Small Wind Energy System Ordinance

Skystream 3.7 (approx. 2 kw)- New Durham, NH

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The Origins of HB310

1. Growing Demand to go ‘GREEN’
   - Bedford, Kensington, New Durham, Hampton, Newington, Kittery, ME
   - Private property rights to use wind resource on property

2. Inadequate Public Review Process
   - ZBA Variance Hearing
   - Minimal inclusion of issues other than height
RSA 674:62-66
- **Municipal Regulations:** Cannot unreasonably limit, hinder small wind energy systems
  - Outright Prohibition
  - Restrict height via generic structure height
  - Setback requirements > 150% system height
  - Sound requirements < 55 decibels
  - Stricter electrical or structural requirements

- **Aviation:** Meet FAA requirements
- **Abandonment:** Establishes framework
- **Abutter Notification:** Building Inspector, Building Permit Process
- **Regional Impact:** Building Inspector determination

RSA 672:1, III-a: Clarifies municipalities requirement to encourage renewable energy
RSA 672:1, III-d: Renewable energy added to definition of unreasonable interpretation of municipal regulations.
Wind Turbines

**Small Scale**
- Rated Under 100 kilowatts (kW)
- Height: 40’ – 150’
- Rotor Diameter: 4’ – 46’
- Size of Units:
  - 1-10 kW (Residential)
  - 20 kW (Agricultural)
  - 50 kW (Municipal/Industrial)

**Utility Scale**
- Height: 100’ – 250’
- Rotor Diameter: 70’ – 350’
- Size of Units:
  - 660 kW (MMA- Bourne, MA)
  - 1.8 MW (Landfill site- Hull, MA)
  - 3.6 MW (Cape Wind, MA)
**Regulatory Process**

**Turbine(s) Capacity**

- **100 kW or Less**
  - Used Primarily for Onsite Consumption

- **100 kW to 30 MW**
  - Electricity Providers

- **30 MW or More**
  - Electricity Providers

**Organizational Oversight**

- **Local Jurisdiction:**
  - Small Wind Energy System Ordinance

- **Local Jurisdiction or Petition to State:**
  - Normal Site Plan Review
  - (In most cases ZBA action)

- **State Jurisdiction:**
  - Site Evaluation Committee
- **Reviewed by Building Inspector**
  - Requires Building Permit
  - Permitted in all Zoning Districts

- **Application Requirements**

- **Abutter Notification**
  - Building Inspector required to notify abutters, including Governing Body
  - 30 day comment period

- **Regional Impact Assessment**
  - Determined by Building Inspector via RSA 36:55
  - RPC, Governing Body and Planning Board
Siting Standards

Setbacks

- The minimum setback number multiplied by the system height
  - 0% to occupied buildings
  - 150% to occupied buildings on abutting properties
  - 110% to property lines and utility lines
  - 150% to public roads

<table>
<thead>
<tr>
<th>Minimum Setback Requirements</th>
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<tr>
<td>Occupied Buildings on Participating Landowner Property</td>
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Siting Standards

**Tower Height**
- 35 feet above surrounding tree canopy within 300 feet.
- 150 feet maximum

**Sound Levels**
- Sound vs. Noise
- 55 decibels using “A” filter (dBA)
- Measured at Property Line
- **CANNOT** be less than 55 decibels
- Allow for short-term events (wind storms and utility outages)
Siting Standards

Shadow Flicker
- Not a major concern with small scale turbines
- Cannot have significant affect.
  - Significant = > 30 hours/year

Signs
- Prohibits all signs except Manufacturer’s
Siting Standards

**Code Compliance**
- Comply with NH State Building Code

**Aviation**
- FAA Regulations: 14 C.F.R. part 77
- NH Aviation Regulations:
  - RSA 422-b and RSA 424
Visual Impacts
- Owner has right to maximum wind resource
- Must minimize visual impacts through proper siting and mitigation
- Color of turbine (stock, white, gray)
- Prohibits lights (except FAA)

Approved Turbines
- CA Energy Commission
- NY State Energy Research and Development Authority
- NH list (if available)
**Utility Connection**

- Adhere to Net Metering Requirements
  (RSA 362-A:9)

**Access**

- Restrict Public Access
- Secure Ground Control Equipment
- No step bolts or ladder for 8 feet
Siting Standards

Clearing

- Restricts clearing of natural vegetation
Abandonment Procedure

Abandonment or Discontinued Use: Out of service for a continuous 12 month period

**Personal Removal Process**

- Notice to Building Inspector
- 90 days to physically remove

Physical removal includes:
- removal of small wind energy system
- restoration of site to natural conditions

**Inspector Removal Process**

- After 12 months- Building Inspector may issue notice
- 30 days for owner to respond: provide contrary information
- 90 days to physically remove (if no response)
- After 90 days: Legal Action
Small Wind Energy System Ordinance

Violation

- Unlawful to construct, install or operate small wind turbine not in compliance of ordinance

- Grandfather clause for pre-existing small wind energy systems

Penalties

- Failure to comply is subject to enforcement and penalties- NH RSA 676
Should we adopt an ordinance?

- **ASSESSMENT:**
  - Assess wind resource, demand within community and current zoning
  - Wind resource [http://navigator.awstruewind.com](http://navigator.awstruewind.com)

- **NO** ordinance adopted:
  - Renewable energy is an accessory use (RSA 672:1, III-d)
  - Building permit and review by Building Inspector required
  - Abutter notification and 30 day comment period required
  - Aviation, abandonment, abutter notification will apply
  - Setback of 150% required
  - No height, noise or system requirements

- **YES** ordinance adopted:
  - Standards protecting public from perceived impacts will be included
Ordinance Customization

This is a MODEL ordinance. It can and should be modified to meet your community’s needs.

- **Review Process**
  - Conditional Use Permit- Planning Board (RSA 674:21)
  - Special Exception- ZBA
  - Building Inspector

- **Siting Standards**
  - **Size of Turbine (Caution)**
    - RSA 674:62 Defines Small Wind Energy Systems as those systems which have a rated capacity “consistent with” net metering specifications (100 kW).
  - **Tower Height (Caution)**
    - Need to allow access to wind resource (generally 30 feet above surrounding tree canopy).
Ordinance Customization

- 7 Most Important Provisions:
  - Outline Public Review Process: Building Inspector required. Planning Board or ZBA optional
  - Abutter Notification
  - Regional Impact Assessment
  - Setbacks: Cannot exceed 150% of system height
  - Sound: Cannot be below 55 decibels
  - Approved Wind Turbines: CA, NY, or NH List
Questions??