HALIFAX
REGIONAL MUNICIPALITY

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Item No. 11.1.2 (i)
Halifax Regional Council
October 18, 2011

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

DATE: September 26, 2011

SUBJECT: Project 00953: Wind Energy Facilities in HRM – Public Engagement

SUPPLEMENTARY REPORT

ORIGIN

On August 16th, 2011, Regional Council passed the following motions:

"That Halifax Regional Council:

1. Adopt the amendments to the Regional Municipal Planning Strategy as set out in Attachment A of the staff report dated April 11, 2011;
2. Adopt the amendments to the Land Use By-Laws as set out in Attachment B of the staff report dated April 11, 2011, as amended by the proposed Land Use By-Law amendments presented in Attachment A of the Supplementary Report dated July 25, 2011;
3. For large scale wind turbines in rural areas, the distance separation to a habitable building on an adjacent lot be 1000 metres;
4. That wind turbine/wind farm approval in HRM be subject to a community engagement process and that staff provide a report defining this process;
5. That the amendments provide for the siting of wind turbines in the urban reserve and the urban settlement areas, especially where a power line corridor runs through those lands."

RECOMMENDATION

It is recommended that Halifax Regional Council approve the amendment to the relevant Land Use By-Laws, as described in Attachment A of this report, to implement siting requirements for Wind Turbines within HRM.

BACKGROUND

On August 16, 2011, Regional Council passed a series of resolutions to regulate the siting of wind turbines in HRM. It also passed a resolution that the approval be subject to a community engagement process and that staff should provide a report outlining the options for community engagement (see Origin Motion #4). This report addresses that direction of Council.

Since the August 16, 2011 meeting, clarification has been requested regarding the use of the term "adjacent" as it applies to measuring the approved distance separation requirements from a wind turbine to a habitable building.

DISCUSSION

Community Engagement:
On August 16, 2011, Council passed Resolutions 1 and 2 (see Origin) effectively approving the regulation of wind turbines applications via HRM's as-of-right permitting process. Council then passed Resolution #4 which reads as follows:

> 4. *That wind turbine/wind farm approval in HRM be subject to a community engagement process and that staff provide a report defining this process.*

Since Council approved the as-of-right permitting process for wind turbines, the "community engagement" condition in Motion #4 is considered within the context of this particular approval.

Under HRM's Community Engagement Strategy, there is a continuum that ranges from Information Sharing to Active Participation as follows:

1. *Information Sharing* – involves sharing information to build awareness of issues that may affect the public or specific communities.
2. *Consultation* – is typically part of a regulatory process by which the public's input on matters affecting them is sought. Its main goals are to improve the efficiency, transparency and public involvement in projects, laws and policies. It may include simple testing of ideas or concepts to build knowledge or it may include a two way collaboration to develop solutions and build community buy in.
3. *Active Participation* – involves sharing decision making to build ownership or delegating decision making to build community capacity and responsibility.

In light of the "as-of-right" approach approved by Council, the only community engagement approach available is "Information Sharing" (Notification). "Consultation" and "Active Participation" approaches are intended for applications that require discretionary approval by Council. The use of either approach is not contemplated under the as-of-right approval process, nor was it part of the original report or what had been advertised leading to the public hearing.

Accordingly, the adoption of a discretionary approval as part of this planning process would be contrary to the direction of the original staff report and the Public Hearing advertisement. If Council wishes to consider implementing a discretionary approval process, a new planning application process would need to be initiated.

Notification Option

Under the information sharing approach, an applicant would provide notification to property owners within preset distances of the proposed wind turbine to ensure that residents are aware that an application for a wind turbine development is being submitted for approval. However, other than through the Environmental Assessment (EA) process there would be no opportunity for public input or decision making authority from Council.

The distance for any such public notification is typically an established distance from the subject property boundary. In this case, staff would suggest that the formal notification distance be a function of the separation distance required for each category of wind turbine as measured from the property boundary upon which it is intended to locate. Staff recommends that the distance of the notification area be double the already approved separation distance of the turbine. For example in the micro turbine category:

- separation
  distance: 3 times the total height of the turbine (max. height of turbine 23 metres)
  3 x 23 metres or 69 metres (70 metres for ease of administration)

- notification
  distance: 70 metres X 2 = 140 metres from the property upon which the turbine is located.

Therefore, any property or portion thereof that lies within 140 metres from the proposed micro wind turbine application would be notified of an applicant's intention to erect a micro wind turbine. The same rationale would hold for all categories of wind turbines as illustrated below:

1. Micro	*140 metres (460 ft)*
2. Small	*360 metres (1180 ft)*
3. Medium	*500 metres (1640 ft)*
4. Large	*2000 metres (6560 ft)*

Clarification of the Term "adjacent"

Some clarification is sought regarding the use of the term adjacent when applying the distance separation as it is currently used in the recently approved wind energy regulations (Attachment C) as follows:

"v) 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***;"

When establishing a distance separation from a turbine to a habitable building on an adjacent lot, the intent behind the use of the term "adjacent" is effectively to establish a distance between a wind turbine and a habitable building, regardless of any lot lines that may lie in between them. For example, if a vacant lot were abutting a property where a large turbine is proposed to be located and a habitable building is sited on a property on the other side to the vacant lot, the turbine would still be required to be a full 1000 metres from that habitable building. The use of the term "adjacent" is meant to mean "nearby" and is utilized in similar fashion through-out many LUBs in HRM. Its use in the proposed amendments was reviewed with HRM Legal Services. Should a future requirement for further clarity be required regarding the use of "adjacent", such a change would be done on a comprehensive basis and not solely for the purpose of siting wind turbines.

Timelines for Approval:
Due to the amount of discussion and information requested on this application, Council needs to be aware of time restrictions placed on land use by-law (LUB) amendments under the Halifax Charter. Under Section 261 (4) of the Halifax Charter, a planning approval process for LUB amendments must be completed within 150 days from the publication of the first notice advertising the Council's intention to amend a land use by-law. The purpose of this legislation is to ensure that an approval cannot be extended indefinitely therefore restricting the administration of the LUB. If the 150 days is exceeded and the time elapsed, the Development Officer is required to issue a development permit based on the LUB's original regulations. For example, in the Eastern Shore East and West Plan areas, wind turbines were permitted as-of-right with very little regulation prior to placing the newspaper ad for the Public Hearing on June 4th, 2011. Should the timeline of 150 days lapse on November 2nd, wind turbines would again be as-of-right with very few LUB regulations restricting them in these areas.

ALTERATIVES

1. Council could approve the proposed amendment as contained in Attachment A. This is staff's recommended course of action.

2. Council could request that staff undertake a new planning process to explore discretionary approvals such as a development agreement provision within which wind turbines would then be vetted with the community. This is not the staff recommendation.

3. Council could refuse to adopt the LUB amendments as per the staff recommendation in this report, which by effect would render the entire wind energy policy and LUB regulations invalid, and request that staff begin the planning process anew. This is not the staff recommendation.

BUDGET IMPLICATIONS

There are no budget implications associated with this report. However, if Council introduces a Development Agreement 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

For the community engagement program undertaken for the wind turbine process, and the synopsis of input received from the numerous public information session held, please refer to the February 2, 2011, staff report.

ATTACHMENTS

Attachment A: Amendments to Relevant LUBs for the Siting of Wind Turbines
Attachment B: Typical Example (Dartmouth) of Wind LUB Amendments with Suggested Changes

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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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Original Signed

ATTACHMENT A

Amendments to the Land Use By-Laws for Bedford, Cole Harbour/ Westphal, Dartmouth, Eastern Passage/ Cow Bay, Eastern Shore (East) Eastern Shore (West), Halifax Mainland, Halifax Peninsula, Lawrencetown, Musquodoboit Valley - Dutch Settlement, North Preston Cherry Brook Lake Major Lake Loon and East Preston, Planning Districts 1&3 (St. Margaret's Bay), Planning District 4 (Prospect Road), Planning District 5 (Chebucto Peninsula), Planning Districts 14 &17 (Shubenacadie Lakes), Planning Districts 8&9 (Lake Echo/Porter's Lake), Planning Districts 15, 18 & 19 (Beaver Bank, Hammonds Plains and Upper Sackville), Sackville, and Timberlea/Lakeside/Beechville of the Halifax Regional Municipality.

The by-law to amend the Land Use By-Laws of the Halifax Regional Municipality as set out above are hereby amended as follows:

1) In Part IV add the following after section a):

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.

ATTACHMENT B

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)**

ii) 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