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Subject: Wind Regulations

Ms. Bachman:

Renewable Energy New England, Inc., or RENEW, hereby submits these comments in response to the Connecticut Siting Council's ("Council") Notice of Intent to Adopt Regulations related to siting of wind energy projects ("Wind Regulations"). RENEW appreciates the Council's efforts in developing these regulations.

RENEW is a non-profit association uniting the renewable energy industry and environmental interest groups whose mission involves coordinating the ideas and resources of its members with the goal of increasing environmentally sustainable energy generation in New England from the region's abundant renewable energy resources.¹ Several RENEW members are considering developing wind generation facilities in Connecticut.

The following comments reflect the experience of RENEW members in developing wind facilities throughout the country.

¹ RENEW's membership is comprised of Anbaric Transmission, American Wind Energy Association, Conservation Law Foundation, First Wind Energy, LLC, EDP Renewables North America LLC, Iberdrola Renewables, Inc., Union of Concerned Scientists and Vestas American Wind Technology, Inc. The comments expressed herein represent the views of RENEW and not necessarily those of any particular member of RENEW.

I. Visual Impact

a. Mitigation Measures - CONN. AGENCIES REGS. §16-50j-94(b)(1)(E)

The Wind Regulations require the developer to identify whether a particular paint color could mitigate the visual impact of the turbines. The color and marking of a wind turbine or any structure over 200 feet above ground level (“AGL”) is regulated by the Federal Aviation Administration’s Advisory Circular 70/7460-1K, *Obstruction Marking and Lighting*, (“FAA Circular”) for the purpose of aviation safety.

The FAA color or marking recommendations ensure the greatest visibility of these structures for airmen to see and avoid them. Paragraphs 131(f) and 133 of the FAA Circular state bright white or light off-white paint is the most effective color to warn pilots of wind turbines during daytime, and if used, eliminates the need for daytime lighting of the wind turbines. If the wind turbines in a project were to have a paint color scheme other than the recommended white or off-white, aviation safety may be diminished and the required supplemental lighting will create its own daytime visual impact.

RENEW recommends the visual impact evaluation report not require identification of paint color mitigation measures for structures regulated by the FAA.

b. View Shed Analyses and Photographic Simulations - CONN. AGENCIES REGS. §16-50j-94(b)(C) and (D)

The Wind Regulations require an analyses be conducted on the view shed containing the proposed wind facility and include photographic simulations. The Wind Regulations do not provide any guidance on the number of viewpoints to be studied or the criteria for selecting the viewpoints used for studying. In cases involving projects with many viewpoints, it is not feasible for a developer to conduct a view-shed analysis from every viewpoint. The lack of detailed criteria in the Wind Regulations does not inform a developer as to what the Council will deem a complete report.

Representative viewpoints are used in the industry and cover areas of the highest scenic value and other sensitive areas. For most locations a developer cannot access the viewpoint to conduct the analysis. As a report by the Clean Energy States Alliance, *A Visual Impact Assessment Process for Wind Energy Projects*, explains, “Private property is generally not accessible to those conducting inventories of views and resources. Except for private property owners that have established “party” rights in formal regulatory

proceedings, professional visual impact assessments generally only address potential views from public roadways near residential areas.”

Setting an appropriate limit on the quantity of viewpoints will keep the visual impact requirements from becoming too burdensome on developers while ensuring the Council will receive sufficient information to evaluate the visual impact. Section 5.5.5. of the Massachusetts Model Bylaw, prepared by the Massachusetts Department of Energy Resources, for example, allows up to four viewpoints. Four to eight simulations should provide sufficient information to assess visual impact.

RENEW recommends the Wind Regulations provide more guidance to developers as to the type of viewpoints constituting higher sensitivity. To ensure sensitive receptors are covered in the view-shed analysis, RENEW suggests more specificity in the Wind Regulations on the criteria for sensitive receptors (i.e. historic resources, scenic roads, trails, conservation areas) that demonstrate the potential for year-round visibility from the turbines. The developer should also consult with the State Historic Preservation Office prior to selecting representative receptors rather than merely submitting the evaluation report to it upon its completion.

II. Noise Evaluation - CONN. AGENCIES REGS. §16-50j-94(c) and §16-50j-95(b)

Regarding noise evaluation and noise requirements, the Wind Regulations dictate the measurements, which are used to establish compliance with the Department of Energy and Environmental Protection noise regulations, be recorded at property lines. Particularly in rural areas, the property line may be far from an inhabited dwelling on the abutting property. Sound measurements at the property line will not provide the Council with information on the noise levels at the dwelling so it can evaluate the effect of wind turbine noise for its inhabitants. For this reason RENEW recommends the recordings be made from inhabited dwellings not property lines.

III. Blade Drop and Blade Throw - CONN. AGENCIES REGS. §16-50j-94(e)

References to site specific evaluation procedures to address blade throw and blade drop should be removed. In the alternative, RENEW strongly recommends that the Council adhere to the turbine manufacturer’s general safety recommendations.

IV. Shadow Flicker - CONN. AGENCIES REGS. §16-50j-94(f)

RENEW recommends the measuring requirements on shadow flicker be changed from a radius around the turbine of one mile to one-half mile. The effects of shadow flicker diminish rapidly with distance and should be minimal beyond one-half mile.

V. Natural Resources - CONN. AGENCIES REGS. §16-50j-94(g)

As pre-construction determination of bird and bat fatalities is difficult to determine RENEW recommends removal of this requirement. In the alternative the Council should follow the standards and guidelines of the United States Fish and Wildlife Service.

Thank you for the opportunity to comment on the Wind Regulations.

Sincerely,



Francis Pullaro
Executive Director