

New England States Committee on Electricity

To: Mike Henderson, ISO-NE
From: New England States Committee on Electricity
Re: Questions Regarding NEWIS Report
Date: January 12, 2011

Pursuant to your request for questions on the New England Wind Integration Study (NEWIS or Report) to be submitted by January 12, 2011 for discussion at the February 2, 2011 Planning Advisory Committee meeting, NESCOE provides the following questions. If certain questions are not amenable to discussion by February 2, 2011, NESCOE would appreciate the information at a later time. Thank you.

1. Figure 0-3. The Report suggests that with high penetration of wind energy, regulation may have to be as high as 430 MW. Please provide an estimate of the cost of this level of added regulation.
2. Executive Summary, Page 20. The Report states that alternative methods of analysis suggest that lower levels of regulation may be required than shown in this Report. Please identify what those lower levels are and provide the alternative analysis.
3. Executive Summary, Page 20. It is stated that the analysis assumed no attrition of dispatchable resources. What would the impact be if dispatchable resources were assumed to be lowered by the amount of the added capacity value of new wind resources?
4. Executive Summary, Page 23. The Executive Summary discounts the value of cost information presented in the report. Please provide ISO-NE's sense of the analysis (time required, cost) that would be necessary to produce more reliable cost information.
5. Figure 0-4 and Executive Summary, Page 28. Figure 0-4 shows the differential between on peak and off peak locational marginal prices (LMP) to decrease with high penetrations of wind energy, and hence suggests little opportunity for increased use of pumped storage hydro. However, at page 28 it is stated that there would be an increased frequency of negative LPM. Please identify when these negative LMP periods are and give a sense of their significance.
6. Executive Summary Page 35 (Report at 37). It is suggested that a deeper analysis of demand response could help define directions and policies to pursue. Does ISO-NE believe this analysis should include consideration of use of the Smart Grid to help satisfy regulation and reserve requirements?
7. Would the addition of significant new load, such as electric heat pump space heating, ease operating concerns attendant with significant wind penetration? What level of analysis would be required to quantify this?
8. Executive Summary, Page 33, 34. See also Page 25. The Report notes that some NEWIS scenarios use transmission overlays that were "one size smaller" than those used for the Governors' Study scenarios, and still no or only minimal congestion was observed. It then states that a future study could start by analyzing wind penetration

scenarios using a “copper sheet” approach to evaluate magnitude and duration of congestion due to existing transmission limitations. This would guide the design of specific transmission additions to minimize congestion with increased levels of wind generation. Could ISO-NE discuss its sense of the magnitude of work associated with such a study, including cost estimates for “reduced” transmission overlays?