

**STATE OF VERMONT**  
**PUBLIC SERVICE BOARD**

Docket No. 7250

Amended Petition of Deerfield Wind, LLC, for a )  
certificate of public good authorizing it to construct and )  
operate a 17-turbine, 34-35.7 MW wind generation )  
facility, and associated transmission and interconnection )  
facilities, on approximately 80 acres in the Green )  
Mountain National Forest, located in Searsburg and )  
Readsboro, Vermont, with 7 turbines to be placed on the )  
east side of Route 8 on the same ridgeline as the existing )  
GMP Searsburg wind facility (Eastern Project Area), and )  
10 turbines along the ridgeline to the west of Route 8 in )  
the northwesterly orientation (Western Project Area) )

**PREFILED SECOND SUPPLEMENTAL DIRECT TESTIMONY OF  
JOHN ZIMMERMAN**

**ON BEHALF OF DEERFIELD WIND, LLC**

December 4, 2007

Summary:

Mr. Zimmerman's second supplemental direct testimony describes several updates to the Project.

1 **Q. Please state your name.**

2 Response. John L. Zimmerman

3

4 **Q. Have you previously submitted testimony in this matter?**

5 Response. Yes, my direct testimony dated January 8, 2007 and my supplemental  
6 direct testimony dated July 30, 2007.

7

8 **Q. What is the purpose of your second supplemental direct testimony?**

9 Response. My second supplemental direct testimony describes several updates to the  
10 Project.

11

12 **Q. Please describe the change Deerfield Wind has made regarding the type of**  
13 **wind turbine that will be used.**

14 Response. Deerfield Wind is now intending to use the Gamesa G80 2.0 MW  
15 turbine, rather than the G87 model, to better match the turbine specifications with  
16 the wind regime at the project site. The G80 will utilize the same tower as the G87,  
17 which is 78 meters (256 feet) in height. The rotor diameter of the G80 is 80 meters  
18 (262 feet) rather than 87 meters (285 feet) for the G87. The overall maximum height  
19 (tip of blade in the vertical position) is 120 meters (393 feet).<sup>1</sup> The Gamesa G80 is  
20 described in new ***Exhibit DFLD-JZ-27***.

21 The Suzlon 2.1 MW turbine is no longer being considered for this Project.

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<sup>1</sup> This assumes a 78 meter tower height with an 80 meter hub height.

1 **Q. What effect, if any, will this change have on the Project and its potential**  
2 **impacts?**

3 Response. The change to a smaller turbine blade will not result in any material  
4 changes in the Project's physical design or footprint, and will not create new  
5 significant impacts under the section 248 criteria. The change to the smaller rotor  
6 will result in the following:

7 Power production. The smaller rotor size will result in an approximately  
8 10% reduction in annual net energy production, to 99,800 MWh (+/- 10%). This  
9 equates to a net capacity factor of 33.5%

10 Visual. As the Gamesa G80 has shorter blades and thus a smaller rotor  
11 diameter (by seven meters), the visual impacts of the turbines will be diminished,  
12 albeit by a small amount. Deerfield Wind's aesthetics witnesses (Vissering and  
13 Buscher) can further address this issue, if necessary, through discovery and/or later  
14 rounds of prefiled testimony.

15 Sound. The Gamesa G80 will result in lower overall sound levels at the  
16 receptors, as described in Ken Kaliski's second supplemental direct testimony.  
17 Sound Modeling Maps have been revised to show the reduction of 2 to 3 dbA in  
18 sound levels (depending upon the location of the receptor). See new **Exhibit**  
19 **DFLD-JZ-28a-b.**

20 Birds and bats. The shorter blades will result in a decrease in overall  
21 maximum height, as noted above, and a decrease in the overall rotor-swept area. To  
22 the extent that these factors could influence bird or bat mortality, those potential  
23 impacts would be lessened. Deerfield Wind's bird/bat witnesses (Pelletier and

1 Erickson) can further address this issue, if necessary, through discovery and/or later  
2 rounds of prefiled testimony.

3

4 **Q. Please describe the change to the location of the substation.**

5 Response. In the site plan that I submitted with my prior supplemental testimony  
6 (Exhibit DFLD-JZ-Rev4), the substation is depicted on the north side of the existing  
7 69kV transmission line, in the Western Project Area. Deerfield Wind is now  
8 proposing to locate the substation to the south of the transmission line. This change  
9 is in response to comments received from an adjacent property owner, Denise Foery.  
10 The new substation location will now be approximately 1200 feet (at its closest  
11 point) from the Foery property line, and approximately 2500 feet (at its closest point)  
12 from the Foerys' home. The new location can accommodate the substation and will  
13 not create new significant impacts under the section 248 criteria. The revised overall  
14 site plan is attached as new **Exhibit DFLD-JZ-29**. The revised preliminary design  
15 sheet prepared by Deerfield Wind's civil engineer, Hill Associates, is also attached  
16 (sheet CS113 of Exhibit DFLD-JK-rev2).

17

18 **Q. Please clarify the size of the Operations and Maintenance Building.**

19 Response. In my original prefiled direct testimony at page 20, I described the O&M  
20 building as being approximately 100 square meters (1076 square feet) in size. That is  
21 incorrect. The building will be approximately 4,000 square feet. Ample room exists  
22 at the previously-identified location to accommodate a building of this size, and it  
23 will not create new significant impacts under the section 248 criteria

1                   The revised preliminary design sheet prepared by Deerfield Wind's civil  
2                   engineer, Hill Associates, is also attached (sheet CS114 of Exhibit DFLD-JK-rev2).

3

4   **Q.   Does this conclude your testimony at this time?**

5                   Response. Yes, it does.