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## Technical Bulletin 11-002

### DEVELOPMENT OF REGIONAL IMPACT GUIDELINES FOR COMPLIANCE WITH LAND-BASED WIND ENERGY STANDARDS

#### INTRODUCTION

In May, 2011, the 2009 Regional Policy Plan (RPP) was amended to include Minimum Performance Standards for siting Wind Energy Conversion Facilities (WECFs) in Barnstable County. Minimum Performance Standards (MPSs) were added to the Energy and Historic Preservation & Community Character sections of the RPP, and supported by an expanded definitions section. These regulations will guide the development of appropriate scale wind energy on Cape Cod consistent with the RPP's renewable energy and resource protection goals. (expand)

#### PURPOSE

The purpose of this technical bulletin is to provide Development of Regional Impact (DRI) applicants with guidance in the preparation and submission of data required to evaluate compliance with the Wind Energy Conversion Facility (WECF) Minimum Performance Standards E1.7 – E1.11, located in the Energy Section of the 2009 Regional Policy Plan.

#### ENERGY GOAL

To promote a healthy and sustainable environment by, "...reducing greenhouse gas emissions and energy consumption through design and construction practices that increase energy conservation, promote energy efficiency, and promote self sufficiency through the use of locally distributed renewable energy."



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### APPLICABILITY OF STANDARDS

The WECF Minimum Performance Standards of the Energy section in the 2009 RPP apply to the review of DRI projects proposing a wind energy conversion facility. To render a project application complete, applicants should demonstrate compliance with the standards of the RPP by providing the information outlined in **Application Requirements (below)**. Recognizing that every project presents a unique set of circumstances, some of the submission requirements may be waived or modified depending on the nature of the project.

### APPLICATION REQUIREMENTS

#### DEFINITIONS

- Wind Energy Conversion Facility, or WECF
- Clear Area
- Shadow Flicker
- Meteorological (or “met” or “test”) Tower
- Municipal Wind Energy Conversion Facility
- Height of a WECF
- Road
- Receptor

#### MPS E1.7 – CLEAR AREA

##### Setbacks & Fall zone

All wind energy conversion facilities and associated equipment shelters should comply with the building setback provisions of the zoning district in which the facility is located. In addition, the minimum distance from the base of any WECF to any structure designed for human occupancy shall be 1.5 times the tip height of the proposed WECF, as measured from the pre-development natural grade of the site of the proposed WECF to the highest point of the structure, including any moving part which is a component of the WECF. If a wind turbine manufacturer’s fall zone requirements are greater than 1.5 times the tip height, then the

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manufacturer's fall zone specification shall be the minimum setback requirement to satisfy the clear area standard. The turbine manufacturers' safety manual and/or technical specifications addressing fall zone for the proposed turbine model are one of the items required to deem an application complete.

MPS E1.8 – NOISE

## Wind Turbine Sound

### Conducting A CCC Noise Assessment

### Operational Controls

### Mitigation

MPS E1.9 – SHADOW FLICKER

### Conducting a shadow flicker study

### Magnitude of flicker effects

### Operational controls

### Mitigation

MPS E1.10 – DECOMMISSIONING

### Abandonment

### Bonding (or another form of surety?)

MPS E1.11 – MUNICIPAL WECF WAIVER

### Eligibility

HPCC 2.3 – AVOID ADVERSE VISUAL IMPACTS

### Visual Impact Assessment

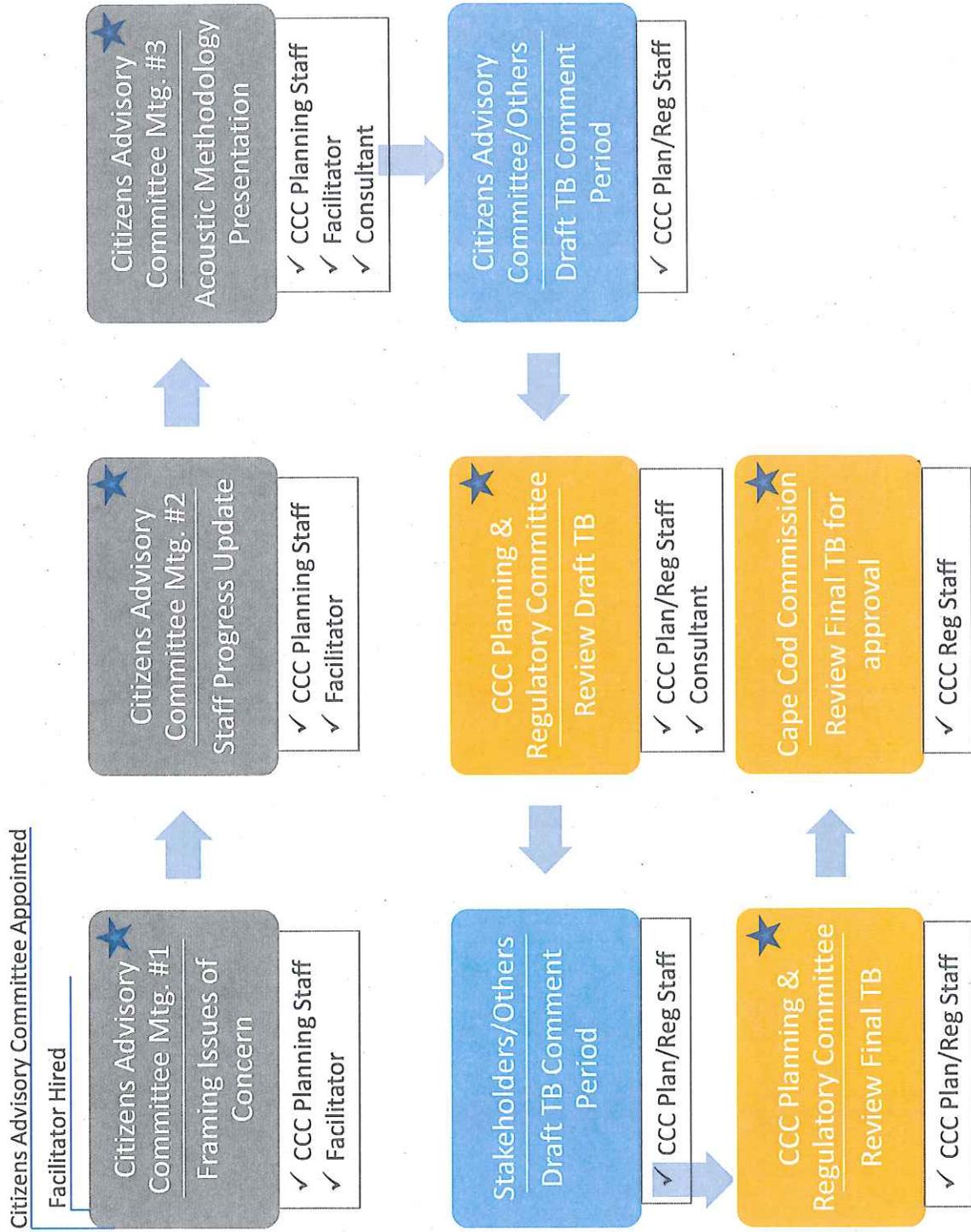


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APPENDIX: DEFINITIONS, GOALS AND STANDARDS

# DRAFT - Land Based WECF Technical Bulletin Development Process



★ = public meeting