TOWN OF STONINGTON
CONSERVATION COMMISSION
REGULAR MEETING

AGENDA
April 27, 2009

There will be a Regular Meeting of the Conservation Commission on Monday, April 27, 2009 at 7:00PM at the Stonington Police Station, 173 South Broad Street, Pawcatuck, CT

1. Call to order

2. Review of Town Developments and Proposals:
   a. **PZ0907ZC Town of Stonington (PZC)** - Request Zone Change for properties currently zoned as LI-130 to GBR-130 (Map/Block/Lot: 70/1/4, 70/1/4A, 70/1/5, 71/1/1, 71/1/1A & part of 84/1/2), realignment of LI-130 zoning district boundary with rear property lines (MBL: 70/1/1, 70/1/2 & 70/1/3), & realignment of LI-130 zoning district boundary to be offset 50 feet of property line of Map 70 Block 1 Lot 3 onto Map 70 Block 1 Lot 4A. Properties are located off Taugwonk Road, Stonington.
   b. **PZ0911RA Town of Stonington (PZC)** – Zoning Regulations Text Amendments to Article II Section 2.6 – Non-Conforming Use & Bulk; Article V Sections 5.1.2 & 5.1.3 – Use & Bulk Tables; Article VI Section 6.1 – Special Use Permits, Section 6.23 – Traffic Impact Study, & Section 6.24 – Archaeology Study; & Article VIII Section 8.3 – Site Plan Submissions, Section 8.4 – Plan Requirements, Section 8.6 – Bonding Requirements, Section 8.7 – Fee Schedule, Section 8.8 – Impact Statement, Section 8.9 – Public Hearings, and Section 8.10 – Zoning Board of Appeals.
   c. **PZ0912RA Town of Stonington (PZC) -** Zoning Regulations Text Amendment to replace all portions of existing language in Section 6.6.22 – Open Space Development, and the addition of OSD's in the RA-20 and RA-15 zoning districts.
   d. **PZ0913RA Pine Point School** - Zoning Regulations Text Amendment to Article VII to create regulations for Alternative Energy Systems: Section 7.22 (Renewable Energy Systems) and Subsection 7.22.1 (Small Wind Energy Systems).
   e. **PZ0916SD Suzanne Medeiros -** Subdivision Application for a 3-lot subdivision of approximate 4.27± acre parcel. Property located at 108 Greenhaven Rd., Pawcatuck. Assessor's Map 35 Block 1 Lot 4. Zone RA-40.
   f. **PZ0917ZC Jamie D. Aluzzo –** Zoning Map Amendment Application from Residential RA-20 to Commercial LS-5 for properties located at 140 & 146 Liberty Street, Pawcatuck. Assessor's Map 15, Block 2, Lots 8 & 9.
   g. Any pending applications and new preliminary proposals

3. Open Space Subcommittee
   a. Discussion of parcels for preservation in Pawcatuck and other locations

4. Old Business
   a. Discussion of HI-60 Zoning Regulations
   b. Discussion of Revisions to Neighborhood Development District (NDD) Zoning Regulations
   c. Mystic River Dam Committee
   d. Discussion of Stonington's 200 Greatest Roadside Trees
   e. Discussion of Wequetequock Cove water quality study and water quality testing for streams
   f. Discussion of possible Taugwonk Road zone change from LI-130 to GBR-130
   g. Looking Forward to 2009 - Discussion of possible regulation changes to bring about short term economic benefits to the Town including floor area ratio and setback requirements in the RC-120 and GBR-130 zoning districts, accessory apartments and vegetable production greenhouses
   h. Discussion of Alternative Energy Options for the Town: Helical Wind Turbine Study – Stuart Cole
   i. Regulations to encourage large scale greenhouse vegetable production

5. New Business

6. Review of March 25, 2009 draft minutes

7. Adjournment

7.22 RENEWABLE ENERGY SYSTEMS

7.22.1 Small Wind Energy Systems.

7.22.1.1 Purpose. This regulation provides for the construction and operation of small wind energy systems to be used for educational and/or research purposes, subject to reasonable restrictions to preserve public health and safety.

7.22.1.2 Findings. The Town of Stonington finds that wind energy is an abundant, renewable, and nonpolluting energy resource and that its conversion to electricity will reduce dependence on nonrenewable energy resources and decrease the air and water pollution that results from the use of conventional energy sources. Distributed small wind energy systems will enhance the reliability and quality of the power grid, reduce peak power demands, and help diversify the State's energy supply portfolio. Wind energy also makes the electricity supply market more competitive by promoting customer choice.

7.22.1.3 Definitions.

Small Wind Energy System -- a wind energy conversion facility consisting of a stationary tower, a wind turbine hub (nacelle) to which rotor blades may be attached, control or conversion electronics, and associated accessory structures. Small wind energy systems are intended to primarily reduce on-site consumption of utility power and shall have a rated capacity of not more than twenty (20) kW. Such systems are not to be utility scale, where the primary use is electrical generation to be sold on the wholesale electricity market.

Fall Zone: The potential fall area for the small wind energy facility. It is measured by using the total height of the wind energy facility as the radius around the center point of the base of the tower.

Height: Height of a wind energy facility measured from natural grade to the tip of the rotor blade at its maximum vertical extent.

Turbine Shadow Flicker: The moving shadow created by the sun shining on the rotating blades of the wind turbine.

7.22.1.4 Special Use Permit.

.1 No small wind energy system shall be erected, constructed or installed without first obtaining a Special Use Permit from the Commission. All such wind energy systems shall be constructed

and operated in a manner that minimizes adverse visual, safety and environmental impacts.

.2 Special Use Permit applications shall include a Site Plan of the subject property prepared by a Connecticut licensed professional engineer, drawn to a scale acceptable to the Commission on sheets 24" x 36" in size. Plan view drawings shall include location of the tower, all appurtenant equipment and accessory structures, proposed landscape screening, and the location of all other structures on the property. Profile drawings shall include the tower, base, footings and all appurtenant structures, minimum and maximum height above the ground of turbine blade tips, footings, and guy wires or other structural supports.

.3 The Applicant shall provide a written report describing the wind energy facility that contains technical supporting documentation establishing its structural integrity and need for accessory structures, to include manufacturer, model, rotor diameter and tower type, and description of interconnection to regional power grid. This report shall address potential noise, shadow flicker, and wildlife impacts.

7.22.1.5 Location, Setback and Design Criteria. Small wind energy systems may be allowed by Special Use Permit, subject to the requirements set forth below:

.1 Small wind energy systems may be permitted on parcels in any district exceeding twenty (20) acres, provided that such properties are owned or controlled by schools, non-profit organizations, or local government.

.2 Total facility height shall not exceed 120 feet above natural grade, to include rotor blades measured to their maximum vertical extent. A 360-degree fall zone with a radius equal to total height (including rotor blades) shall be provided within the parcel upon which the tower is located. All such systems shall be set back a distance equal to total height from all overhead utility lines, property lines, and public roads. Buildings and structures located within the same property boundaries are exempt from this requirement.

.3 The tower and accessory structures shall, to the extent possible, use materials, colors, textures, screening and landscaping that will blend the facility into the natural setting and built environment.

.4 Guy wire anchors and accessory facilities may extend no closer to property lines than the minimum zoning district setback requirements.

.5 Wind energy systems shall not be located within any inland wetlands and watercourses, tidal wetlands, or coastal resources as defined in Section 22a of the Connecticut General Statutes.

.6 Noise and Vibration. Wind energy systems shall not exceed noise and vibration standards contained in Section 2.13.2.4 of these Regulations as measured from the nearest property line. If documented noise level exceeds any of these conditions, the facility shall be shut down until the noise problem is remedied to satisfaction of the Commission. Documentation of violated noise levels shall provide date, time, and duration of all observed instances of noise levels that exceed the regulated level.

.8 Shadow Flicker. The wind energy system shall be designed such that shadow flicker will not fall on, or in any existing inhabited structure or public roadway, except under the following conditions:.

1) Cumulative time flicker is present will not exceed 10 hours per year.
2) Traffic volumes are fewer than 500 vehicles per day on the roadway.

If documented shadow flicker exceeds any of these conditions, the wind energy system shall be shut down until the flicker problem is remedied to satisfaction of the Commission. Documentation of shadow flicker shall provide date, time, and duration of all observed instances.

.8 Advertising signage, communication devices, cellular dishes or the like shall not be attached to a tower. This restriction does not apply to signs necessary for public safety purposes as authorized by the Commission.

.9 Wind energy systems shall comply with applicable FAA regulations as specified in 14 CFR Part 77, entitled “Objects Affecting Navigable Airspace.” Towers shall not be artificially lighted unless required by FAA. If lighting is required, the Commission shall review available lighting alternatives and approve a design that will cause the least disturbance to surrounding views.

.10 Wind energy systems shall be designed to prevent unauthorized access. The tower shall be installed so as to not provide step bolts

or other climbing means readily accessible for a minimum height of 8 feet above the ground. Electrical equipment shall be locked or secured within a fenced yard.

.11 The wind energy system owner shall by log book and/or photographs, maintain documentation of wildlife impacts, and provide access of these records to the Commission upon request.

.12 The owner shall maintain a log of all public comments received as written correspondence, phone or email regarding the facility, and provide access to this log to the Commission upon request.

.13 In granting a Special Use Permit for a small wind energy system, the Commission shall have the power to impose such additional standards and requirements as it deems necessary, within reason, to carry out the purposes of Stonington's Zoning Regulations.

7.22.1.6 Utility Notification. No small wind energy system shall be granted a Special Use Permit until written evidence has been provided that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid, non-connected systems shall be exempt from this requirement.

7.22.1.7 Abandonment. The owner of the property where a wind energy system is located shall be required to obtain a demolition permit to remove and properly dispose of the structure within one hundred and twenty (120) days of its abandonment, which shall be defined as the ceasing of production of electricity for longer than ninety (90) days. If such tower is not removed within the specified timeframe, the Town of Stonington may remove the structure at the owner's expense.

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Add Small Wind Energy System to ZR Section 1.2 -- Definitions

Small Wind Energy System -- a wind energy conversion facility consisting of a stationary tower, a wind turbine hub (nacelle) to which rotor blades may be attached, control or conversion electronics, and associated accessory structures. Small wind energy systems are intended to primarily reduce on-site consumption of utility power and shall have a rated capacity of not more than twenty (20) kW. Such systems are not to be utility scale, where the primary use is electrical generation to be sold on the wholesale electricity market.