeared in subsection 3.6(I), the maximum allowed noise level generated by a wind energy system in residential areas shall be 45 dBA for wind speed 10 m/s, as measured at the exterior of the existing (or future) closest neighboring inhabited dwelling.
- III. The Town staff would assess and measure sounds generated by turbines and compare with the regulations.

3.7 Safety:

Any part of a small wind energy system shall be designed to prevent unauthorized access. For instance, the tower shall be designed and installed so as to not provide step bolts or any climbable parts readily accessible to the public, in particular children, for a minimum 8 feet above the ground.

3.8 Shadow flicker:

Shadow flicker at any point of neighboring inhabited dwelling shall be minimized and not be permitted to exceed 30 hours per year as a result of the operation of the wind turbine.

3.8 Advertising Sign:

No advertising sign or logo shall be visible on any turbine.

3.10 Number of Turbines:

A maximum of one small wind turbine per property is permitted

3.11 Color:

The color of a wind turbine and its tower shall be white, off-white, light grey or light blue.

3.12 Compliance with Canadian Building Code:

Permit applications for small wind energy systems shall be accompanied by standard drawings of the wind turbine structure, including the tower, base, and footings, anchoring method and drawn to scale. An engineering analysis of the wind turbine tower showing compliance with the Canadian Building Code and certified by a licensed professional mechanical, structural, or civil engineer shall also be submitted. Documentation of this analysis supplied by the manufacturer shall be accepted.

3.13 Compliance with Air Traffic Safety Regulations:

Where it is required, small wind energy systems must comply with applicable air traffic safety regulations. A statement on compliance by the applicant is sufficient. Transport Canada must be notified of the location (latitude and longitude) and height of all wind turbine installations

through the aeronautical clearance application process. Small wind turbine towers shall not be artificially lighted except as required by Navigation Canada.

3.14 Compliance with Existing Electric Codes:

Building permit applications for small wind energy systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to existing electrical codes, if applicable.

3.15 Utility Notification:

No grid-interconnected a wind energy system shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. A copy of a letter to the applicant's utility is sufficient. No response or evidence of approval from the utility is required.

Off-grid systems and grid-tied systems that are not capable of feeding onto the grid with advanced control grid fault protection and disconnect switches covered under the electrical code shall be exempt from this requirement.

3.16 Abandonment or Decommissioning:

Should a wind energy system located on a site appear to Council to have discontinued producing power for a minimum one year, the system's owner must upon request of Council, prepare a status report. Following review of the status report, if in the opinion of Council power will not be produced on the site within a reasonable period of time, Council may order that the wind energy system located on the site be decommissioned in accordance with the decommissioning plan at the time of the issuance of the development permit.

4) Severability:

If any provision of this bylaw shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable.

Effective Date

The effective date of this bylaw is _____

This bylaw was read and approved a 1st time by Council at a meeting held on December 10, 2008.

This bylaw was read and approved a 2nd time by Council at a meeting held on

This bylaw was adopted by Council at a meeting held on

Kevin Jenkins,
Mayor

Robert G. Hughes,
Chief Administrative Officer

This bylaw is hereby declared to be passed and proclaimed as a bylaw of the Town of Stratford
on this _____ day of _____, 2008.

Hon. Carolyn Bertram
Minister of Communities, Cultural Affairs and Labour