



Planning Services

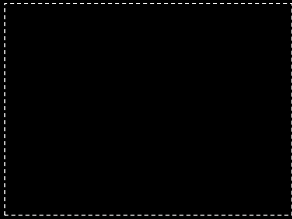

# WIND ENERGY



## Wind Energy

Planning Services

1. Wind Turbines - Categories
2. Public Perceptions
3. Proposed Policy Direction
4. Locations Suitable
  1. Urban and Rural



# Wind Energy

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## 1. Wind Turbines - Categories

2. Public Perceptions
3. Proposed Policy Direction
4. Locations Suitable
  1. Urban and Rural

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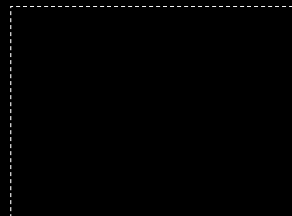


## Categories of Wind Turbine

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1. Micro
2. Small
3. Medium
4. Large

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## Micro Turbines

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Height  
0 – 23 metres

Power  
Output  
0 - 10 KW

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## Micro Turbines

Planning Services



Height  
0 – 23 metres

Power Output  
0 - 10 KW

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10 kW

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## Small Turbines

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Height  
23 – 35 metres

Power Output  
10 - 50 KW

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## Medium Turbine

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100 Kilowatts

Height Range  
35 – 60 m.

Power Output  
50 – 300 KW

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## Medium Turbine

50m Height  
100 KW



## Large Turbine

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Height  
60 metres+

Power Output  
Greater than 300 kW  
(EA process required)



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2 megawatts

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# Wind Energy

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1. Wind Turbines—Categories
- 2. Public Perceptions**
3. Proposed Policy



# Public Values Expressed

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- Want to Benefit
- Public Supports Use
- Do Not Want Impacts



# Wind Energy

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1. Wind Turbines—Categories
2. Public Perceptions
- 3. Proposed Policy**
  - 1. Wind Turbines As of Right**
    1. Urban
    2. Rural
  - 2. Provincial EA and Large Wind Turbines**

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## Proposed Wind Energy Policy



## Proposed Policy

*Planning Services*

### 1. Wind Turbines As of Right

#### 1. Discretionary Approvals

2. Urban HRM
  1. Locations suitable
  2. Setbacks
3. Rural HRM
  1. Locations suitable
  2. Setbacks
4. Provincial EA



## Proposed Policy

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- As of Right Process
  - Discretionary Approvals





# Discretionary Approvals

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Development Agreements, Site Plan:

- Mass, Scale and Location of Buildings,
- Hours of operation, landscaping, screening,
- Site function, parking, traffic issues, etc.



# Proposed Policy

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1. Wind Turbines As of Right
  1. Discretionary Approvals

## 2. Urban HRM

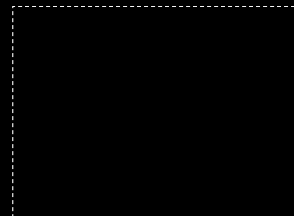
### 1. Locations suitable

### 2. Setbacks

3. Rural HRM

1. Locations suitable
2. Setbacks

4. Provincial EA

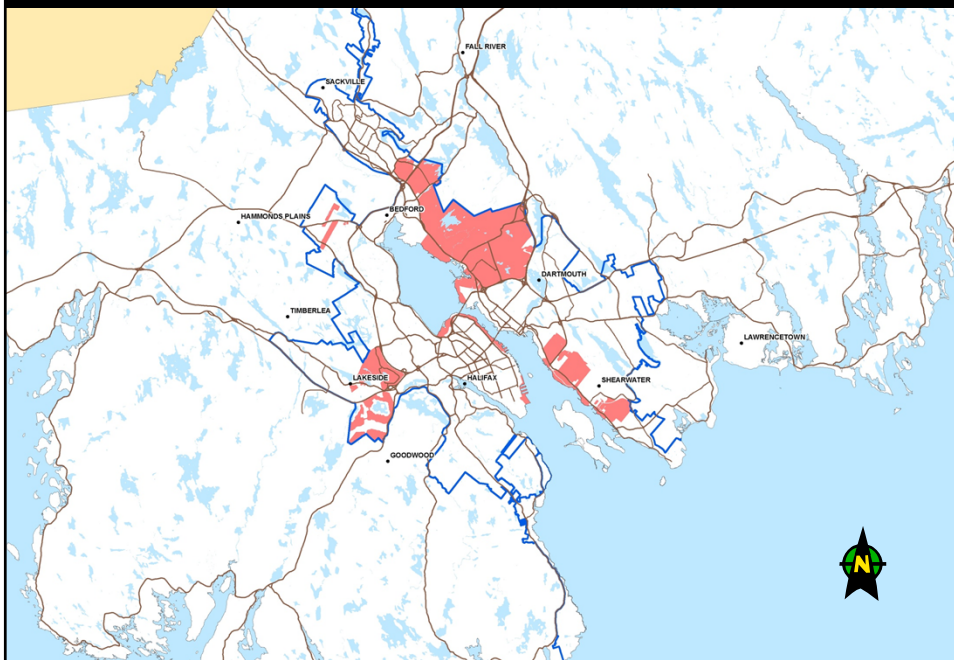


# Urban HRM

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## Recommended Locations for Urban Wind Turbines



# Setback and Separation Regulations

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1. *Setback to property boundary*
2. *Separation to adjacent buildings*

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## Setbacks from Turbine -- Urban Zone

Selected Areas Only include Commercial campus', business parks, some marine industrial locations. *\* No Turbines in Residential Neighbourhoods*

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Turbine Type (max. height)	Prop. lines	Adj. Non – Sensitive	Adj. Sensitive Buildings
Micro (23m)	1.0 x ht	1.5 x ht	3.0 x ht.
Small (35m)	1.0 x ht	1.5 x ht	180 m
Medium (60m)	1.0 x ht	1.5 x ht	250 m
Large 60m+	Not Permitted		

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# Proposed Policy

*Planning Services*

1. Wind Turbines As of Right
  1. Discretionary Approvals

2. Urban HRM

1. Locations suitable
  2. Setbacks

## 3. Rural HRM

### 1. Locations suitable

### 2. Setbacks

4. Provincial EA

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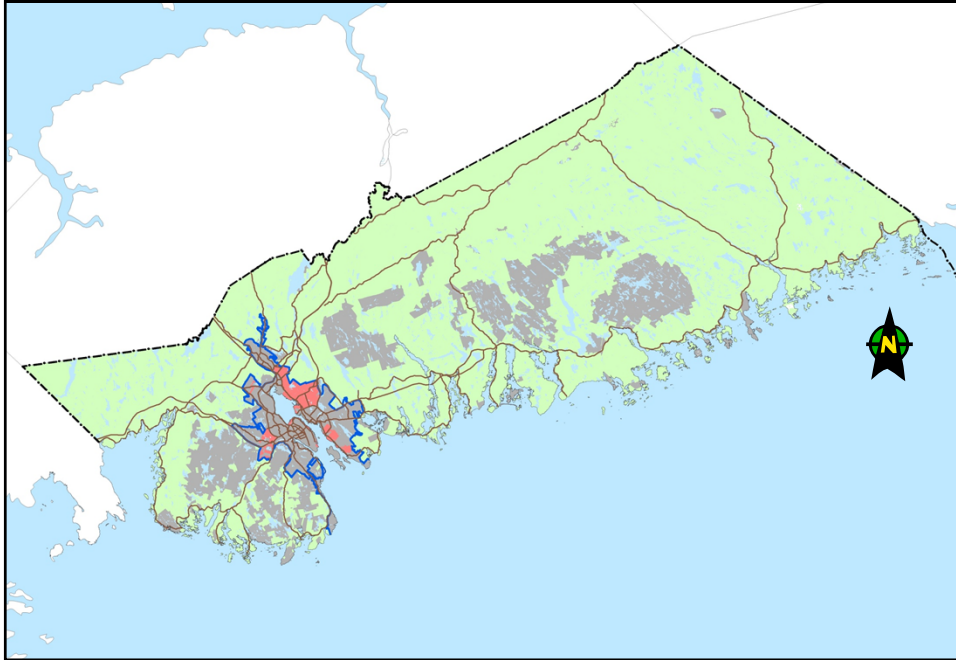


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## Rural HRM



## Rural Context for Wind Turbines



## Areas of Restriction -- Wind Turbines

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- Regional Parks
- Protected Areas
- Conservation Areas
- Western Commons

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## Setbacks from Turbine-- Rural Energy Zone

(Restricted- Reg. Parks, Protected Areas, Conservation Areas, West Comm.)

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Turbine Type (max. height)	Prop. Lines	Adj. Habitable Buildings
Micro (23m)	2.0 x ht.	3.0 x ht.
Small (35m)	2.0 x ht.	180 m
Medium (60m)	1.5 x ht.	250 m

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## Setbacks from Turbine-- Rural Energy Zone

(Restricted- Reg. Parks, Protected Areas, Conservation areas)

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Turbine Type (max. height)	Prop. Lines	Adj. Habitable Buildings
Large (60m+)	1.5 x ht.	550 m

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# Proposed Policy

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## Provincial Environmental Assessment



## Provincial Environmental Assessment

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Criteria set out in Guidelines for Large Wind Turbine Projects:

1. Human Safety
2. Environmental Protections
3. Site Requirements
4. Nuisance Impacts



# Provincial EA -- Large Turbines

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2MW  
EA required



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0.6MW  
No EA  
required

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# Provincial EA -- Large Turbines

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80m Height (Goodwood)

x 4 = EA

.6MW

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## Large Wind Turbines

## Large Turbine Siting Criteria

- As-of Right
- Rural Areas Only
- 550m Separation to Habitable Buildings
- No Height Limit
- Not Permitted in Urban Area



# Large Wind Turbines

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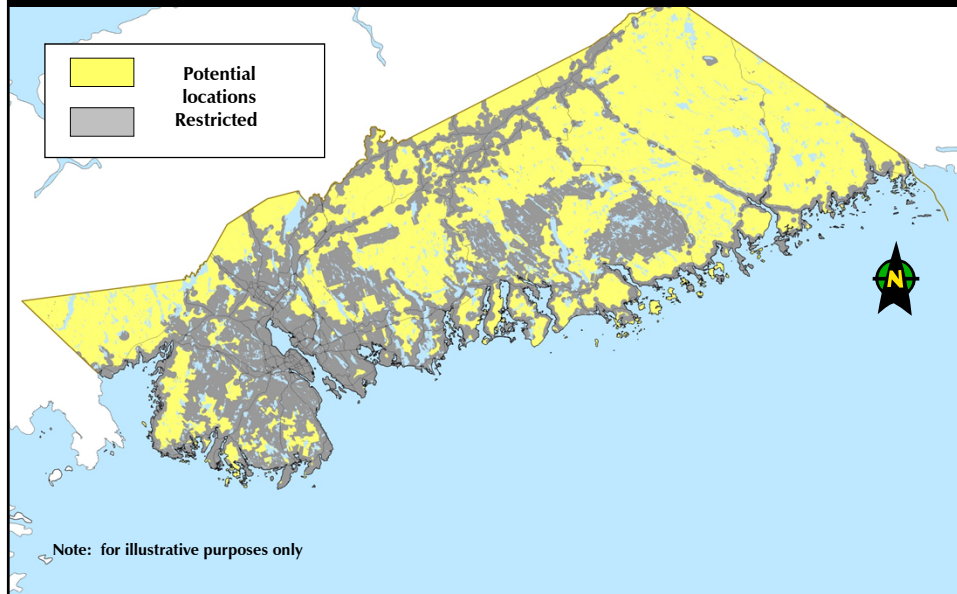
## Areas of Restriction

- Regional Parks
- Protected Areas
- Conservation Areas
- Western Commons
- Urban Centre

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## Approximate Potential Locations for Large Scale Wind Turbines



## Wind Turbines Permitted

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<b>Turbine Type</b>	<b>Micro 23m</b>	<b>Small 35m</b>	<b>Medium 60m</b>	<b>Large 60m+</b>
<b>Urban</b>	Yes	Yes	Yes	<b>No</b>
<b>Rural</b>	Yes	Yes	Yes	Yes

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## Wind Energy

*Planning Services*

1. Wind Turbines—Categories
2. Public Perceptions
3. Proposed Policy
- 4. Conclusion**

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# The End

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