Model Ordinance Addressing Small Wind Energy Systems for New Jersey Municipalities

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New Jersey Model Zoning Ordinance

- Background
- New Jersey Wind Working Group
- SWOT Analysis
  - Strengths
  - Weaknesses
  - Opportunities
  - Threats

SWOT Analysis

- Strengths
  - Net Metering
  - Rebates
  - Job Creation
  - Wind
  - Energy Independence
  - Renewable Energy Credits
  - Lower Upfront Costs
  - Environmental Benefits
  - Strong Support from Governor and BPU
- Weaknesses
  - Local Zoning Regulations
  - Lack of Wind Data
  - Year Round Wind Resource
  - State and Local Permitting
  - NIMBY Effects
  - High Urbanization
  - Energy Production vs Peak Demand
  - Availability of Financing
  - Availability of Site Assessors

SWOT Analysis (cont)

- Opportunities
  - Location
  - Work with Environmentalists
  - New Jersey EMP
  - Hybrid Wind/Solar for Municipalities
  - NJ CORE Rebates
  - USDA Grants
  - Wind RECs
  - On-Shore Wind Goals
  - NJWWG leads Policy Changes in Trenton
- Threats
  - NIMBY Effect
  - Local Zoning Ordinances
  - Lack of Information/Education
  - Confidence in Existing Wind Maps
  - State and Local Permitting
  - Environmental Concerns
    - Birds and Bats
    - Wetlands
    - CAFRA
    - Pinelands

Highlights of New Jersey Model Zoning Ordinance

- Stipulates that Wind is an abundant, renewable, and non-polluting energy resource
- Wind System Specific Definitions
- Wind Systems with a capacity of 100 kilowatts or less
- Height of System as high as necessary to capture the wind
- Setbacks equal to the municipality’s existing building setback requirements
- Permitting Requirements
- Abandonment
- Zoning Permit Procedure

Municipalities Adopting a Similar Version of the New Jersey Small Wind Model Ordinance

- Ocean Gate Borough – adopted November 12, 2007
- Hillsboro Township – adopted December 26, 2007
- Brick Township – adopted April 3, 2008
- Galloway Township – adopted April 22, 2008
- Oldmans Township – adopted July 2, 2008
- Stafford Township – adopted September 16, 2008
- Beachwood Borough – adopted September 17, 2008
- Berkeley Township – adopted November 25, 2008

Municipalities with Existing Wind Ordinances

- City of Brigantine – adopted August 21, 2002
- Deerfield – archives
- Millville – archives
- Pittsgrove Township – archives
- Holland Township – archives
- Lower Township - archives

Ordinance Comparison

	Zoning Designation	Height	Setbacks	Permits
Model Ordinance	Comm/Indus Resid/Agri	Maximize Wind velocity	Existing municipal	As Required
Ocean Gate	Any Category	135 ft	Existing Setbacks	Regular Building
Hillsboro	Commercial/ Agriculture	120 ft	10 acres 250 ft	Regular Building
Brick	Commercial	125 ft	10 ft	Regular Building
Galloway	Resid/Agri Forested	80 ft – 1 acre 150 ft – 3 acre	1 acre or 100% of height	Regular Building
Oldmans	Agri, Resid, Comm	120 ft	130% of height	Regular Building
Stafford	Residential Industrial	Maximize Wind Velocity	Existing Setbacks and 1 acre	Regular Building
Beachwood	Municipal	145 ft	Existing Setbacks	Regular Building
Berkeley	Commercial Industrial	135 ft	110% System height – 3 acres	Regular Building
Brigantine	Residential Business	80 ft	1 Rotor radius +5 ft	Regular Building

Ordinance Observations

- All ordinances require the existing building permitting process
- Requirements for the other categories vary
- Commercial, Industrial and Agricultural Zoning designations are comparable, however, residential is somewhat restrictive
- Height varies from 80 ft to a height as high as necessary to capture the wind energy source
- Setbacks and required acreage become very restrictive for residential and some Industrial
- Some of the ordinances setbacks are really fall zones
- Acreage limitations make most residential installations unachievable, since most residents in strong wind resource area have limited acreage

Model Ordinance Suggestions for Residential

- When determining acreage ensure at least 5% of residential properties would qualify
- CORE rebate requirements require the tip of the blade be at least 30 ft above the highest obstacle within 500 ft of the turbine site, residential tower heights will be at least 80 ft
- There are no fall zone requirements in the UCC. Water towers, Cell towers and communication towers have no fall zone requirements
- The size of the turbine is related to the size of the property
- The height of the turbine is related to the height of the wind resource
- Hold public information sessions for the general public explaining the pros and cons
- Make sure municipal officials understand all the terminology and the benefits of wind as a tax stabilizer

NJDEP Permitting in CAFRA Zone

- Presently must meet all guidelines for an Individual Permit as found in N.J.A.C. 7:7E, Subchapters 3,4,5,6,7&8
- NJDEP proposed three tier approach
- Tier “A”
  - Less than 150 ft high and 3 turbines or fewer
  - Permit-by-Rule or General Permit or Individual Permit
  - Permit Evaluation dependent on permit type
  - Monitoring – No pre/post surveys
- Tier “B”
  - 150 ft to 250 ft high less than 20,000 sq ft swept area
  - General Permit or Individual Permit
  - Identify Critical Environmental habitats with potential impacts
  - No Pre construction survey –One year post construction bird and bat

NJDEP Permitting in CAFRA Zone (cont)

- Tier “C”
  - Greater than 250 ft in height
  - Individual Permit Required
  - Identify critical environmental habitats where potential impacts preclude Type C turbines
  - Pre-construction surveys: 1 year - radar; Birds; Bats
  - Post-construction surveys: 2 years – Bird and Bat carcass search; visual Bird surveys

Recommended Changes to Proposed 3 Tiers

- Tier “A”
  - Up to 200 ft
  - Permit by Rule
  - No DEP Evaluation
- Tier “B”
  - 200 ft to 300 ft
  - General Permit
  - Identify Critical Environmental Habitats and Impacts
  - Post Construction Surveys if Needed
- Tier “C”
  - Above 300 ft
  - Individual Permit
  - Pre-Post Surveys limited and performed by neutral third party