


Item No. 10.1.3 (i)
Halifax Regional Council
February 21, 2012

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY: Original signed by 

Richard Butts, Chief Administrative Officer

Original Signed by 

Mike Labrecque, Deputy Chief Administrative Officer, Operations

DATE: January 20, 2011

SUBJECT: Case 17342 - Wind Energy Facilities by Development Agreement

SUPPLEMENTARY REPORT

ORIGIN

On December 13, 2011, Regional Council passed the following motion:

“MOVED by Councillor Watts, seconded by Councillor Sloane that Halifax Regional Council defer consideration of staff recommendation 2 of the report dated November 10, 2011, and request a supplementary report regarding the implications of the recommendation for a development agreement process as well as clarification on the current approach being proposed.”

RECOMMENDATION

It is recommended that Halifax Regional Council not initiate Municipal Planning Strategy and Land Use By-Law amendments to introduce a development agreement provision for the siting of wind turbines outside the urban core.

EXECUTIVE SUMMARY

On October 18, 2011, and August 16, 2011, respectively, Council adopted an as-of-right approval process for the siting of wind turbines in HRM. On December 13, 2011, Regional Council requested that staff prepare a supplementary report outlining the implications of using a Development Agreement (DA) process for wind turbine applications with possible options.

Current Process

The current process is a development permit application process. This is known as an as-of-right approval. Under this process, all of the conditions within the applicable zone such as setbacks, separation distances, and notification, are required to be satisfied at the time of issuance of a development permit. In the opinion of staff, the current process is adequate and a DA process is not needed.

Options

If Council wishes to consider options to introduce a DA process for the siting of wind turbines, staff has identified three options as follows:

Options	Action	Result
1	<ul style="list-style-type: none">• Recognize existing MPS standards• Introduce no new standards	<ul style="list-style-type: none">• Allow Community Consultation only• Maintain existing minimum separation distances
2	<ul style="list-style-type: none">• Limit requirement for additional studies to one (i.e. a sound study)	<ul style="list-style-type: none">• Maintain existing minimum separation distances• Enhance separation distances based on sound study
3	<ul style="list-style-type: none">• Require large number of studies to establish additional standards (sound, environmental, human health, visual impact, etc.)	<ul style="list-style-type: none">• Reduce or enhance separation distances based on studies• Add other siting requirements

To implement any of the options, Council would have to initiate a new planning process to amend the Regional Municipal Planning Strategy (RMPS) and the applicable Community Municipal Planning Strategies (MPS) and Land Use By-Laws (LUB).

If Council wishes to introduce a DA provision, staff recommends Option #2 as it provides a criterion for Council to evaluate a proposal but is narrow enough in scope so as not to revisit most of the standards already researched, prepared and adopted through the earlier approval process. Further, option #2 should only apply to Large Wind Turbines not required to undergo a Provincial Environmental Assessment process (i.e. 300 kilowatts up to 2 megawatts)

RECOMMENDATION

The DA process can provide for public consultation and a case by case review and decision by Community Council on wind turbines. However, staff does not recommend the use of this process as the current process provides adequate controls on wind turbines now and requires public notification under a region wide strategy for HRM.

BACKGROUND

On October 18, 2011, and August 16, 2011, respectively, Council adopted an as-of-right approval process for the siting of wind turbines throughout HRM. On December 13, 2011, Regional Council requested that staff prepare a supplementary report outlining the implications of using a Development Agreement (DA) process for wind turbine applications outside the urban core. Council also asked for staff to provide options for processing wind turbine applications by DA.

Current Process

The current process for the siting of wind turbines is a development permitting application process, which was developed over the past five years through consultation with the public and industry representatives. This is known as an as-of-right approval. Under this process, all of the conditions for the development permit, such as setback and separation distances and notification, are required to be satisfied at the time of issuance of a development permit. There is no Planning process or case by case decision required of Council. Staff believes that this approach establishes a region wide strategy which ensures that the process is complimentary and consistently applied throughout the entire municipality.

Existing Regulations for the Siting of Wind Turbines

Regulations have been adopted that must be satisfied prior to obtaining a development permit for erecting a wind turbine in HRM. In order to receive a development permit for a wind turbine, an application must demonstrate that a proposed wind turbine be set back a certain distance from a property line. In addition, the turbine must also be separated by a certain distance from an adjacent habitable building. These distances have been established based on the scale of the turbine, as reflected in the following table:

Setbacks and Separation Distances and Notification from Wind Turbines

Turbine Type (Max. height/ kilowatt limit)	Setback Distances (Height of Tower from Property Lines)	Separation Distances (Adjacent Habitable Buildings)	Notification
Micro (23metres/ 0-10 kW)	1.0 x ht.	3.0 x ht.	140 metres (460 ft.)
Small (35metetrs/ 10-30 kW)	1.0 x ht.	180 m	360 metres (1180 ft.)
Medium (60metres/ 30-300 kW)	1.0 x ht.	250 m	500 metres (1640 ft)
Large (60metres+ / 300 kW+)	1.0 x ht.	1000 m	2000 metres (6560 ft)

Note: Large Wind turbines are not permitted in the Urban Core

In addition to the setback and separation distance regulations, the current process includes a requirement to provide notification to property owners within preset distances of a proposed wind turbine, as illustrated in the above table. The process also contains land use controls that address issues of land use compatibility and restrictions on advertising and the colour of a wind turbine. A typical example of the Land Use By-Law regulations for wind turbines can be found in Attachment A.

Due to the comprehensive nature and intensity of the provisions applied to wind turbines under the various land use by-laws as-of-right, staff does not support the need for additional control being applied to wind turbines such as a development agreement process.

DISCUSSION

Wind Energy as a Region-Wide Strategy

A basic tenet underlying the recent adoption of the wind energy regulations, was that the requirements be applied equally through-out HRM as a Regional Strategy and not be differently applied between Planning Districts. The purpose for making the wind turbines regulations uniform for all urban areas, and also for all rural areas, was specifically to avoid the prospect of each project being evaluated independently at the Community Council level. In essence, the objective was to avoid potential disparity between locations and to provide a sense of equity to Urban and Rural locations in HRM.

By adopting a DA requirement, Council would by default require that the implementation of the DA be established in the Community MPS's. Accordingly, all decisions would be made at Community Council as DAs are implemented through the Community Plans. This would undermine the intent to remain both comprehensive and consistent between Regions, as was the underlying framework of the original wind energy project. Potentially, this could create

disparity and the perception that there are Regions where setbacks and separation distances could be applied differently than in others. Therefore, staff recommends that the siting of wind turbines remain a Regional Strategy and those current policies and regulations continue to be applied in a consistent and comprehensive manner throughout the Municipality.

Process for Change

If Council wishes to consider a DA process for the siting of wind turbines outside the urban core, Council must initiate a new planning process to amend Plan policy and land use regulations. The purpose of the amendments is to establish evaluation criteria that Council would use to consider wind turbines. To achieve this objective, the following documents would need to be amended:

1. Regional Municipal Planning Strategy (RMPS);
2. Community Municipal Planning Strategies (MPS); and
3. Community Land Use By-Laws (LUB).

Implications of the DA Process

A development agreement process, relative to wind turbines, would have both benefits and constraints compared to the current approval process for large wind turbine applications, as follows:

Benefits and Constraints of the Development Agreement Process

Benefits

1. Public input on DA applications
2. Ability to require studies under the DA process
3. Case by case decision making

Constraints

1. Cost and Number of studies for DA
2. Reliance on consultants by HRM
3. Protracted timeframe for DA process
4. High likelihood of appeal if approved
5. Reopening of debate on approved standards
6. Substantial research will be required for each application

Options

The options that follow are based on the scope and number of studies (to address sound and environmental issues) that the Municipality would review as part of the evaluation of a DA application for wind turbine siting:

Option #1

Council could introduce DA policy that requires wind turbines to meet the current LUB regulations (i.e. setbacks and separation distances) as set out in the Rural Wind Two (RW-2) Zone – see Attachment B. In addition, this option would introduce community consultation and to allow Community Council's to approve wind turbines.

Implications

In effect, the sole purpose of this option would be to conduct community consultation. However, Council's decision-making authority would be restricted as it would be based upon the limited amount of existing evaluative criteria currently in policy. Accordingly, there would be little latitude or interpretation in the decision-making process. As a result, this option is not recommended.

Option #2

Council could introduce DA policy the same as in Option #1, but also require a sound study to be conducted to determine if the established separation distances should be enhanced. This approach allows for public consultation and allows Council to set separation distances for wind turbines on a case by case basis.

Implications

Council would have the latitude to consider, as part of their decision-making authority, the results of a sound study which could dictate whether or not the separation distance is adequate or needs to be enhanced. Consultants would be required only to review the results of one study and provide a recommendation to staff.

Option #3

Council could introduce DA policy the same as in Option #2, but require a wide variety of studies (sound, visual impact, bird and bat migration, shadow flicker, ground water resources, etc.) to establish site specific standards to mitigate impacts for each application. In this case, Council could maintain, increase, or reduce separation distances on the basis of these studies, if it so desired, as well as add visual impact assessment criteria. In addition to the requirement for community consultation, this option would provide Council with the greatest latitude in decision-making.

Implications

This process would replicate the Provincial Environmental Assessment (EA) process that already requires much of this form of study for wind turbine applications. In addition, under this process, the Municipality might even require additional studies that would not be required through the EA process at all.

It also should be noted that the results of the studies requested as part of the DA application, would have to be evaluated and reviewed by outside consultants. This would be required in order to provide HRM staff with the ability to make an informed decision, as there is no expertise on staff to evaluate such studies. In addition, such a DA process could take a very long time to complete, depending on the depth of the studies requested. Accordingly, Staff does not recommend this option.

Application of the Options

Should Council wish to initiate an amendment process to consider introducing a new DA policy, regardless of the option, staff recommends that the option be only applied to the large wind turbines that are:

- a. greater than 60 metres in height and in excess of 300 Kilowatts; and
- b. not required to undergo a Provincial EA (Less than 2 megawatts of power).

Staff Recommendations

It is the position of staff, when considering the siting of wind turbines, that the DA process is not the best tool to ensure a consistent Regional Strategy throughout HRM, since the application would have to be sent to Community Council for decision. Therefore, Staff recommends that Council *not initiate a planning process to consider a DA process for wind turbines at this time*, as Council has recently adopted a comprehensive suite of regulations.

However, should Regional Council wish to initiate a planning process to introduce a community consultation component via a development agreement process, staff recommend that the potential DA provisions and the planning process be consistent with Option #2.

Further, should Regional Council wish to initiate a planning process, staff recommend that Council endorse the public consultation process as outlined in Attachment B, which deals with the number and location of meetings for this planning process.

BUDGET IMPLICATIONS

There are no budget implications associated with this report. However, if Council introduces a DA requirement for the siting of wind turbines in HRM, this may have impact on staff resources.

FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

In the event that Regional Council initiates a planning process to introduce Development Agreement provisions for wind turbines, siting the number and general locations of Public Meetings for this planning process have been outlined in Attachment B.

ALTERNATIVES

1. Council could choose to not initiate a MPS and LUB amendment process to permit wind turbines by development agreement outside the urban core. This is staff's recommendation.
2. Council could choose to initiate a MPS and LUB amendment process to permit wind turbines by development agreement outside the urban core as per Option #2.
3. Council could choose to initiate a MPS and LUB amendment process to permit wind turbines by development agreement outside the urban core as per Options #1 or 3.

ATTACHMENTS

Attachment A - Typical Example (Dartmouth) of Wind LUB Regulations
Attachment B - Public Information Meeting for proposed Options

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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Case 17342 ATTACHMENT A

**Typical Example (Dartmouth) of Wind LUB
Amendments with Suggested Changes - For Information Only
(revisions shown in bolded text)**

1. Inserting in “Section 2 General Provisions”, a new subsection “32 G WIND ENERGY FACILITIES” as follows:

“32G WIND ENERGY FACILITIES

The use of windmills or wind turbines to produce electricity or for any other purpose shall be regulated in accordance with the provisions of this Section.

I DEFINITIONS

For the purposes of this Section, certain terms are defined as follows:

- a) “Habitable Building” means a dwelling unit, hospital, hotel, motel, nursing home or other building where a person lives or which contains overnight accommodations.
- b) “Nacelle” means the frame and housing at the top of the tower that encloses the gearbox and generator.
- c) “Nameplate Capacity” means the manufacturer’s maximum rated output of the electrical generator found in the nacelle of the wind turbine;
- d) “Total Rated Capacity” means the maximum rated output of all the electrical generators found in the nacelles of the wind turbines used to form a wind energy facility;
- e) “Tower Height” means the distance measured from grade at the established grade of the tower to the highest point of the turbine rotor or tip of the turbine blade when it reaches its highest elevation, or in the case of a roof mounted wind turbine the distance measured from the lowest point of established grade at the building’s foundation to the highest point of the turbine rotor or tip of the turbine blade when it reaches its highest elevation;
- f) “Turbine” means a wind energy conversion system, the purpose of which is to produce electricity, consisting of rotor blades, associated control or conversion electronics, and other accessory structures.
- g) “Wind Energy Facility” means a wind energy conversion system, the purpose of which is to produce electricity, consisting of one or more roof mounted turbines or turbine towers, with rotor blades, associated control or conversion electronics, and other accessory structures including substations, meteorological towers, electrical infrastructure and transmission lines;

- i) “Micro Facility” means a wind energy facility consisting of a single turbine designed to supplement other electricity sources as an accessory use to existing buildings or facilities and has a total rated capacity of 10 kW or less, and is not more than 23 metres (75 feet) in height.
- ii) “Small Facility” means a wind energy facility which has a total rated capacity of more than 10 kW but not greater than 30 kW. A Small Facility has a stand alone design, on its own foundation, or may be supported by guy wires, is not roof mounted, and the tower of which is not more than 35 metres (115 feet) in height.
- iii) “Medium Facility” means a wind energy facility which has a total rated capacity of more than 30 kW but not greater than 300 kW. A Medium Facility has a stand alone design, on its own foundation, or may be supported by guy wires, is not roof mounted, and the towers of which are not more than 60 metres (197 feet) in height.
- iv) “Large Facility” means a wind energy facility which has a total rated capacity of more than 300 kW. A Large Facility has a stand alone design, on its own foundation, or may be supported by guy wires, is not roof mounted, and the towers of which are greater than 60 metres (197 feet) in height.

II ZONES

For the purpose of this section the following zones apply as shown on the attached Schedule A-1 - Wind Energy Zoning Map. Such zones are:

- (UW-1) Urban Wind Zone
- (RW-2) Rural Wind Zone
- (R) Restricted Zone

- a) **URBAN WIND ZONE (UW-1)**
 - i) All Wind Energy Facilities, except Large Facilities, are permitted in the Urban Wind Zone (UW-1).
 - ii) All turbine towers in the UW-1 Zone shall have a minimum distance between towers equal to the height of the tallest tower
 - iii) All turbine towers in the UW-1 Zone shall be set back a minimum distance of 1.0 times the tower height from any adjacent property boundary.
 - iv) Turbine towers of Micro Facilities in the UW-1 Zone shall be set back a minimum distance of 3.0 times the tower height from any habitable building on an adjacent property.
 - v) Turbine towers of Small Facilities in the UW-1 Zone shall be set back a minimum distance of 180 metres (590 feet) from any habitable building on an adjacent property.

- vi) Turbine towers of Medium Facilities in the UW-1 Zone shall be set back a minimum distance of 250 metres (820 feet) from any habitable building on an adjacent property.

b) **RURAL WIND ZONE (RW-2)**

- i) All Wind Energy Facilities are permitted in the Rural Wind Zone (RW-2).
- ii) All turbine towers shall have a minimum distance between turbines equal to the height of the tallest tower.
- iii) Turbines towers of Micro Facilities in the RW-2 Zone shall have the following set back requirements:
 - (1) A minimum distance of 3.0 times the tower height from any habitable building on an adjacent property;
 - (2) A minimum distance of 1.0 times the tower height from any adjacent property boundary.
- iv) Turbines towers of Small Facilities in the RW-2 Zone shall have the following set back requirements:
 - (1) A minimum distance of 180 metres (590 feet) from any habitable building on an adjacent property;
 - (2) A minimum distance of 1.0 times the tower height from any adjacent property boundary.
- v) Turbines towers of Medium Facilities in the RW-2 Zone shall have the following set back requirements:
 - (1) A minimum distance of 250 metres (820 feet) from any habitable building on an adjacent property;
 - (2) A minimum distance of 1.0 times the tower height from any adjacent property boundary.
- vi) Turbines towers of Large Facilities in the RW-2 zone shall have the following set back requirements:
 - (1) A minimum distance of 1000 metres (3280 feet) from any habitable building on an adjacent property;
 - (2) A minimum distance of 1.0 times the tower height from any adjacent property boundary.

c) **RESTRICTED ZONE (R)**

- i) Wind Energy Facilities shall not be permitted in the Restricted Zone.

III PERMIT APPLICATION REQUIREMENTS

All Wind Energy Facilities require a development permit. The permit application shall contain the following:

- a) a description of the proposed Wind Energy Facility, including an overview of the project; the proposed total rated capacity of the Wind Energy Facility;
- b) the proposed number, representative types, and height or range of heights of wind turbines towers to be constructed, including their generating capacity, dimensions, respective manufacturers, and a description of accessory facilities;
- c) identification and location of the properties on which the proposed Wind Energy Facility will be located;
- d) at the discretion of the Development Officer, a survey prepared by a Nova Scotia Land Surveyor, a surveyor's certificate, or a site plan showing the planned location of all wind turbines towers, property lines, setback lines, access roads, turnout locations, substation(s), electrical cabling from the Wind Energy Facility to the substation(s), ancillary equipment, building(s), transmission and distribution lines. The site plan must also include the location of all structures and land parcels, demonstrating compliance with the setbacks and separation distance where applicable;
- e) at the discretion of the Development Officer, proof of notification to the Department of National Defense, NAV Canada, Natural Resources Canada and other applicable agencies regarding potential radio, telecommunications, radar and seismoacoustic interference, if applicable, to Transport Canada and the *Aviation Act*; and,
- f) any other relevant information as may be requested by the Halifax Regional Municipality to ensure compliance with the requirements of this By-law.

IV ADDITIONAL PERMIT REQUIREMENTS

- a) The Development Permit application shall be reviewed by a Municipal Building Official to determine if design submissions are required from a Professional Engineer to ensure that the wind turbine base, foundation, or guy wired anchors required to maintain the structural stability of the wind turbine tower(s) are sufficient where a wind turbine is:
 - a. not attached to a building and is not connected to the power grid and,
 - b. attached to an accessory building in excess of 215 square feet and is not connected to the power grid.
- b) A minimum of 60 days before the date a development permit application is submitted, an applicant shall send a notice to all assessed property owners of property that is within the following distances from the boundary of the property upon which any Micro, Small, Medium and Large wind energy facility is proposed:
 - i. Micro 140 metres (460 ft)

- ii. Small 360 metres (1180 ft)
- iii. Medium 500 metres (1640 ft)
- iv. Large 2000 metres (6560 ft)

- c) The notice pursuant to section b) shall include the following information:
 - i. a site plan that includes property boundaries and the location of the proposed wind energy facility;
 - ii. a description of the type of wind energy facility; and
 - iii. the applicant's contact information which shall include a mailing address.

V EXCEPTIONS

Notwithstanding Section II a) and II b) the setback requirements from any Wind Energy Facility to a property boundary may be waived where the adjoining property is part of and forms the same Wind Energy Facility. All other setback provisions shall apply.

- a) Wind Energy Facilities shall not be permitted in the following zones of the Dartmouth Land Use By-law:
 - a. RPK (Regional Park) Zone.

VII INSTALLATION AND DESIGN

- a) The installation and design of a Wind Energy Facility shall conform to applicable industry standards.
- b) All structural, electrical and mechanical components of the Wind Energy Facility shall conform to relevant and applicable local, provincial and national codes.
- c) All electrical wires shall, to the maximum extent possible, be placed underground.
- d) The visual appearance of the Wind Energy Facility shall at a minimum:
 - i) be a non-obtrusive colour such as white, off-white or gray;
 - ii) not be artificially lit, except to the extent required by the *Federal Aviation Act* or other applicable authority that regulates air safety; and,
 - iii) not display advertising (including flags, streamers or decorative items), except for identification of the turbine manufacturer, facility owner and operator.

VIII MISCELLANEOUS

- a) Micro Wind Facilities shall be permitted on buildings subject the requirements in Section II a) Urban Wind Requirements and Section II b) Rural Wind Requirements.
- b) The siting of Wind Energy Facilities is subject to the requirements for Watercourse Setbacks and Buffers as set out in the Land Use By-law.
- c) The siting of all accessory buildings are subject to the general set back provisions for buildings under this By-law

IX SCHEDULES

- a) Schedule - Map A-1.1 – Wind Energy Zoning Map

Case 17342 ATTACHMENT B
Public Information Meeting locations
for Wind Turbine Development Agreement Provisions

Unlike other rounds of community consultation in 2007 and 2009 this process if initiated would be focused solely on Rural HRM. Accordingly, staff would hold 6 public meetings, the purpose of which is to present proposed regulations to the community and Business Park Associations to receive feedback on the opportunities and issues related to the siting of wind turbines in the urban and rural areas of HRM.

The consultation meeting list is as follows:

Meeting Locations

Rural

- ✓ 1 meeting in the Prospect/ Timberlea Area
- ✓ 1 meeting in the St. Margaret's Bay area
- ✓ 1 Meeting in the Fall River Area

- ✓ 1 Meeting in the Porter's Lake Area
- ✓ 1 Meeting in the Middle Musquodoboit Area
- ✓ 1 Meeting in the Sheet Harbour Area

The public meetings will be duly advertised, and invitations will be extended to all members of Community Councils. In addition Stakeholders will also be invited to attend these sessions to provide comment.