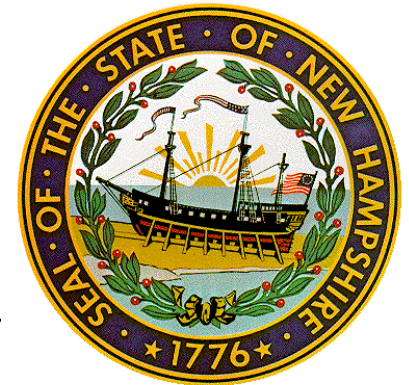


## Informing the Development of Energy Siting Criteria in New Hampshire

*First Public Stakeholder Meeting*



April 11, 2014





**1. » Introduction**



**2. » Rulemaking Process**



**3. » Developing Siting Criteria**



**4. » Siting Criteria Break Out Groups**



**5. » Report Backs**



**6. » Calendar of Deliverables and Next Steps**



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## Agenda

9:00 – 9:15 Introduction

9:15 – 9:30 Rulemaking Process

9:30 – 10:00 Developing Siting Criteria

10:00 – 11:20 Siting Criteria Break Out Groups

- Health & Safety
- Visual & Aesthetics

11:20 – 11:30 Break

11:30 – 12:10 Report Backs

12:10 – 12:30 Calendar of Deliverables and Next Steps

12:30pm Wrap-up

**Today, we will explore developing consensus on key issues to address in the Site Evaluation Committee rules.**

### Background

- Senate Bill 99 requires the Site Evaluation Committee (SEC) to adopt criteria for the siting of Energy Facilities by January 1, 2015.
- Legislation also requires the Office of Energy and Planning (OEP) to facilitate a public stakeholder process to develop recommended siting criteria.
  - Phase I: SB 99 Raab report issued in December 2013

### Today's Meeting Objectives

- Develop an understanding about the rule making process
- Explore and build agreement on some key siting criteria
- Identify Working Group teams who can work together after this meeting to help meet a June 6, 2014 deadline

**Throughout the morning, please follow the basic guidelines below.**



### *Do's*

- Speak one at a time.
- Be courteous and listen to the material presented.
- Be concise – share the 'air-time'.
- Keep the focus here – cell phones on silent; limit sidebar conversations.

### *Don'ts*

- Hold back – this is the place to bring it up.
- Focus too heavily on specific projects – siting guidelines must be broadly applicable.

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**The rulemaking process has many steps, and SEC's timeline will be very aggressive to meet the January 1, 2015 deadline.**

Pre-rulemaking process to seek stakeholder input: April - June



SEC develops initial proposal and fiscal impact statement; public input process



JLCAR process – see flow chart (OLS manual)

<http://www.gencourt.state.nh.us/rules/manual/amendedmanualeffective2-20-12.pdf>



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**Below are categories for possible siting criteria that mainly apply to wind, but could apply to other facilities.**

Setbacks

Noise

Shadow  
Flicker

Ice Throw  
Mitigation

Visual  
Appearance

Lighting

*Are there others to add? Is there agreement on possible approaches to criteria for any of the above categories?*

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**We will break into working groups focused on issues related to health & safety and visual/aesthetics. Some topics will overlap both.**

## Health & Safety

- Noise
- Setbacks
- Shadow Flicker
- Ice Throw

## Visual/Aesthetics

- Setbacks
- Visual Appearance
- Lighting

*Are there other key issues that fall outside the scope of either category?*

**In the breakout groups, identify key issues, areas of potential agreement, and areas where there are wide gaps in positions.**

What are the key issues?

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graph TD; A[What are the key issues?] --> B[On what issues do various stakeholder groups agree?]; B --> C[On what topics are there wide gaps in stakeholders positions?];
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On what issues do various stakeholder groups agree?

On what topics are there wide gaps in stakeholders positions?

*The 5 – 7 minute report backs should focus on the above topics for each category of criteria*

**The breakout group for Health & Safety will focus on noise, setback requirements, shadow flicker, and ice throw mitigation.**

## Health & Safety

- Noise
- Setbacks
- Shadow Flicker
- Ice Throw

## Visual/Aesthetics

- Setbacks
- Visual Appearance
- Lighting

*Are there other key issues that fall outside the scope of either category?*

**Below are examples of noise limitations to provide a starting point and to seed the discussion.**

## Noise

The wind energy system shall be operated so that the noise attributable to the system does not exceed the following limits, in each case as measured at the outside wall of any residence or other occupied building through an independent monitoring procedure.

Limitations on noise may be either absolute or relative as illustrated in the example below.

1. Example using absolute limits:
  - 50 dBA during the hours beginning at 6:00 am and ending at 10 pm daily; and
  - 45 dBA during the hours beginning at 10:00 pm and ending at 6:00 am daily
2. Example using relative limits
  - 10 dBA above ambient conditions
  - 10% above ambient conditions

**Below are examples of setback requirements to provide a starting point and to seed the discussion.**

### Setbacks for Wind

1. Setback distance for each of the proposed WT installations from the nearest property line shall be the greater of:
  - a. 1.1 times the wind turbine height measured from the ground level to the tip of the blade in a vertical position.
  - b. The wind turbine manufacturer's recommended distance for setback from property lines, if any
2. The setback distance for each of the proposed WT installations from the nearest public road or critical utility, energy or transportation infrastructure shall be the greater of:
  - a. 1.5 times the WT height measured from ground level to the top of the blade in a vertical position; and
  - b. The WT manufacturer's recommended distance for setback from public roads or critical infrastructure.
3. The setback distance for each of the proposed WT installations from the nearest residence or other occupied building shall be the greater of:
  - a. 3.0 times the WT height measured from ground level to the top of the blade in a vertical position; and
  - b. The WT manufacturer's recommended distance from setback from occupied buildings, if any.



**Below are examples of shadow flicker requirements to provide a starting point and to seed the discussion.**

### Shadow Flicker

Shadow flicker shall not occur more than 30 consecutive minutes during any day nor more than 30 total cumulative annual hours at any off-site occupied building location from each of the proposed WT locations at the proposed site of the system.

“Shadow flicker” means the intermittent shadows created by the WT blades passing through the light of the sun.

DRAFT CRITERIA  
FOR DISCUSSION

**Below are examples of ice throw mitigation requirements to provide a starting point and to seed the discussion.**

### Ice Throw Mitigation

The owner and operator of the wind energy system shall be required to:

1. Install and implement special WT features that prevent ice accretion or operation during periods of ice accretion;
2. Curtail operation of WTs during periods of severe ice accretion;
3. Slow turbine blade speeds during periods of significant ice accretion;
4. Visually inspect WT blades prior to re-connecting operations following curtailment due to ice accretion;
5. Prominently display warning signs alerting anyone in the area of the risk of ice shedding from operation of the WT blades; and
6. Train operational staff about the conditions likely to result in ice accretion on WTs, the risk of ice falling from the rotors, and the relevant areas of risk.

**The breakout group for visual and aesthetic criteria will focus on setback requirements, visual appearance, and lighting requirements.**

## Health & Safety

- Noise
- Setbacks
- Shadow Flicker
- Ice Throw

## Visual/Aesthetics

- Setbacks
- Visual Appearance
- Lighting

*Are there other key issues that fall outside the scope of either category?*

**Below are examples of setback requirements to provide a starting point and to seed the discussion.**

### Setbacks for Wind

1. Setback distance for each of the proposed WT installations from the nearest property line shall be the greater of:
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3. The setback distance for each of the proposed WT installations from the nearest residence or other occupied building shall be the greater of:
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  - b. The WT manufacturer's recommended distance from setback from occupied buildings, if any.

**Below are examples of criteria for visual appearance to provide a starting point and to seed the discussion.**

### Visual Appearance

Each WT installation included in the proposed wind energy system shall:

1. Be painted white or otherwise display a neutral or unobtrusive finish;
2. Not display advertising material or signage other than warnings, equipment information, or indicia of ownership; and
3. Not attach any flag, decorative sign, streamers, pennants, ribbons, spinners, fluttering or revolving devices.

DRAFT CRITERIA  
FOR DISCUSSION

**Below are examples of criteria for lighting to provide a starting point and to seed the discussion.**

## Lighting

The Wind energy system shall be installed and operated such that:

1. The minimum nighttime lighting necessary to comply with Federal Aviation Administration (FAA) requirements is utilized;
2. An FAA-approved on-demand audio visual warning system for obstruction marking (such as the Vestas Obstacle Collision Avoidance System), is utilized unless technically or financially infeasible;
3. Lighting of areas of the wind energy system other than turbine installations such as appurtenant structures, shall be limited to that required for safety and operational purposes and shall be reasonably shielded from abutting properties; and
4. Except as required by the FAA, all lighting of the wind energy system shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

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**In your report backs, please limit your time to 5 – 7 minutes and focus on the key take-aways.**

What are the key issues?

On what issues do various stakeholder groups agree?

On what topics are there wide gaps in stakeholders positions?

*The 5 – 7 minute report backs should focus on the above questions for each category of criteria, and any other categories raised in the breakout sessions.*



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## Our next in-person meeting is scheduled for April 21<sup>st</sup>.

### Next Steps

- Conference calls in breakout teams
- In person meeting on April 21<sup>st</sup>, starting at 8:30
- Regular conferences calls and material drafts for review

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