



Municipal Planning Strategy
for the
COUNTY OF VICTORIA

Concerning the Regulation of
Wind Turbine Development
February 2014

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1. INTRODUCTION

1.1 Background

With the political, economic and ecological pressure to lessen dependence on fossil fuels for energy supply, communities throughout Atlantic Canada are looking at alternative sources of energy. Wind energy is becoming an important and increasingly viable source of energy. The Government of Nova Scotia's 2010 Renewable Electricity Plan and regulations require that by 2015, 25% of the Province's electricity will come from renewable sources, including wind, biomass, tidal and solar power. In recent years, a number of wind turbine projects have been constructed throughout Nova Scotia, with several more under consideration currently. These facilities range from single turbines to "wind farms", consisting of many turbines clustered together. According to the Canadian Wind Energy Association, wind energy powered the equivalent of 563,000 Canadian homes as of 2007, a number that will certainly increase in coming years. Along with construction of the turbines, some concerns have emerged, especially regarding visual and sound impacts on nearby residences.

As turbines of different sizes have been built throughout the province, many municipalities have created land use policies to plan for the development of this infrastructure. The County of Victoria has identified the need for a land use planning mechanism to regulate such development. This strategy and accompanying land use by-law have been developed recognizing the benefits that wind turbines bring to the community, while protecting the interests of local residents and respecting the surrounding environment. Council feels that residents are generally supportive of renewable energy development, as long as the character, health and safety of their communities are maintained.

There are two scales of wind turbine development. The larger turbines are often called 'utility scale' wind turbines, and they are designed to supply power commercially for Nova Scotia Power Inc. (NSPI). These turbines can reach 115 metres (377 feet) in height and are typically developed by companies (often community based) that have agreements in place with NSPI for the sale of the electricity. Usually, only one turbine is initially constructed to be used as a test turbine. If tests confirm good wind energy generation capabilities for a site, more can be constructed, leading to a development known as a wind farm. However, many turbine developments are stand-alone operations where there is only one turbine at a location. Even a small increase in wind velocity has a great impact on energy produced, so location and design are very important. The largest wind farm in Nova Scotia is currently the Glen Dhu Wind Farm in Pictou and Antigonish Counties, producing 62.1 megawatts of electricity (the output of one megawatt of wind power is enough electricity to power approximately 350 homes). The Province requires that wind turbines producing 2 megawatts or more undertake an environmental assessment. Federal requirements may also apply.

Smaller scale turbines, or 'domestic' turbines, are also being installed throughout the province. As the term implies, these turbines generate power primarily for private use by homes, farms and businesses. Many of these turbines are installed "behind the meter" and can substantially reduce or entirely replace power consumption from the grid. In addition, some domestic wind turbines have been constructed in remote areas not serviced by NSPI. Nova Scotia Power's Net Metering program also allows domestic turbines, generating 100 kilowatts or less, to be interconnected with the main utility and only draw from the provincial power grid when needed. Surplus energy generated by the turbine gets delivered to the provincial grid and the customer can credit that energy against any future use.

The size of the turbines refers to their nameplate capacity, which equals the electricity produced when the wind velocity results in the greatest conversion efficiency. The smallest domestic turbines can be purchased at retail stores, generating anywhere from 50 to over 500 watts.

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Victoria County is supportive of wind energy and believes that it is important that this source of energy be developed without jeopardizing the rights of their residents to fully enjoy their property and way of life. Council intends to provide for the future development of wind turbines and to regulate them in such a way that other uses, especially residential development, will not be adversely affected. Council is aware that there will be no perfect solution acceptable to all residents and the developers of wind energy, but will strive to arrive at a reasonable balance in their approach to control future wind turbine development.

1.2 Legislative Mandate

The *Municipal Government Act*, Chapter 18 of the Statutes of Nova Scotia, 1998, as amended, gives municipalities the authority to regulate land use and development within its borders. This authority is exercised through the adoption of a Municipal Planning Strategy and Land Use By-law.

The purpose of a Municipal Planning Strategy is to provide statements of policy to guide the development and management of all or part of a municipality. Council may address a broad range of land uses in the strategy, or may choose to provide for the planning and management of only one use of land. In the preparation of the Municipal Planning Strategy, the Statements of Provincial Interest were reviewed to determine their applicability to this planning initiative. Statements of Provincial Interest form part of the *Municipal Government Act*, and the Act requires that planning documents must be consistent with them.

Council has decided that this Municipal Planning Strategy and Land Use By-law will address only the development of wind turbines within the entire County of Victoria. As such, these documents will not adversely affect the goals and objectives reflected in the Statements of Provincial Interest. Prior to the adoption of this Planning Strategy, land use planning existed in the community of Baddeck in the County and was regulated by a separate Plan Area Municipal Planning Strategies. This existing planning document will not be affected, other than through a change in its status from Municipal Planning Strategy to Secondary Planning Strategy, and will be subject to the requirements of this strategy.

This strategy provides the policy statements with respect to the regulation of wind turbines, with regulations pertaining to wind turbine development contained in a separate document, the Land Use By-law. The documents are prepared and adopted concurrently and in accordance with Section 205 of the *Municipal Government Act*, where they were subject to a public participation program within the County. After adoption, both documents may be amended, but any amendments must be consistent with the intent of the Municipal Planning Strategy. Development is regulated by the Land Use By-law through the issuance of a development permit by the Municipal Development Officer. A Development Officer may not issue a development permit unless it meets all requirements of the Land Use By-law.

1.3 Municipal Profile

The Municipality of the County of Victoria is a largely rural municipality located in the north-eastern part of Nova Scotia, covering 2,870 square kilometers of land. The County is bounded by the Bras D'Or Lakes and the Atlantic Ocean to the east and Inverness County to the west. According to the 2011 Census, the population of the County was roughly 7,115. Larger settlements in the County of Victoria include Ingonish and Baddeck.

Traditionally, the main industries in the County were fishing along the coast, farming and forestry. Today, tourism is an important local industry, with the Cabot Trail, as well as Cape Breton Highlands National Park, all being located partially within the boundaries of the County. Geographically, the County is dominated by lowlands along the coast, with a significant number of harbours and beaches,

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and highlands inland throughout the county, particularly as one moves north. The Nova Scotia Wind Atlas, prepared by the Province, indicates that the highland and coastal areas present wind conditions most favourable to wind turbine development.

The County is governed by a Council of eight (8) members and provides a wide range of municipal services. Planning and development services for the County are the responsibility of the Eastern District Planning Commission. Current land use planning has been established as needed in different sections of the County at various times. At the time of the development of this strategy, the Baddeck municipal plan regulates development for the planned area of the County.

2. REGULATING WIND TURBINE DEVELOPMENT

2.1 General Resource Designation

This Municipal Planning Strategy and Land Use By-law will cover the entire Municipality of the County of Victoria. While municipal planning documents often regulate many uses, Victoria County Council has decided that this Strategy and By-law will only regulate wind turbine developments. In keeping with this objective, Council intends to establish a “General Resource” designation that will apply to the entire Planning Area. This designation provides the framework by which wind turbine developments will be regulated within the County; Mini, Small, Medium and Large Wind Energy Facilities. In the future, as Council sees fit, this Plan can be expanded to address other County-wide issues, either within the General Resource designation or a new designation.

Currently, there is only one planning area in place within the County of Victoria: Baddeck. This existing plan will continue to remain in effect; however, it will now be considered Secondary Planning Strategy addressing local concerns. The wind turbine regulations will be in effect for the entire County, and overlay all currently zoned and un-zoned areas of the County. The wind turbine regulations will serve as a high-level general guideline, with more detailed, and possibly more restrictive, regulations being found in the secondary plans with respect to land use and development.

Policy R-1

It shall be the policy of Council to establish the General Resource Designation. This designation will cover the entire County of Victoria and will specifically address wind turbine development. All other development shall be allowed as of right, subject to the existing designations within the Secondary Planning Strategies.

Policy R-2

It shall be the policy of Council to define the Baddeck Municipal Planning Strategy as a Secondary Planning Strategy within the County.

Policy R-3

It shall be the policy of Council to define within the Land Use By-law Wind Energy Facilities differentiating between Mini, Small, Medium and Large facilities on the basis of “total rated capacity” and height.

2.2 Domestic Scale Turbines

Nova Scotia Power Inc. (NSPI) requires turbines producing more than 100 kW of electricity to be interconnected with a contract signed by an independent power producer and treated as a “utility scale wind turbine” while turbines smaller than this can supply power “behind the meter” and are considered “domestic scale turbines”. For the purposes of this by-law “domestic scale turbines” will be subject to permits and defined as turbines which produce less than 100kW of electricity. Domestic scale turbines are divided into four sub-classifications of turbine: micro, mini, small and medium. Micro turbines are the smallest classification of turbine and are not subject to development or building permits.

Domestic scale turbines are becoming increasingly popular and are used to power or help power homes, farms and small businesses. Residents whose turbines are connected to the grid can use grid energy storage, where domestically produced electricity displaces purchased electricity when available. Domestic wind energy generation can result in substantial energy cost savings for residents and

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businesses. Council recognizes their benefits and is supportive of their use, and intends to establish the Wind Resource (Restricted) WR-1 Zone, which will permit domestic-scale turbines (Mini, Small and Medium facilities) through development permits.

Council feels that domestic scale turbines should be set back from all property lines, in order to wholly contain the turbine on the lot if it were to fall. These setbacks would also help to protect neighbouring properties, particularly in densely populated areas, from the noise, visual impact or other environmental concerns that domestic scale turbines could produce. As Council feels that domestic scale turbines are not suitable for higher density residential areas, minimum lot sizes will also be imposed.

Council also recognizes that some domestic turbines are large enough to provide electricity to more than one household, and that residents may want to share the power generated by a turbine. As property line setbacks are used to protect neighbouring residences from potential impacts of domestic-scale turbines, if neighbours wish to waive these setbacks in order to share the benefits of wind turbines, or for any other reason, Council feels it is reasonable that in site-specific circumstances the setbacks may be eliminated.

Domestic scale turbines come in a variety of sizes, some producing as little as 50 watts of electricity to charge a battery. These turbines can be installed as stand-alone structures, or are quite often attached to the side wall or roof of a building. These micro turbines, which are available at some retail outlets in Canada, have minimal impact on surrounding properties.

Policy R-4

It shall be the policy of Council to establish, within the General Resource Designation, the Wind Resource (Restricted) WR-1 Zone in the Land Use By-law.

Policy R-5

It shall be the policy of Council not to permit Large wind turbines within the Wind Resource (Restricted) WR-1 Zone.

Policy R-6

It shall be the policy of Council to permit within the Wind Resource (Restricted) WR-1 Zone Mini, Small, and Medium wind energy facilities as of right and by way of development permit. All other non-turbine uses shall also be permitted as of right, and while they will not be subject to a development permit some developments falling within the jurisdiction of a Secondary Planning Strategy may require a development permit as per that Secondary Planning Strategy.

Policy R-7

Council shall establish minimum setback requirements from all property lines for wind turbines in the Wind Resource (Restricted) WR-1 zone. Notwithstanding this minimum setback requirement, where a domestic scale wind turbine development is proposed on a lot where the immediately adjacent property is subject to a long term lease for the domestic wind turbine use, the setback requirement for the turbine from a property line shall not apply.

Policy R-8

Council shall allow consenting landowners to waive setback requirements for domestic scale turbines.

Policy R-9

Council shall define in the Land Use By-law “micro wind turbines” as domestic scale turbines with a nameplate capacity of less than 1 kilowatt (1000 watts) and having a height of turbine of less than 15 metres. The intention of Council is that the minimum lot size requirements in the Land Use By-law be waived for “micro wind turbines”.

2.3 Utility Scale Wind Turbines

Utility scale wind turbines are typically defined as those producing more than 100 kW of electricity, and Council expects most utility scale wind turbines to be much bigger than that, often in the range of 750 kW to 2 MW, since these turbines are intended to produce power to sell to NSPI. Given the size of the structures, as well as the significant infrastructure and capital required for construction and servicing, such developments often occur as wind farms. For the purposes of this by-law therefore “utility scale turbines” will be defined as turbines which produce more than 100kW of electricity and be identified under the “large” sub-classification of turbines.

Small increases in wind velocity can have a great impact on energy produced; thus Council recognizes that the location and design of turbines are very important. Turbine development locations will be regulated using setbacks, creating minimum separation distances that are intended to address concerns of noise, visual impact, environmental protection and other off-site impacts. While there is some disagreement between industrial, residential and environmental interests as to appropriate setbacks, Council believes this approach will provide for wind turbine development in the future and also provide a degree of protection to homeowners to continue the use of their residential property.

In keeping with Council’s original intent to regulate only wind turbine development, the setback requirements will not apply to future residential growth locating closely or relatively closely to existing turbines. Council’s position is that homeowners who do so will be fully aware of the distance their residence will be to a turbine and will have accepted any adverse effects, if any, that the turbine may have on them. The same is true of future purchasers of these residences. Existing wind turbine development that does not meet the setback requirements will be allowed to continue as non-conforming structures, but an expansion resulting in further reduction of setbacks will not be permitted.

Policy R-10

It shall be the policy of Council to establish, within the General Resource Designation, the Wind Resource (General) WR-2 Zone in the Land Use By-law. It shall be the policy of Council to permit within the General Resource Zone all wind energy facilities as of right and by way of development permit. All other uses, shall also be permitted as of right, and while they will not be subject to a development permit under this plan, some developments falling within the jurisdiction of a Secondary Planning Strategy may require a development permit as per that Secondary Planning Strategy.

2.4 Expansion of Wind Development

Wind farms will be permitted within the County, provided that all of the turbines meet the setback requirements. There may be instances where a number of contiguous properties are leased for wind turbine development. Although the properties are leased, the property lines remain in place. If an adjacent property owner has also leased their land for wind turbine development, the concern of a wind turbine falling onto the leased land should not apply. Therefore the setback requirement from a property line, where applicable, will be waived where the adjacent property is leased on a long term basis for wind turbine development.

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As previously indicated, Council will not regulate any development with this document other than wind turbine development. Therefore, the setback requirements will not apply to new residential development being located close to any utility scale wind turbine development. If such residential development does occur, Council is of the opinion that it should not prevent an expansion of a wind turbine development that has been established in conformity with this Strategy. However, the expansion should not be located any closer to the residential development that has been built within the setback.

Policy R-11

Where a residence is constructed within the setback distance of utility scale wind turbine development erected after the effective date of this Strategy, the wind turbine development may expand provided the expansion is not located closer to the residence than the initial wind turbine development.

2.5 Documentation Requirements for All Turbines

Within this plan, wind turbines are grouped into two sizes: domestic and utility. Each of these sizes has a specific set of requirements in the Land Use By-law. All new wind turbines will be subject to certain site plan requirements assuring a basic level of safety and aesthetic standards, and property owners or developers shall be required to submit documentation to that effect. These standards will have to be met in order for a development permit to be issued. Council also recognizes that noise from turbines can have an impact on residences. The World Health Organization recommends 30dB as an acceptable noise standard in the interior of a house, which would roughly equate to 40dB outside the home.

Policy R-12

Council shall establish within the Land Use By-law site plan and documentation requirements to assure safety, environmental and aesthetic standards are met in order to receive a development permit.

Policy R-13

Council shall establish within the Land Use By-law noise standards for all turbines ensuring minimal disturbance to surrounding residents.

2.6 Removal of Turbine

When the time comes that a utility scale wind turbine is no longer in operation, the owner shall remove the turbine and all associated equipment from the site within a reasonable period of time. The owner shall also endeavour to restore the site to a reasonable natural condition. Council would like to be informed of the decision to remove the wind turbine as early as possible.

Policy R-14

Council shall establish, within the Land Use By-law, a time by which inactive wind turbines and all supporting structures must be removed from the site and the site be restored to a natural condition. Council shall be made aware of decisions to remove any wind turbines and determine a time by which developers must notify Council of such.

3. IMPLEMENTATION

3.1 General

The Municipal Planning Strategy for the County of Victoria is the policy document providing the framework by which wind turbine development throughout the entire County is encouraged, controlled and coordinated. The policies of the Strategy will be implemented through a variety of means, but generally through the powers of Council as provided by the *Municipal Government Act* and other statutes that may apply.

Policy I-1

It is the intention of Council that all sections of this document and Generalized Future Land Use Map shall constitute the Municipal Planning Strategy for the Municipality of the County of Victoria.

Policy I-2

In addition to employing specific implementation measures, it shall be the policy of Council to maintain a program of ongoing planning through the Victoria County Planning Advisory Committee and Victoria County Council. Such a program shall include aspects of public information and participation, further study respecting such matters as the drafting or revision of Municipal By-laws that deal with wind energy or any other issues that Council may suggest.

Policy I-3

In order that development control decisions may be based on expert advice beyond that which the Planning Advisory Committee is able to supply, applications for amendment of the Land Use By-law shall be directed to the Eastern District Planning Commission and provincial and federal government agencies for their information and comment, as may be required.

Policy I-4

The Regulation of Wind turbines in the Municipality shall also be through the *Wind Turbine Licensing Development By-law* which will include ongoing reporting requirements for the developer including but not limited to critical incidents.

3.3 Amending the Municipal Planning Strategy

Policy I-4

It shall be the policy of Council to require amendments to the policies and maps of the Municipal Planning Strategy under the following circumstances:

- a) where any policy intent is to be changed;
- b) where detailed areas or functional strategies are desired to be incorporated into this Strategy; or,
- c) where the Strategy is in conflict with applicable provincial land use policies or regulations, in accordance with the *Municipal Government Act*.

Policy I-5

Strategy amendments shall require the approval of the Minister of Service Nova Scotia and Municipal Relations and shall be carried out in accordance with the provisions of the *Municipal Government Act*.

3.4 Amending the Land Use By-law

The Land Use By-law is the instrument by which all the policies in this Municipal Planning Strategy dealing with wind turbine development are implemented. The Land Use By-law establishes certain land use zones, identifies their location on a Zoning Map, and indicates the uses permitted and the development standards required.

Policy I-6

In considering amendments to the Land Use By-law, in addition to all other criteria as set out in various policies of this Strategy, it shall be the policy of Council to have consideration of the following:

- a) That the proposal is in conformance with the intents of this Strategy and with the requirements of all other Municipal By-law and regulations;
- b) That the proposal is not premature or inappropriate by reason of the following:
 - i. the financial capability of the Municipality to absorb any costs relating to the proposal;
 - ii. the intersection of any access road(s) with any public road and meeting the design and construction specifications of the authority having jurisdiction over public roads;
 - iii. the potential for the contamination of abutting watercourses or private wells or the creation of erosion or sedimentation as a result of the development as determined by a qualified person from the appropriate government department; and,
 - iv. the potential impact on protected wetlands or other sensitive habitat and on endangered species in the area of the proposed site;

Policy I-7

In considering amendments to the Land Use By-law, in light of the above policy, it shall be the intention of Council to require the following information to assist in the assessment of the proposal:

- a) A report from the Eastern District Planning Commission.

Policy I-8

In addition to the advertisement for public hearing requirements in the *Municipal Government Act*, it shall be the policy of Council to require the Municipality to notify all adjacent land owners of applications to amend the Land Use By-law.

3.5 Plan Review

Council recognizes that wind turbines are a relatively new technology, and that knowledge and experience in the field grow with practice. In accordance with the *Municipal Government Act*, this Strategy may be reviewed when either the Minister of Service Nova Scotia and Municipal Relations or Council deem it necessary.

Policy I-9

Council shall review this Municipal Planning Strategy and Land Use By-law within five years of its adoption. At that time, Council shall examine the number of wind turbines sited, the impact on the landscape and on tourism and any other issues that Council deems necessary.

Municipality of Victoria County
Wind Turbine Development

**Generalized
Future Land Use**

Designation
General Resource

