

MEMORANDUM

TO: Bylaw Committee
FROM: Nelson Bezanson, Municipal Planner
DATE: June 15, 2021
RE: Wind Turbine Regulations

Issue: The Bylaw Committee requested information on wind turbine regulations. More specifically, setbacks, decommissioning practices, and approval options.

Background:

Council has historically supported wind energy development through various policies and strategies such as the Wind Energy Strategy, the Cumberland Wind Energy Development Plan, the Cumberland Integrated Community Sustainability Plan (ICSP), the Regional Energy Strategy and most recently in the Springhill Economic Development Strategy (2020) where one of the key goals was to *“broaden Springhill’s reputation as a renewable energy centre of excellence”* which includes solar, wind and geothermal.

Wind turbines have also been a divisive issue in Cumberland with criticisms from small vocal groups in various areas since the first proposed wind turbines. Key areas of discord include the visual impact on the landscape, setbacks, noise, and concerns on decommissioning.

During the 2016-2017 Planning review staff received both positive and negative comments towards wind turbines: In Pugwash there were concerns over the removal costs for abandoned / unused windmill projects and comments that windfarms degrade rural aesthetic and property values. Staff also heard that wind farms are aesthetically beautiful and environmentally sound and that there should be more turbines. The only significant number of comments on wind turbines occurred during the final public engagement session in Wentworth where some residents were concerned about a proposed wind development on Higgins Mountain and possible negative impacts on potential environmental tourism plans.

These concerns were discussed at a Steering Committee meeting where it was suggested that the nature of the Higgins Mountain development is such that tweaks to the wind turbine regulations would not be adequate to alleviate local concerns and would only serve to hurt the industry as a whole. Instead, possible future restrictions were proposed based upon the development of a comprehensive tourism strategy for an area. The steering committee agreed with this approach and the following policy was added to the Planning Strategy:

Policy 4-53: Council may consider amending the Wind Turbine Restricted Overlay to add locations where a local tourism plan concludes that small- and large-scale wind turbines are not compatible with the goals of the tourism plan.

Current Planning Policy: The Municipal Planning Strategy (MPS) sets out the policies of Council relating to land use. The Land Use Bylaw (LUB) then provides the detailed regulations such as zones, permitted uses, lot sizes, etc. The current MPS and LUB were adopted in April of 2018 with two subsequent amendments to the LUB and one minor amendment to the MPS.

In the Renewable Energy section of the MPS, Section 4.7.2 (Below) describes the importance of wind energy.

Section 4.7.2

4.7.2 Wind Energy

In 2011, the Municipality of Cumberland released its Wind Energy Development Plan, developed with the support of the Union of Nova Scotia Municipalities.

Through this project, the Municipality identified areas that are appropriate for wind turbines, and areas that are inappropriate for wind turbines for reasons such as water supply areas or areas of cultural significance. The project also established requirements to help reduce the impact of wind turbines on surrounding communities and natural features.

As of 2017, Cumberland hosts three large-scale wind farms at Stevens Mountain, outside of Springhill, and on the Tantramar Marshes. Council intends to continue to support the establishment of large-scale wind turbines in appropriate locations, as well as smaller wind turbines for personal and on-site commercial use.

The MPS then provides eight additional policies intended to define different types of wind turbines, their approval and control.

Approval of Wind Turbines:

In Cumberland, large wind turbines are permitted in all zones but are restricted from certain areas by the *Wind Turbine Restricted Overlay* (Schedule F of the LUB) and a variety of setbacks and separation distances including:

- Separation distance of 600 metres or 3 times the height of the turbine, whichever is larger, from habitable buildings external to the wind energy project.
- 1.1 times the height of the turbine or turbine height plus 7.5 metres, whichever is larger, from Property lines external to the wind energy project.

Approval for large wind turbines is *as-of-right*, meaning that a development permit must be issued if the applicant has satisfied all of the various design and approval requirements in the Land Use Bylaw.

Approaches by other Municipalities:

Rural municipalities throughout Nova Scotia have followed a variety of approaches to wind turbine project approval. Listed below are a few of the areas where municipalities differ from one another in their process:

Separation distance from dwellings

Like Cumberland, many municipalities use a multiplier of the turbine height and a minimum distance, whichever is greater, to determine the minimum distance to dwellings. Guysborough uses 2 times the turbine height while CBRM uses 175m for turbines up to 76m tall plus 1m separation for each additional metre in tower height. Annapolis, Antigonish, Colchester, Pictou and Yarmouth have minimum separation distances that range from 600m to 1000m.

Noise Studies

Antigonish, East Hants, Lunenburg and Pictou (Draft) municipalities require noise studies and establish noise limits at property boundaries or nearby dwellings. The typical noise threshold used is 40 decibels or the equivalent noise of a refrigerator running or of a quiet suburban neighbourhood at night.

Zone Restrictions

Several municipalities (Annapolis, Antigonish, East Hants and Lunenburg) only permit large scale wind turbines in a specific wind energy zone. This would typically trigger a rezoning application for each new development providing additional opportunities for public comment.

Decommissioning

Many Municipalities have no decommissioning requirements at all while others, like Cumberland, require that a decommissioning plan be provided during the application. Colchester authorizes the Development Officer to carry out any work deemed necessary to complete the decommissioning plan if not completed by the owner in a reasonable time, with any costs immediately payable by the owner/ operator. Caution is advised on following this example as the Municipal Government Act does not provide such authority to Land Use Bylaws or Development Officers unless provided for in a Development Agreement or similar legal mechanism.

Development Agreements

A Development Agreement is a contract between a Municipality and a property owner, detailing the obligations of both parties and specifying the standards and conditions that will govern development of the property. Once signed, a Development Agreement is binding on the parties and their successors.

There appears to be a growing trend to approve wind turbines by Development Agreement as they provide a higher level of customization and control not available in other approval methods. East Hants, Guysborough, Lunenburg, Queens (Draft LUB), West Hants and Yarmouth all utilize this mechanism in at least some circumstances. A development agreement may include a performance surety or bonding requirements and has the ability to force decommission work.

Decommissioning:

Decommission costs are difficult to estimate and would be very dependant on turbine size, location and the level of remediation desired. Estimates from other locations in North America would suggest a decommission cost of \$30,000 to \$120,000 per turbine.

The Municipality currently has no authority to force a decommissioning of wind turbines without making application to the Supreme Court of Nova Scotia. There are also concerns that should a wind energy operator cease operation, the only recourse for the Municipality would be to the property owner. A Development Agreement can include requirements for decommissioning and even performance surety or bonding requirements.

Bonding

Bonding is a method to protect landowners and taxpayers from bearing the cost of decommissioning if a wind farm owner goes belly-up and walks away from a wind project. While no Canadian examples for the use of bonds could be found, in 2017 Montana passed legislation requiring bonds for wind farms that produce at least 25 megawatts. Bond amounts were based on decommissioning plans that wind facilities are required to provide during project approval. In some other jurisdictions bonding may be required up front upon approval while in other circumstances operators are given a number of years to post such bonds.

One of the criticisms of such bonding is that it would appear to create an unfair playing field as other types of energy development may not have the same requirements.

Recommendations:

It would certainly appear that there is room to improve wind development regulations in Cumberland. Requiring noise studies and possibly approval by Development Agreement have the potential to provide more detailed controls and better public involvement. Separation distances also deserve a closer examination along with decommissioning requirements.

Where Council has to this point been very supportive of wind energy, any major departure from that stance or the current regulations should include a high level of consultation with the public and wind energy sector.

Staff feel that a more in-depth review of the wind regulations may be warranted. Where this would be a somewhat lengthy process, staff capacity is the key concern. Currently adding a full review of wind energy regulations to an anticipated five-year interim review of the Land Use Bylaw sometime in 2022 or 2023 would seem the most feasible.