memo

To: Fred Todd
From: James F. Palmer
Date: March 12, 2012
Re: Champlain's Response to 15th Procedural Order

I have reviewed the "Applicant's Response to 15th Procedural Order" dated March 9, 2012 ("Response"). The following are my comments.

Champlain's Uncertainty about the WEA Evaluation Criteria
The first page of the Response identifies two reasons for Champlain's request to its application:

1. "there had been an evolution in how the Commission was interpreting and applying the visual impact standard - - an inherently subjective standard" and
2. "there had been an…increasing reliance on the use of intercept surveys, which had occurred over the course of the proceeding."

On the second page, the Response asserts that one obstacle to reconfiguring the Bowers project is the "significant uncertainty on what is required by the Commission to meet the visual impact standard of the Wind Energy Act." This is further explained on the third page of the response:

> "Champlain believes there is continued and significant uncertainty on how LURC and its visual consultant will interpret and apply the visual impact standard. Of most concern to this Project is the role of user intercept surveys and how to assess cumulative visual impacts."

The WEA became effective on April 2008. It includes a number of evaluation criteria that require consideration of how users of SSRSNSs perceive the scenic impact of a grid-scale wind project proposed in the expedited area, and how that perception will affect the continued use and enjoyment of the SRSNSs. The criteria also include the expectations of the typical viewer and the extent, nature and duration of potentially affected public uses of SRSNSs. The WEA is silent on how to develop the information necessary to apply the evaluation criteria. While neither the LURC nor BEP Commissioners have provided additional detailed interpretation, I believe that I have included an appendix to all of my reviews that explains my understanding of the WEA.[1]

As the scenic expert for both LURC and DEP, I have consistently supported surveying actual users at SRSNSs as the most appropriate way to gather relevant and reliable data. However, I remain open to alternatives that can be demonstrated to provide useful information. Champlain Wind submitted the results of a telephone survey as part of its application for the Bowers Wind Project. The survey did not use visualizations from SRSNSs to assist respondents in understanding the potential scenic impacts. It was not even certain that the respondents were actual users of SRSNSs within the area of potential impact. In contrast, a number of Registered

[1] I do not believe that the text of "Appendix 1: Maine's Wind Energy Act and the Evaluation of Scenic Impacts" has been changed since it was developed before conducting my review of the Kibby Expansion Project.

Maine Guides testified about their experience being on SRSNS lakes within 8 miles of the proposed turbines, and how they thought their clients would respond to viewing the project. The way I understand the Commissioners' action is that in the absence of alternative relevant and reliable information, they felt obligated to follow the testimony of the Registered Maine Guides. It was Champlain Wind's decision to conduct the telephone survey and it is disingenuous to blame LURC for its own failure to provide useful information.

A Suggested Framework and Thresholds

On the third page of the Response, there is reference to paper I have prepared:

> Dr. Palmer, the Commission's visual consultant, recently submitted a paper summarizing many of the intercept surveys that have been conducted for wind power projects in Maine and articulated a framework for evaluating the statistical significance of such surveys. He also sought to establish thresholds for determining compliance with applicable regulatory criteria."

This paper will be presented at the 2012 annual meeting of the National Association of Environmental Professionals. It was not "submitted" to LURC or DEP as part of my contractual relationship to review wind project visual impact assessments. However, it was shared with LURC and DEP staff and others for review and comment. The Response accurately characterizes the paper as an attempt for articulating a framework for evaluating the user surveys and suggesting (I am not in a position to "establish") interpretive thresholds. The Response asserts:

> "The statistical analyses methods identified by Dr. Palmer in his most recent work are complex and the steps used to analyze the data and derive impact metrics are not transparent."

I do not believe that the complexity of the framework or the logic of the thresholds proposed are any more complex than the evaluation of other resources in the environmental impact assessment of grid-scale wind energy projects. For instance, is Champlain Wind claiming that it is more complex than the evaluating noise impacts, the impacts to bats, birds and other wildlife, or hydrologic and geologic impacts? In general, the collection of data and their analyses to evaluate all these impacts is beyond the capability of citizens who have not had special training or professional experience in these areas. If scenic impacts are sufficiently important to consider, then best scientific procedures should be brought to bear in their evaluation. As to the claim that the procedures used are not transparent, the paper lists the formulae used and provides all of the data necessary to complete the calculations. In addition, the paper is well documented and any individual could obtain these citations through their local library using the inter-library loan process. Someone who is not a statistician or scientist using current quantitative methods may be unfamiliar with the use of effect size. However, its use is now considered best practice across many fields of science. The paper cites its recommended use by the American Psychological Association, but it could just as easily have cited recommendations from biology,[2] marketing research,[3] or many other fields.

[2] Nakagawa, Shinichi, and Innes C. Cuthill. 2007. Effect size, confidence interval and statistical significance: a practical guide for biologists. *Biological Review* 82: 591-605.

[3] Sawyer, Alan, and Dwayne Ball. 1981. Statistical power and effect size in marketing research. *Journal of Marketing Research* 43: 275-290.