

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 15-turbine, 30 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)
8 turbines along the ridgeline to the west of Route)
8 in the northwesterly orientation (Western Project Area))

Order entered: 7/17/2009

ORDER RE MOTIONS TO ALTER

Introduction

On April 16, 2009, the Vermont Public Service Board ("Board") issued an Order and Certificate of Public Good ("CPG"), with conditions, authorizing the construction of a 30 MW wind generation facility by Deerfield Wind, LLC ("Deerfield")("the Project").

On April 30, 2009, Deerfield, the Vermont Agency of Natural Resources ("ANR"), and the Vermont Natural Resources Council ("VNRC") separately filed motions to alter or amend the Board's April 16 Order and CPG.

Deerfield's motion requests that the Board clarify certain aspects of the April 16 Order, including issues related to noise, public safety, tourism, and wildlife. ANR requests that the Board modify the Order to deny issuance of a CPG to the Project, or, in the alternative, require additional mitigation for the impacts of the Project on bears. ANR further requests that the Board allow ANR to have the authority to review and approve any mitigation measures proposed by Deerfield. Finally, ANR requests that the Board establish bat fatality thresholds that would trigger adaptive management practices. VNRC requests that the Board allow parties to comment

on Deerfield's proposed bear mitigation, and further requests that the Board require off-site mitigation of indirect impacts to bears.

On May 18, 2009, Deerfield, ANR, the Department of Public Service ("Department"), and Mr. Thomas Shea separately filed comments in response to the motions to alter and amend the April 16 Order and CPG.

On June 5, 2009, ANR filed a response to Deerfield's May 18 reply comments.

In this Order, we deny, in part, and grant, in part, those motions.

Issuance of the Certificate of Public Good

ANR contends that the Board should not have issued a certificate of public good for the Project because "the Board found that the Project 'at the present time' does not provide an economic benefit to the State if it could not find that the benefits of the project outweighed its environmental costs or impacts."¹ ANR states that the Board failed to make the required positive findings on the substantive criteria of Section 248(b) in our April 16 Order, and in particular Section 248(b)(4), which requires that the Board find that the project "will result in an economic benefit to the state and its residents."

Deerfield's May 18 comments state that ANR's argument "appears based on a fundamental misunderstanding of the Board's analysis and the standard it applies under Section 248."²

The Board expressly found, as required under Section 248(b)(4), that "[t]he revised Project will result in an economic benefit to the State and its residents."³ This finding was itself supported by 42 additional findings addressing the economic benefits and burdens of the Project. As described on pages 26 through 45 of the April 16 Order, there are sufficient benefits from the Project, such as the creation of jobs and tax revenues, to meet the necessary test under Section 248(b)(4).

1. ANR motion at 4.

2. Deerfield reply comments at 5.

3. Order of 4/16/09 at 26.

ANR's argument appears to stem from a failure to appreciate the distinction between positive findings on the criteria of Section 248(b) and a determination of whether the Project promotes the public good. We utilize the individual criteria of Section 248(b), including criterion (b)(4), to help us make the determination under Section 248(a)(2) as to whether the Project promotes the general good of the state.⁴ As we stated in the April 16 Order:

In this Order we make positive findings under each of the criteria of Section 248 while at the same time recognizing the potential impacts of the Project, not the least of which are the impacts on the natural environment. This includes an affirmative finding that the Project provides economic benefits through employment and tax revenues. But we must also make a determination as to whether the Project promotes the general good of the State under Section 248. Here, we agree with the Department's assertion that if Vermont is going to allow a merchant generation facility to utilize one of the State's valuable resources, its natural environment, then the State should receive comparable value in return in order to promote the public good. To ensure sufficient benefit, this Order conditions our approval of the Project on Deerfield entering into contracts with Vermont utilities.⁵

Thus, in our Order we made precisely, and explicitly, the finding that ANR contends that we did not. We also concluded that, notwithstanding the positive economic benefits the Project would bring to the state, it would not promote the general good in the absence of stably priced power purchases by Vermont utilities.

ANR also argues that the Board erred in issuing a CPG for the Project because there is insufficient evidence and findings regarding necessary bear mitigation. ANR contends that Deerfield failed to sustain its burden of production on the sufficiency and details of the proposed mitigation.

ANR relies entirely on Act 250 precedent for this assertion. ANR ignores the fact that, while the Board must give due consideration to the Act 250 criteria, including the necessary wildlife habitat criterion, as stated in our April 16 Order "our evaluation under the Act 250

4. See, *In re Amended Petition of UPC Vermont Wind, LLC, for a Certificate of Public Good, Pursuant to 30 V.S.A. § 248, et. al.*, 2009 VT 19, ¶ 7.

5. Docket 7250, Order of 4/16/09 at 45.

criteria is not dispositive, as we must, in the end, apply Section 248(b)(5) and determine whether the Project will have an undue adverse effect on the natural environment."⁶

We found that, without sufficient mitigation, the Project would have an undue adverse effect on the natural environment and required Deerfield to file mitigation proposals in the form of habitat conservation and an impact study. The Vermont Supreme Court has reviewed the Board's use of post-certification procedures and has affirmed that such procedures are "an accepted practice of the Board and administrative tribunals generally."⁷

Further, as Deerfield notes in its May 18 filing, ANR's witness stated in prefiled testimony that, if the Board approved the Project, ANR would "recommend that a detailed mitigation plan be developed by the Petitioner. . . ."⁸ In addition, the Board has not made a final determination regarding the adequacy of the mitigation; we have only stated that the Project's impacts could potentially be mitigated. Deerfield must still file mitigation proposals and parties will have the opportunity at that time to review and comment on the proposals.

For these reasons, we deny ANR's request to alter our Order to deny a CPG to the Project.

Sufficiency of Mitigation

In our April 16 Order we required Deerfield to mitigate direct impacts to bear habitat on a four-to-one ratio; for the 36 acres of bear-scarred beech that would be cut, Deerfield is required to conserve, off-site, 144 acres of comparable remote, high-elevation habitat. In addition, the Board required that Deerfield conduct a study to determine the indirect impacts of the Project on bears. Such a study would be multi-year, and would be conducted both prior to construction, and after the Project has been operating. Deerfield is required to file proposals for both the off-site mitigation and the impact study.

ANR argues that the Board's decision in this Docket conflicts with our ruling on the UPC wind generation facility in Docket 7156. ANR contends that: "The mitigation in UPC required

6. Docket 7250, Order of April 16, 2009, at 73.

7. *In re Amended Petition of UPC Vermont Wind, LLC, for a Certificate of Public Good, Pursuant to 30 V.S.A. § 248, et. al.*, 2009 VT 19, ¶ 7; *Petition of Vermont Electric Power Company, Inc.*, 131 Vt. 427, 435 (1973).

8. Deerfield May 18 response, citing Hammond pf. surr. at 19.

the conservation of 2700 acres of bear habitat to compensate for the undue adverse impact of the project."⁹ In addition, ANR and VNRC contend that the Board should require off-site mitigation for the indirect impacts to bear habitat.

We note, first, that it is a largely meaningless exercise to attempt to compare the habitat mitigation requirements from these two different proceedings, involving different projects at locations more than 100 miles apart at opposite ends of the state. Second, in order to address ANR's argument, it is necessary to refer to relevant documents from the UPC case, even though the transcript and exhibits from the UPC case (PSB Docket 7156) are not part of this case.

The conservation by UPC of 2700 acres was a result of a stipulation between ANR and UPC, and ANR now mischaracterizes its own stipulation. The easements referenced by ANR resulted in the conservation of only 250 to 300 acres of what was considered necessary bear habitat by ANR, compared to the direct and indirect impacts from the UPC project on approximately 100 acres of necessary habitat. ANR's witness in that case testified that the mitigation measure was not consistent with ANR's guidelines, because the amount of necessary wildlife habitat conserved was less than typically required under the four-to-one ratio contained in the guidelines.¹⁰

As ANR's witness testified in the UPC case, the conservation easement was not intended to conserve 2700 acres of bear habitat but was an attempt by ANR to provide flexibility in applying its mitigation guidelines. As ANR's witness testified in Docket 7156, in response to a question regarding the sufficiency of the mitigation:

the guidelines well are just that, they are guidelines to help bring a measure of consistency to the Department of Fish and Wildlife's review of assessment of impacts to this sort of habitat. . . . In some ways crafting guidelines for the assessment of impacts to and mitigation for impacts to something of an ecological nature, it's like cramming a square peg through a round hole. You've got to, you know, be open minded and be willing to make adjustments and try to make things work as best you can and represent the interests of the state and the conservation of resources. That – that is our opinion as to what we've done here.¹¹

9. ANR motion at 11.

10. Docket 7156, tr. 1/31/07 at 186 -188 (Austin).

11. Docket 7156, tr. 1/31/07 at 188-189 (Austin).

Our decision in this Docket is not inconsistent with our decision in the UPC case. In both cases we have attempted to "be open minded . . . and represent the interests of the state and the conservation of resources" by balancing the benefits of renewable generation with the impacts of the project. In the UPC case, ANR entered into a stipulation regarding the amount of total land that should be conserved, and in the interest of flexibility it did not require the conservation of bear habitat in a four-to-one ratio as generally recommended by ANR guidelines.

Our April 16 Order requires off-site mitigation for the direct impacts to bear habitat, as the direct impacts are known and measurable. We have set a high standard for what constitutes acceptable off-site mitigation; Deerfield must conserve land that is "comparable to the remote, high elevation area of concentrated beech stands impacted by the Project."¹²

With respect to the indirect impacts, as we noted in the Order, there is significant uncertainty regarding the indirect impacts that the Project may have on bears.¹³ Although ANR claims that the turbines will displace bears from one-quarter to one-half mile from the Project, the record evidence does not support such a finding. Evidence was presented during hearings that the nature of the Project, and in particular the infrequent human presence at the site, could result in significantly less displacement of bears than that experienced at developments such as ski resorts. In addition, to the extent that any indirect impacts of the Project required mitigation, we relied on the testimony of Dr. William Kilpatrick, a wildlife expert, who stated that his first priority when it comes to mitigation would be to conduct valid pre- and post-construction studies to obtain concrete information about the impact of wind turbines on bears.¹⁴

Any impact study approved by the Board will need to be rigorous and be designed to provide valuable information regarding the indirect impacts of wind turbines on bears.

For these reasons, the mitigation measures required by our April 16 Order are fully supported by the evidence, and are sufficient to prevent an undue adverse impact to bears.

12. Certificate of Public Good, 4/16/09, at Condition 11.

13. *See* findings 267 and 271.

14. Tr. 12/10/08 at 214; *see* Order of 4/16/09 at finding 277.

Parties will have the opportunity to review and comment on Deerfield's mitigation proposals, and the Board will retain oversight to ensure that the measures are fully implemented.

Parties' Involvement in Mitigation Requirements

ANR contends that, as the state entity charged with overseeing wildlife, it should have a role in reviewing the mitigation plans to be filed by Deerfield. In particular, ANR requests that the Board modify its Order to require ANR review and approval of the habitat-conservation and indirect-impact-study proposals. VNRC also requests that the Board require Deerfield to work with VNRC and ANR in developing a proposal for off-site black bear mitigation and allow interested parties to comment on the mitigation proposal that Deerfield files with the Board.

Parties familiar with Board practice will recognize that the Board allows parties to comment on post-certification filings such as the ones at issue here. We will continue this practice for this case. Parties with standing on wildlife issues will have the opportunity to comment on Deerfield's proposed mitigation plan, both the habitat mitigation as well as the study of indirect impacts. We require Deerfield to work with interested parties in developing these proposals, and note that Deerfield has stated that it is willing to work with ANR and VNRC in developing these proposals.

With respect to ANR's request that it be given the authority to approve the mitigation proposals, Section 248 provides the Board with the responsibility to determine whether generation and transmission projects promote the public good of the state and should be approved. Section 248(a)(4)(E) specifically provides the following role for ANR in our review of projects:

The agency of natural resources shall appear as a party in any proceedings held under this subsection, shall provide evidence and recommendations concerning any findings to be made under subdivision (b)(5) of this section, and may provide evidence and recommendations concerning any other matters to be determined by the board in such a proceeding.

In requesting that the Board require Deerfield to obtain approval for any mitigation proposals from ANR, ANR is asking that we delegate our statutorily-mandated role to determine whether this Project, including the fulfillment of conditions imposed by the Board, promotes the general good of the state. Given the Board's responsibility under Section 248, we do not have the

authority to delegate our responsibility to another entity, as ANR proposes. Section 248(a)(4)(E) specifies that ANR is to provide evidence and recommendations, it does not provide ANR with authority to approve or deny conditions established by the Board.

We thus deny ANR's request that it be given the authority to approve the habitat conservation and indirect-impact-study proposals. However, we expect ANR will avail itself of the ability to comment on the proposals.

Timing of Off-site Bear Mitigation Plan

VNRC requests that the Board amend Condition 11 to require Board approval of the mitigation proposal before construction activities begin in bear habitat.

We believe that the intent of the condition was clear, and there is no dispute among the parties regarding the meaning of this condition. However, given the high threshold that we have set in requiring mitigation, and the possibility that Deerfield might not meet this threshold, we make this intention clear and modify Condition 11 as follows:

Deerfield shall file a proposal, for approval by the Board, for the land it proposes to conserve as a mitigation measure for the impact of the Project on bears. The proposal shall conserve at least 144 acres of land that is comparable to the remote, high elevation area of concentrated beech stands impacted by the Project.

Deerfield may not commence site preparation or construction until the Board has approved the mitigation proposal, unless otherwise authorized by the Board.

For the sake of consistency, we also modify the first sentence of Condition 5 to parallel the language of Condition 11, as follows:

Prior to commencement of site preparation or construction, unless otherwise authorized by the Board, Deerfield Wind shall file any such contracts entered into with Vermont utilities for Board review to determine if the contracts contain appropriate terms and conditions, including price stability and prices favorable to market purchases, to promote the general good of the State of Vermont.

These modifications will ensure that Deerfield may not undertake either site preparation or construction until we are satisfied that the two most significant concerns set out in the Order are addressed.

Bat Fatality Thresholds

ANR requests that the Board modify the April 16 Order to implement bat mortality thresholds. ANR contends that the condition concerning bat mortality monitoring and development of an adaptive management plan is insufficient protection as there is no threshold for determining at what point operation of the Project should be curtailed to minimize impacts on bats. ANR states: "The Bat Monitoring Conditions do not provide certainty or predictability on bat fatality thresholds or otherwise provide the necessary protection to ensure that the project will not result in an undue adverse impact to bats."

Our April 16 Order specifically addresses the establishment of bat mortality thresholds and ANR's proposed threshold levels because there is insufficient information. ANR's witness testified that the mortality thresholds ANR proposed were based on regional bat populations and assumptions regarding how many wind generation facilities would be built in the northeast, and consequently how many bat fatalities would occur due to wind turbines.¹⁵ Given the uncertainties contained in these assumptions, we determined that there was not sufficient basis to adopt ANR's proposed thresholds. Further, the testimony from ANR and Deerfield indicates that the science regarding bat mortality due to wind turbines continues to evolve, but there is growing consensus that operational adjustments during certain periods can significantly reduce mortality levels.¹⁶ Given these factors, we found that the best course of action was to require Deerfield to work with ANR to determine an appropriate adaptive management regime that would minimize bat mortalities.

It is also important to note that the April 16 Order creates significant operational uncertainty for Deerfield precisely because we have not established threshold mortality levels. As the Order clearly states, the Board:

retains the authority to require operational adjustments at any time. If mortality events during the early portion of the mortality studies indicate that such

15. Tr. 12/2/08 at 278-280 (Darling).

16. See Pelletier pf. at 19; Darling pf. at 23-24.

adjustments should be made to reduce bat fatalities, any party, or the Board on its own motion, may propose such limits.¹⁷

At this time, Deerfield does not have any certainty regarding the number of hours that operation may be shut down to avoid bat mortality; the Board retains the authority to determine this number. This provides a substantial incentive for Deerfield to work with ANR to establish operating protocols that minimize mortality events.

For these reasons, we do not alter our Order on this issue.

Construction during bird breeding season

Deerfield argues that Condition 14 of the CPG, regarding construction during bird breeding season, is too restrictive and should be modified to restrict only certain construction activities. Deerfield contends that Condition 14, and the findings associated with the condition, should specify that only bulldozing, tree cutting, and blasting in areas proximate to breeding bird habitat should be restricted during bird breeding season.

Condition 14 states:

Deerfield shall not undertake construction activities during May and June to protect breeding birds. If Deerfield anticipates that construction will occur over the course of two seasons, Deerfield may propose that construction be allowed during May and June, but shall demonstrate that such permission will lessen the impact on breeding birds.

Deerfield cites to the testimony of its bird expert, who stated that the main construction-related impacts to breeding birds would be from bulldozing, blasting, and cutting trees.¹⁸

ANR, in its May 18 response, states that it believes Deerfield's proposed changes are acceptable.

Deerfield has provided a sufficient basis for us to alter Condition 14, and the associated finding, as follows:

Condition 14. Deerfield shall not undertake ~~construction activities~~ bulldozing, tree cutting, and blasting in areas proximate to breeding bird habitat during May and June to protect breeding birds. If Deerfield anticipates that construction will

17. Docket 7250, Order of 4/14/08 at 83.

18. Tr. 12/2/08 at 252-523 (Kerlinger).

occur over the course of two seasons, Deerfield may propose that construction be allowed during May and June, but shall demonstrate that such permission will lessen the impact on breeding birds.

Finding 288. To reduce impacts on breeding birds in the Project area, ~~construction-bulldozing, tree cutting, and blasting in areas proximate to breeding bird habitat~~ should not be allowed during the primary breeding season in May and June. In addition, areas surrounding turbines, meteorological towers, roads, and other infrastructure should be allowed to naturally reforest once construction is complete. Tr. 12/2/08 at 250–253 (Kerlinger); Kerlinger pf. at 19.

Television Interference

Deerfield notes that the Order adopts the conditions regarding television interference jointly proposed by the Department and Deerfield, but these conditions are not included in the CPG. Deerfield requests that the Board include the adopted conditions in the CPG.

The failure to include the television interference conditions was an oversight that we correct today. Those conditions are included in the Amended CPG accompanying this Order.

Public Health and Safety

Deerfield states that the April 16 Order neglects to address the issues of icing on turbine blades and shadow flicker.¹⁹ Deerfield contends that, because parties raised these issues, the Board should address icing and shadow flicker in the Order.

Deerfield proposes a revision to finding 125 and two new findings, as follows:

125. The Project will not have an undue adverse impact on public health and safety. This finding is supported by findings 126 through 129B. Zimmerman pf. at 53-55; Zimmerman reb. at 4-6.

129A. There is a low potential for the occurrence of shadow flicker in the areas surrounding the Project, based upon modeling results. With vegetation taken into account, the potential is even further reduced or eliminated. Exh. DFLD-JZ-18 at 3; exh. DFLD-JZ-31a-b; Zimmerman reb. at 4.

129B. Ice that may form on the wind turbines will not pose undue risks to on-site workers or the general public. Experience at other wind projects - including Iberdrola's Casselman project, the Searsburg facility, and the Mt. Equinox facility

19. Shadow flicker is defined as "the occurrence of periodic changes in light intensity due to the shadow of a wind turbine blade passing over a point of interest." Exh. DFLD-JZ-18 at 1.

- has shown that ice on turbines will primarily fall straight to the ground or within a relatively short distance. In addition, turbine icing can be detected and adequately managed. Significant icing will cause the turbines to automatically go into standby mode, after which "ice safety rules" will be put into effect to protect facility personnel. Deerfield Wind will also develop plans in coordination with the Forest Service to control public access to the turbines when potentially hazardous icing conditions exist, including the posting of warning signs and the use of gates on project access roads. No public roads, trails or other public areas, or private residences would be affected. Zimmerman pf. at 55; Zimmerman reb. at 5-6; tr. 12/12/08 at 199-205 (Goland).

Mr. Shea's May 18 comments recommend that, if the Board chooses to address these issues, it should consider the testimony of other parties besides Deerfield, and further contends that the testimony of Deerfield's witness on these issues "was less than compelling and in no way should be used as a basis for any finding."²⁰

We conclude that we should address the issue of shadow flicker and icing. With respect to the issue of shadow flicker, Deerfield, in its initial brief, contended that potential shadow flicker would not be a nuisance and "[t]he conservative model output shows low occurrence of flicker throughout the surrounding areas, and the presence of dense mixed vegetation around the Project site will reduce or eliminate the flicker in most areas."²¹ Deerfield specifically referenced the residence of Mr. Shea and contended that there will not be any shadow flicker at the site, after existing vegetation is considered, and without vegetation, there will be only 1-10 hours of potential shadow flicker per year.²²

Mr. Shea's reply brief requested that, given Deerfield's assurances regarding the minimal impact of shadow flicker, the Board impose a requirement that shadow flicker from the Project be limited to the amount projected by Deerfield, and "in no case exceed one half hour at any dwelling in the town of Searsburg over any twenty-four hour period." Mr. Shea recommended that, if Deerfield exceeds these limits, Project operations would be limited or ceased until appropriate remediation has been completed.

20. Shea response at 4.

21. Deerfield brief at 226-227.

22. Deerfield brief at 227.

We find Mr. Shea's recommendation to be reasonable. Deerfield has testified that the impact of shadow flicker will be minimal and, given the ability to quantify such an impact, we conclude that the impacts should be limited to those claimed by Deerfield. Accordingly, we adopt Deerfield's proposed Finding 129A and impose the following condition:

Shadow flicker from the Project shall be limited to the amount specified in exhibit DFLD-JZ-31. Deerfield shall file a protocol that it will implement in the event complaints are received that the Project is exceeding the allowable amount of shadow flicker (including, if appropriate, monitoring at the affected locations).

With respect to icing, the turbines would be located on Forest Service land, away from residences and thus unlikely to pose a safety threat from ice throw. We adopt Deerfield's proposed Finding 129B. However, Deerfield has represented in its proposed finding and testimony that turbines at this Project will go into standby mode during icing conditions. We rely upon this representation in finding the risk of ice throw to be acceptable and require Deerfield must use turbines at this Project site that automatically enter into standby mode when ice build-up is present.

Noise

Deerfield's motion requests clarifications and modifications concerning the noise restrictions contained in the Order and CPG. Deerfield argues that the condition (Condition No. 28 of the Order and CPG) which requires it to "construct and operate the project" within certain noise limits, would impose unnecessary sound limits during Project construction. Deerfield also argues that the condition (Condition No. 30 of the Order) related to noise monitoring should be made more explicit by limiting the seasons in which the monitoring should occur to winter and summer, and requiring protocols for handling noise complaints.

The Department, in its comments on Deerfield's motion, supports Deerfield's request to modify the condition related to noise monitoring.

Mr. Shea, in his comments on Deerfield's motion, argues that Deerfield should not be allowed to exceed noise levels during construction. Mr Shea also argues that Deerfield's suggestion regarding noise monitoring protocols should be rejected.

Condition No. 28 of the Order and CPG provides that:

28. Deerfield shall construct and operate the Project so that the turbines emit no prominent discrete tones pursuant to ANSI standards at the receptor locations; and Project-related sound levels at any existing surrounding residences do not exceed 45 dBA(exterior)(Leq)(1 hr) or 30 dBA (interior bedrooms)(Leq)(1 hr).

Both Deerfield and Mr. Shea misinterpret the requirement to "construct and operate" the Project in accordance with the required sound levels as applying to the noise from the construction of the Project as a whole. Therefore, we clarify that the use of the term "construct" in this context refers to the construction of the turbines as it relates to the sound generated by the *turbines*. This condition requires Deerfield to ensure that the turbines used in the Project are constructed or assembled so that they will operate within the sound level guidelines set forth in this condition; the condition does not apply to sound generated by the construction activities themselves. However, in an effort to address concerns related to noise from construction-related activities, the Board adopts the following condition:

Deerfield shall file a plan for approval by the Board that addresses the hours of the day and days of the week when construction will take place, any limitations on the timing of construction activities that are expected to produce significant noise, and any plans to mitigate the noise of such activities.

Condition No. 30 of the Order and CPG provides that:

30. Deerfield shall submit to the Board for review and approval a noise monitoring plan to be implemented during the first full year of operation. The Plan shall establish a monitoring program to confirm under a variety of seasonal and climatic conditions compliance with the maximum allowable sound levels described above.

This sound-monitoring requirement is identical to the condition imposed by the Board on another wind project.²³ The condition requires sound monitoring under a variety of seasonal conditions, including summer and winter conditions. Deerfield has provided no explanation as to why, in this case, sound monitoring should be limited to winter and summer seasons only. Therefore, we see no reason to limit the sound-monitoring plan.

With respect to noise-complaint protocols, we agree with Deerfield that a process for responding to noise should be explicitly required as part of the monitoring plan. Therefore we will amend the condition as follows:

23. Docket No. 7156, Order issued 10/1/07, CPG Condition No. 10.

30. Deerfield shall submit to the Board for review and approval a noise monitoring plan to be implemented during the first full year of operation. The Plan shall establish a monitoring program to confirm, under a variety of seasonal and climatic conditions, compliance with the maximum allowable sound levels described above. The plan shall also specify the protocols Deerfield will implement in the event complaints are received that the Project is exceeding the noise limit (including, if appropriate, monitoring at the affected locations). All monitoring results shall be promptly provided to the Board.

Tourism

Deerfield requests correction of an apparent transcription error in the Order, in the Board's discussion regarding property values and tourism impacts. The apparent error consists of a reference to the Board's adoption of a condition requiring mitigation of impacts on property values when, in fact, no such condition was included in the Order.

Mr. Shea, in his comments on the Motion, argues that the requirement for mitigation should not be removed from the Order.

The Board's discussion on page 33 of the Order states:

As described below, we conclude that there is no empirical evidence to indicate that the Project would result in such impacts *and, to the extent that such impacts arise, we have adopted a condition that would require Deerfield to mitigate them.*

(Emphasis added).

As Deerfield notes, the highlighted language is not consistent with the Board's Findings on this issue (Findings 97-100) or the Board's conclusion (on page 34 of the Order) to specifically reject a proposed condition proposed by IWAG/SVR with regard to property-value protection. We also note that no such condition was included in the Order or CPG. Therefore, we amend the Order to strike the language highlighted above.

Condition 22 Regarding Permits and Leases

Deerfield requests that Condition 22 be modified to accurately capture language that was jointly proposed by the Department and Deerfield Wind. The Board noted on page 95 of the Order that we were adopting the proposed joint condition; however, the language of Condition 22 inadvertently omitted certain language from the parties' proposal. The last sentence of Condition 22 is hereby modified to state: "Deerfield may not begin significant construction activities prior

to Board approval of any permits and leases, but may perform site preparatory work such as geotechnical investigations, surveys, light construction, and other similar activities."

ORDER

It Is Hereby Ordered, Adjudged and Decreed by the Public Service Board of the State of Vermont that:

1. The Agency of Natural Resources' ("ANR") request to modify the April 16 Order to deny issuance of a certificate of public good ("CPG") to the Project is denied.

2. ANR's request to modify the April 16 Order to provide ANR with authority to review and approve the bear mitigation proposals is granted in part and denied in part. The Board does not delegate the authority to approve the bear mitigation proposals to ANR, but makes clear that any party with standing on the issue may review and comment on the mitigation proposals.

3. Vermont Natural Resource Council's request to modify Condition 11 of the April 16 CPG, to clarify that construction of the Project may not commence until Deerfield Wind, LLC's ("Deerfield") habitat mitigation proposal has been approved, is granted. Condition 11 is revised as follows, and is included in the attached Amended CPG:

Deerfield shall file a proposal, for approval by the Board, for the land it proposes to conserve as a mitigation measure for the impact of the Project on bears. The proposal shall conserve at least 144 acres of land that is comparable to the remote, high elevation area of concentrated beech stands impacted by the Project.
Deerfield may not commence site preparation or construction until the Board has approved the mitigation proposal, unless otherwise authorized by the Board.

4. ANR's request to modify the April 16 Order to implement bat mortality thresholds is denied.

5. Deerfield's request to modify Condition 14 of the CPG, to specify the construction activities that cannot be undertaken during bird breeding season, is granted. Condition 14 and the associated finding, are revised as followed, and the revised condition is included in the attached Amended CPG:

Deerfield shall not undertake ~~construction activities~~ bulldozing, tree cutting, and blasting in areas proximate to breeding bird habitat during May and June to protect breeding birds. If Deerfield anticipates that construction will occur over the course of two seasons, Deerfield may propose that construction be allowed

during May and June, but shall demonstrate that such permission will lessen the impact on breeding birds.

Finding 288. To reduce impacts on breeding birds in the Project area, ~~construction~~ bulldozing, tree cutting, and blasting in areas proximate to breeding bird habitat should not be allowed during the primary breeding season in May and June. In addition, areas surrounding turbines, meteorological towers, roads, and other infrastructure should be allowed to naturally reforest once construction is complete. Tr. 12/2/08 at 250–253 (Kerlinger); Kerlinger pf. at 19.

6. Deerfield's request to include conditions related to television interference in the CPG is granted, and the following conditions are included in the attached Amended CPG.

Prior to commencement of construction, Deerfield shall conduct a study of reception quality at the Duncan Cable TV Service ("DCTV") headend facility in Wilmington, Vermont, and provide a copy of this study to the Board, the Department of Public Service, and DCTV. The study shall measure and document the signal strength and video quality received off-air at the DCTV headend of analog and digital television stations of sufficient quality for commercial distribution (defined as having at least 20 dB carrier to noise ratio), and the signal strength received at the DCTV headend of each FM radio station DCTV distributes to its subscribers as of the date of the study.

Signal levels shall be measured using a commercially available test antenna with a known gain figure.

The study shall include a one-minute recording of each measured television channel and radio station.

Measurements and recording shall be conducted no more than 45 days prior to commencement of construction.

DCTV shall allow Deerfield access to the DCTV headend facility as necessary to conduct the baseline study with at least 7 days' advance notice. DCTV personnel shall be permitted to observe all measurements and recordings taken at the DCTV headend facility.

Deerfield shall provide at least seven days' notice to DCTV prior to commencement of commercial operation of the turbines. Deerfield shall remediate any material interference at the DCTV headend facility that is caused by operation of the Project. Within two weeks of receipt of a complaint, Deerfield shall complete an interference measurement study for the DCTV headend facility, and provide a copy of this study to DCTV, the Department of Public Service and the Board. Deerfield may seek an extension of this time frame for good cause. If the interference measurement study demonstrates that the Project is causing material interference at the DCTV headend facility, Deerfield shall at the same time submit a plan and schedule to remediate any material interference to DCTV,

the Department of Public Service and the Board. Deerfield shall complete remediation within two weeks of the date it submits any such remediation plan, and shall submit to DCTV, the Department of Public Service and the Board a report demonstrating the elimination of the interference upon completion of the remediation work. Deerfield may seek an extension of this timeframe for good cause.

Deerfield and DCTV shall make good-faith efforts to resolve between themselves any disputes concerning the methodology for investigating or remediating a complaint, or the time frame for completion of remediation. Unresolved disputes may be taken to the Board for resolution, which the Board will process in an expedited manner.

During operation of the Project, Deerfield shall investigate complaints of Project-related interference with television broadcast signals received at any residence. Deerfield shall use commercially practicable efforts to remediate material interference experienced at any residence affected by the Project. Deerfield and the affected homeowner(s) shall make good-faith efforts to resolve amongst themselves any disputes concerning the methodology for investigation or remediating a complaint, or the time frame for completion of remediation. Unresolved disputes may be taken to the Board for resolution.

7. Deerfield's request to include findings related to shadow flicker and icing is granted.

The Board revises Finding 125 of the April 16 Order and adopts the following new findings, as follows:

125. The Project will not have an undue adverse impact on public health and safety. This finding is supported by findings 126 through 129B. Zimmerman pf. at 53-55; Zimmerman reb. at 4-6.

129A. There is a low potential for the occurrence of shadow flicker in the areas surrounding the Project, based upon modeling results. With vegetation taken into account, the potential is even further reduced or eliminated. Exh. DFLD-JZ-18 at 3; exh. DFLD-JZ-31a-b; Zimmerman reb. at 4.

129B. Ice that may form on the wind turbines will not pose undue risks to on-site workers or the general public. Experience at other wind projects - including Iberdrola's Casselman project, the Searsburg facility, and the Mt. Equinox facility - has shown that ice on turbines will primarily fall straight to the ground or within a relatively short distance. In addition, turbine icing can be detected and adequately managed. Significant icing will cause the turbines to automatically go into standby mode, after which "ice safety rules" will be put into effect to protect facility personnel. Deerfield will also develop plans in coordination with the Forest Service to control public access to the turbines when potentially hazardous icing conditions exist, including the posting of warning signs and the use of gates on project access roads. No public roads, trails or other public areas, or private

residences would be affected. Zimmerman pf. at 55; Zimmerman reb. at 5-6; Tr. 12/12/08 at 199-205 (Goland).

In addition the Board imposes the following conditions related to shadow flicker and icing:

Shadow flicker from the Project shall be limited to the amount specified in exhibit DFLD-JZ-31. Deerfield shall file a protocol that it will implement in the event complaints are received that the Project is exceeding the allowable amount of shadow flicker (including, if appropriate, monitoring at the affected locations).

Deerfield must use turbines at this Project site that automatically enter into standby mode when ice build-up is present.

8. Deerfield's request to alter Condition 28 of the CPG, regarding construction and operation of the Project within certain noise limits, is denied. However, the Board imposes the following condition related to noise during construction activities:

Deerfield shall file a plan for approval by the Board that addresses the hours of the day and days of the week when construction will take place, any limitations on the timing of construction activities that are expected to produce significant noise, and any plans to mitigate the noise of such activities.

9. Deerfield's request to modify Condition 30 of the CPG, to include a process for responding to noise complaints from the Project, is granted. Condition 30 is revised as follows, and is included in the attached Amended CPG:

Deerfield shall submit to the Board for review and approval a noise monitoring plan to implemented during the first full year of operation. The plan shall establish a monitoring program to confirm, under a variety of seasonal and climatic conditions, compliance with the maximum allowable sound levels described above. The plan shall also specify the protocols Deerfield will implement in the event complaints are received that the Project is exceeding the noise limit (including, if appropriate, monitoring at the affected locations). All monitoring results shall be promptly provided to the Board.

10. Deerfield's request to alter an apparent transcription error in the April 16 Order, regarding property values and tourism, is granted. On page 33 of the Order, the last sentence of the second paragraph under "Discussion — Economic Benefit" is modified as follows:

As described below, we conclude that there is no empirical evidence to indicate that the Project would result in such impacts. ~~and, to the extent that such impacts arise, we have adopted a condition that would require Deerfield to mitigate them.~~

11. Deerfield's request to modify Condition 22 of the CPG is granted. The last sentence of Condition 22 is revised as follows, and is included in the attached Amended CPG:

Deerfield may not begin significant construction activities prior to Board approval of any permits and leases, but may perform site preparatory works such as geotechnical investigations, surveys, light construction, and other similar activities.

12. The first sentence of Condition 5 of the CPG is altered as follows:

Prior to commencement of site preparation or construction, unless otherwise authorized by the Board, Deerfield shall file any such contracts entered into with Vermont utilities for Board review to determine if the contracts contain appropriate terms and conditions, including price stability and prices favorable to market purchases, to promote the general good of the State of Vermont.

Dated at Montpelier, Vermont, this 17th day of July, 2009.

<u>s/ James Volz</u>	)	
	)	PUBLIC SERVICE
	)	
<u>s/ David C. Coen</u>	)	BOARD
	)	
	)	OF VERMONT
	)	

OFFICE OF THE CLERK

FILED: July 17, 2009

ATTEST: s/ Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.

Separate Opinion of John D. Burke, Concurring in Part and Dissenting in Part

I concur with my colleagues on all matters except as stated below.

I dissented from the Board's decision on April 16, 2009, to issue a CPG to Deerfield. As I stated in that dissent:

Where I depart from the majority is their apparent conclusion that Deerfield can develop a plan that will sufficiently mitigate the impacts to bears and enter into purchase power agreements with Vermont utilities that will provide sufficient economic benefit such that, overall, the Project will promote the general good of the state. As presented, the costs resulting from this project are, in my estimation, dramatic and the benefits are comparatively insignificant.

In today's Order, the majority have rejected ANR's request to modify the April 16 Order so as to deny issuance of a CPG. In support of its request, ANR contends that there are insufficient evidence and findings concerning mitigation of the Project's impacts on bears. While I concur with the majority in their conclusion that ANR has not properly interpreted the applicable standard under Section 248, I continue to disagree with the majority's conclusion that the impacts on bears can be sufficiently mitigated, for the reasons set forth in my dissenting opinion of April 16.

Furthermore, in today's Order, as a result of the Board's reconsideration of other issues, Deerfield will be subject to additional requirements that it must satisfy before it can construct the Project. These additional requirements strengthen my belief that the Board should have denied the CPG and given Deerfield the opportunity to refile its petition after it has addressed and corrected the omissions and deficiencies in its proposal. I recognize that for the UPC wind generation project in Sheffield (Docket No. 7156), I and the other Board members issued a CPG that included post-CPG conditions similar to many of the conditions that the majority have imposed on Deerfield. I see a fundamental difference, however, in that the Deerfield project is highly unlikely to be able to satisfy the bear-habitat-mitigation condition, and thus there is not sufficient basis for finding that the Project will promote the general good of the state. This situation is more comparable to Docket No. 6911 (East Haven Wind Farm). In that docket we

were faced with a Petitioner who had not and was not likely to conduct a study on the effect of the project on birds and bats. Since it was unlikely that the conditions would be met if we approved the CPG, we denied the petition.

On all other matters in today's Order, I concur with the majority.

Dated at Montpelier, Vermont, this 17th day of July, 2009

s/ John D. Burke
John D. Burke, Board Member

OFFICE OF THE CLERK

FILED: July 17, 2009

ATTEST: s/ Susan M. Hudson
Clerk of the Board