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: 1/8/2016

ORDER RE: THIRD COMPLIANCE FILING

INTRODUCTION

On April 16, 2009, the Vermont Public Service Board ("Board") issued an Order ("Order") and Certificate of Public Good ("CPG") in this docket approving, subject to certain conditions, the construction and operation of a wind electric generating facility (the "Project"). On July 17, 2009, the Board issued an Order Re Motions to Alter ("Amended Order") and an Amended CPG ("Amended CPG"), in which several of the conditions contained in the CPG were altered. Additionally, on April 7, 2011, the Board issued a subsequent Order amending certain conditions of the CPG related to requirements for a bear study ("Bear Order"). Among other things, the CPG and Amended CPG required the Petitioners, Deerfield Wind, LLC ("Deerfield") to make a number of post-certification compliance filings.

On July 2, 2015, Deerfield submitted the third set of compliance materials for party comment and Board review, which included a draft (undated, unsigned) power purchase agreement ("PPA") between Deerfield and Green Mountain Power Corporation ("GMP"), a draft letter of credit ("LC"), and a revised decommissioning cost estimate. For the reasons set forth below, in this Order we approve the draft PPA as filed by Deerfield on July 2, 2015. We approve the draft LC to be used as the template for a final LC, but in order to comply with Condition 19 of the Amended CPG, Deerfield shall submit a fully executed LC for Board review prior to commencement of construction. In addition to submission of the final, fully executed LC, we require a modification to the Drawing Certificate as described below. With respect to the revised decommissioning cost estimate, we are deferring our ruling at this time based on several items that require clarification, and direct Deerfield to provide additional information in response to our requests and a revised cost estimate if necessary.

The July 2, 2015, Filing

Deerfield's July 2, 2015, filing included: (1) a PPA between Deerfield and GMP; (2) a draft LC; and (3) a revised decommissioning cost estimate.

1. PPA

Condition 4 of the Amended CPG states:

> Deerfield shall enter into long-term, stably-priced power contracts with Vermont utilities for a substantial portion of the Project's power output. Deerfield shall provide an update of any negotiations with Vermont utilities 90 days after the date of this Order.

Condition 5 of the Amended CPG states:

> 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 the appropriate terms and conditions, including price stability and prices favorable to market purchases, to promote the general good of the State of Vermont. Along with the contracts, Deerfield must also file an explanation as to how the contracts promote the general good of the state. If, after good faith efforts on the part of Deerfield and the utilities, Deerfield cannot obtain in-state power contracts as specified above for the Project for a substantial portion of the output, it shall file a statement explaining why an agreement cannot be reached and why the Board should modify or remove this requirement.

Deerfield's PPA with GMP[1] indicates that 100% of the Project's energy output, capacity, and environmental attributes will be sold to GMP for a period of 25 years at a set price of $88 per MWh, with no escalator. In addition, under the PPA, GMP has an option to purchase the Project after ten years for a price of $50 million. In support of the PPA, Deerfield submitted a letter from GMP describing the agreement. GMP stated that the Project's output will fulfill roughly 2% of GMPs annual energy needs, will help GMP and the State attain renewable energy goals, and will provide direct and indirect benefits to consumers through Renewable Energy Certificates ("RECs"), long-term pricing stability, and Deerfield's assumption of financial risk associated with the operation of the Project.

The Vermont Department of Public Service (the "Department") filed comments on the PPA on July 22, 2015,[2] stating that its review indicated that the PPA meets the requirements of Conditions 4 and 5 of the Amended CPG. The Department found that the terms and conditions of the PPA include price stability and prices favorable to market purchases, and would provide net present value ("NPV") benefit of over $40 million compared to market purchases.[3]

Wind Action Group ("WAG") provided detailed comments on the PPA and GMP's letter in its filing dated July 24, 2015.[4] WAG's comments are summarized as follows: (a) the price of $88/MWh is higher than the price of less than $80/MWh recently (2013-2104) negotiated between various wind energy developers and the Massachusetts Department of Public Utilities; (b) the benefits of pricing to customers is based partly on REC prices that are declining and will continue to do so; (c) GMP refers to federal tax credits that expired in 2014; (d) the definition of "Commercial Operation" in the PPA should be expanded to more clearly demonstrate that the Project will be capable of delivering its output to GMP customers when it reaches commercial operation (WAG included conditions from a different contract for comparison purposes); (e) the responsibility to ensure that the Project is qualified as a Class I Renewable Generation Unit in Vermont should be borne by Deerfield, not GMP; (f) the PPA lacks protective language regarding negative pricing, which will increase the Project rates to customers with no guarantee that REC

1. Deerfield filing of 7/02/15 at Attachment 1.
2. Department filing of 7/22/15 at 1.
3. Department filing of 7/22/15 at 2.
4. WAG filing of 7/24/15 at 2 through 7.

sales will be sufficient to offset the difference; WAG's solution is that any negative prices should be borne entirely by Deerfield, as has been done in other states; and (g) the 10-year optional purchase price of $50 million appears overly generous, the PPA lacks any detail about how the price was set, and establishing that GMP would be the purchaser eliminates a competitive process for the sale (open competition may result in a more realistic, fair market value). WAG requested that the Board initiate a limited proceeding and permit petitions for new parties to intervene in order to review the contract price and impact on ratepayers.

WAG provided additional comments on the PPA in its filing dated September 24, 2015,[5] stating that the Deerfield PPA price is too high and the terms allow a significant risk shift from Deerfield to GMP ratepayers. This filing also included supporting commentary prepared on behalf of WAG by Robert Amelang, a former engineer for Central Vermont Public Service Corporation and GMP, and by William P. Short, III, an energy consultant. Mr. Amelang's comments pertain to how the contract terms and aggregate pricing fail to consider current and anticipated competitive pricing for wind energy, thus shifting risks to GMP customers. The comments recommend a technical hearing as the most expedient means of evaluating the PPA, as opposed to a prudency review at a later time.

Mr. Amelang's analysis results in a 25-year levelized value of about $83/MWh; he states that the difference between this estimate and the $88/MWh value in the PPA is due to his revised REC price forecast and a lower energy price forecast based on lower natural gas prices. WAG relies on this to claim that "the contract terms and aggregate contract price negotiated between Deerfield and GMP fail to consider current and anticipated competitive pricing for wind energy," and that the price is "at least 10% above market price contract prices for similar wind energy facilities in New England."[6]

Mr. Amelang's analysis also claims that additional consumer risk is introduced by the 25-year length of the PPA, eliminating the opportunity to revisit pricing with a contract of a shorter time-frame. Mr. Short's comments provide an evaluation of current and potential future

5. WAG filing of 9/24/15 at 2.
6. WAG filing of 9/24/15 at 2.

REC prices and wind energy prices, indicating that the Deerfield PPA price is too high to protect consumers.

Deerfield responded to these comments in its filings dated September 3, 2015,[7] and October 21, 2015.[8] The October 21, 2015, response stated that WAG's filing of September 25, 2015, was not filed in a timely manner and should be disregarded. Deerfield stated that WAG's request to allow new intervention requests is inappropriate as part of the post-CPG compliance filing review. Deerfield stated that as indicated in the Order for the Project, Board review was focused on long-term contracts, stable pricing, significant portion of the output, and prices favorable relative to market purchases; the Board did not specify a price for the power and did not state that it would conduct a wholesale review of all the contractual provisions that are part of any PPA. Deerfield claims that the only comment raised by WAG that pertains to Board concerns is its claim that $88 per MWh is not a favorable price relative to market purchases. Deerfield's response to this is that the price is based on GMP's 2014 Integrated Resource Plan ("IRP"), which was recently approved by the Board (Order of July 29, 2015), for which Board review considered whether the IRP is reasonably likely to lead to identification and implementation of least-cost outcomes. According to Deerfield, the remainder of WAG's comments pertain to whether GMP struck a good bargain regarding specific contract terms, which is an issue for prudency review, not for approval of a CPG compliance filing. Deerfield notes previous dockets where the Board has explicitly cautioned against incorrectly equating a Section 248 review with a prudence review.

The Board finds that the proposed purchase of power under the PPA satisfies Conditions 4 and 5 of the Amended CPG and will promote the general good of the state. The PPA provides price stability by reducing GMP's exposure to short-term and long-term electric market price volatility, with a projected power price that compares favorably to market purchases. In addition, Deerfield, not GMP, assumes the financial risks associated with plant operation and wind output, and the ten-year option for GMP to purchase the facility at a fixed price may provide additional benefit to customers under future conditions.

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7. Deerfield filing of 9/03/15 at 3.
8. Deerfield filing of 10/21/15.

As described in the Order for the Project, the Board found that the initial proposal by Deerfield to sell 10 MW of its output to Vermont utilities for a 15-year period was too small and required Deerfield to submit power contracts for "a significant portion" of the power output to Vermont utilities.[9] The currently proposed PPA provides 100% of the Project's output, capacity, and environmental attributes to a Vermont utility at a stable price with no escalator. As indicated by GMP, the PPA price, $88/MWh, compares favorably to GMP's projected, long-term value of $95/MWh based on "7x24" energy, RECs, and the ISO-NE Forward Capacity Market, all of which have uncertainties in terms of future projections.[10]

We have decided not to investigate the remaining terms and conditions raised by WAG as part of this post-CPG compliance filing. The future rate impacts that accrue to GMP's customers as a result of this PPA are properly considered in future GMP cost-of-service proceedings, where the propriety of the PPA's terms and conditions may be considered.

2. Draft Letter of Credit

Condition 19 of the Amended CPG states:

> Deerfield shall implement the Decommissioning Plan submitted as Exh. DFLD-HGC-2. The Decommissioning Plan may allow the fund to grow as the construction process proceeds such that the funding level is commensurate with the costs of removing infrastructure in place. The amount of the fund may not net out the projected salvage value of the infrastructure.

The decommissioning plan referenced in the Amended CPG, Exh. DFLD-HGC-2, states, "The Decommissioning Fund will initially be funded with a letter of credit ("LC") (or other appropriate financial security) to be issued solely for the benefit of the Board by an A-rated institution." The decommissioning plan further states, "Deerfield shall provide the LC (or other appropriate financial security) to the Board prior to the commencement of construction of the

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9. Order of 4/16/09 at 4 - 5, including footnote 4 at 5: "We do not specifically delineate how much of the power output must be sold to Vermont utilities nor do we specify the price at which the power must be sold. We also do not specifically require that the power be sold at a fixed price (although we have previously noted the benefits of such arrangements. . . This will preserve some flexibility for Deerfield Wind in negotiating arrangements with those utilities."

10. Deerfield filing of 7/2/15 at Attachment.

Project."[11] Finally, the decommissioning plan requires that prior to commencement of commercial operations, Deerfield shall post an LC (or other appropriate funding security) equal to the estimated cost of decommissioning, and that on each annual anniversary thereafter, Deerfield shall adjust the estimated cost of decommissioning to account for any price level changes in the preceding 12-month period.

Deerfield's filing of July 2, 2015, included a form of letter of credit,[12] which Deerfield referred to as a draft LC, and which Deerfield stated satisfied Condition 19 of the CPG.[13] The draft LC is for an irrevocable standby LC, indicates that the Board is the beneficiary of the LC, and includes an attached drawing certificate. The draft LC lacks Project-specific information and is not signed, but provides the form Deerfield would use for a final LC. The draft LC and drawing certificate contain similar terms and conditions to previous Board-approved LCs, with the exception that the drawing certificate typically specifies what constitutes a reasonable period of time after which the Board would determine that Deerfield had failed to comply with an Order requiring decommissioning (typically specified as not to exceed 90 days).

The Department provided comments on the LC dated July 22, 2015,[14] arguing that Deerfield has not met Condition 19 of the CPG because the decommissioning plan is not fully implemented until an LC is in place. The Department maintained that the draft LC lacks specifics such as the issuer, effective dates, and dollar amounts, and does not include an annual adjustment provision.

WAG provided comments in its filing dated July 22, 2015,[15] stating that the draft LC is nothing more than a placeholder for a future financial instrument, and recommended that the Board require a completed LC before agreeing that Condition 19 is satisfied.

11. Exhibit DFLD-HGC-2 at 2.
12. Deerfield filing of 7/22/15 at Attachment 2.
13. Deerfield filing of 7/22/15 at 3.
14. Department filing of 7/22/15 at 2.
15. WAG filing of 7/22/15 at 7.

In response, Deerfield indicated that the draft LC was submitted for Board approval and would serve as the basis for a fully executed LC to be submitted when completed, as has been done by the Board in prior cases (e.g., Docket 7844 Order of August 29, 2013).[16]

We conclude that the draft LC is appropriate for its purpose and is therefore approved as to form. However, to satisfy this CPG requirement, Deerfield shall file a final, executed LC with the Board consistent with the draft LC. Deerfield may not commence site preparation or construction until its final, executed LC has been approved by the Board. The Board requires Deerfield to amend its final drawing certificate for issuance to the Board as follows (text in italics to be added): "The Beneficiary represents that it has issued an order that decommissioning shall occur and [Deerfield] or its successor is unable or unwilling to commence decommissioning activities within a reasonable period of time *not to exceed ninety (90) days* after the issuance of the order."

3. Revised Decommissioning Cost Estimate

Condition 21 of the Amended CPG states:

> Prior to commencement of construction, Deerfield shall prepare a revised detailed estimate of the costs of decommissioning, covering all of the activities specified in the Decommissioning Plan. The Plan shall certify that the cost estimate has been prepared by a person(s) with appropriate knowledge and experience in wind generation projects and cost estimating. The cost estimate shall be submitted to the Board for review and approval. Parties shall have two weeks to file any comments.

Deerfield's July 22, 2015, filing included a revised decommissioning cost estimate,[17] prepared by Westwood Professional Services, a surveying and engineering firm, and signed by a civil engineer with an active Vermont engineering license. The line items on the revised cost estimate are not directly comparable to the original cost estimate[18] because there are some differences in what is provided as separate line items on the two estimates. Both cost estimates include the following costs:

> (a) turbine, tower, transformer, and pad dismantling and removal (original $25,672, revised $34,733, per turbine);

16. Deerfield filing of 9/03/15 at 1.
17. Deerfield filing of 7/22/15 at Attachment 3.
18. Exhibit DFLD-JZ-12.

(b) met tower removal (original and revised $7,311);
(c) substation removal (original and revised $125,000);
(d) access road removal (original $40,000, revised $42,245, per mile);
(e) grading and reseeding of disturbed areas (original $81,505, revised $82,000, lump sum); and
(f) salvage and resale estimates provided separately.

The revised cost estimate includes new and/or more detailed line items:

(a) operations and maintenance building removal ($100,000);
(b) crane mobilization/demobilization (2 events totaling $400,000);
(c) general conditions, a field staff cost ($360,000); and
(d) erosion and sediment control Best Management Practices ("BMPs") ($75,000).

The original and revised cost estimates include removal of the meteorological tower ($7,400), which presumably would be accomplished during construction of the Project based on the final design plan; in terms of decommissioning activities, this line item should be replaced with removal of two ground-based light detection and ranging ("LiDAR") units.

The total decommissioning cost estimate has increased from $931,300 for 22 turbines to $1,877,400 for 15 turbines (a net per-turbine cost increase from $42,332 to $125,160). The changes to the plan include negligible cost increases for some line items (cost per mile of road removal, substation removal), addition of fairly substantial items that appear to have been omitted in the first plan (removal of the operations and maintenance building, crane mobilization costs), and addition of fairly substantial construction-related elements that increase the per turbine total cost (erosion and sediment control BMPs, construction oversight).

The Department provided comments dated July 22, 2015,[19] requesting an additional 30 days to review the decommissioning cost estimate and to provide enough time for them to consult with outside sources in its evaluation of the estimate. The Department provided follow-up comments on the decommissioning cost estimate dated August 21, 2015,[20] indicating that while the total decommissioning cost provided by Deerfield is generally consistent with some other wind projects (e.g., Georgia Mountain Wind, Docket 7508) and other projects outside Vermont, it

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19. Department filing of 7/22/15 at 3.
20. Department filing of 8/21/15 at 1.

is substantially lower than the per-turbine decommissioning cost provided by Kingdom Community Wind.[21] Specifically, the Department noted that Deerfield's cost for removal of concrete foundations and transformer pads ($2,467 per turbine) was lower than other projects' estimates ($5,000 to $15,000 per turbine). The Department questioned whether Deerfield's estimate considered separation of rebar and trucking and disposal fees for concrete rubble.

WAG provided comments in its filing dated July 22, 2015,[22] which included questioning the expertise of the firm that prepared the cost estimate, and noting alleged deficiencies in the cost estimate such as omission of costs for removal of turbine components other than the blades, omission of landfill disposal costs, and insufficient details regarding removal of foundations and transformer pads (i.e., details on disposal of materials, backfilling, and landscaping/reseeding costs).

Deerfield responded to comments in a filing dated September 3, 2015.[23] Deerfield stated that the Department's request for additional time was unreasonable, untimely, and should be denied. Deerfield argued that the Department had two months to review the revised cost estimate, which was submitted to account for any cost changes attributable to the passage of time since the original cost estimate was filed. Deerfield states that the original cost estimate was not contested by the Department, that no party provided an alternative cost estimate, and that the time is long past for any party to initiate independent review of the estimate. Deerfield also indicated that the Department acknowledged that the decommissioning cost estimate is generally consistent with other wind projects in the region, although substantially lower than one project. Deerfield stated that the Department did not request information on the basis for the Deerfield cost estimate, and has not provided an adequate basis for its request to provide additional comments or perform an independent review, and, therefore, that the Board should approve the revised cost estimate.

Deerfield also responded to WAG's comments on the revised decommissioning cost estimate.[24] Deerfield indicated that the firm that prepared the estimate has been involved with more than 100 wind projects in 30 states, shown on the firm's website (link provided). However,

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21. Department filing of 8/21/15 at 2.
22. WAG filing of 7/22/15 at 7.
23. Deerfield filing of 9/03/15 at 2.
24. Deerfield filing of 9/03/15 at 5.

Deerfield argued that the number of wind projects the firm has been involved with is not relevant information for determining the company's qualifications to prepare the Deerfield cost estimate. Deerfield also stated that WAG's comments about the level of detail in the estimate exceed the intent of the revised estimate, which was to be based on the initial estimate as indicated in the CPG (Final Order at 95 and Amended CPG Condition 21). Deerfield stated that the revised estimate covers all the items addressed in the initial estimate and should not require a greater level of detail.

We conclude that the revised decommissioning cost estimate generally satisfies this CPG condition, in that it includes updates to prior cost estimates, construction-related costs, and removal of the operations and maintenance building, which appear not to have been considered in the first estimate.

Based on the comments received and our review, there are two outstanding issues related to the revised decommissioning cost estimate that - although relatively minor in terms of the total decommissioning costs - warrant clarification. Deerfield shall provide confirmation of the per-turbine costs of demolishing and disposing of each concrete foundation and transformer pad, and shall clarify the line item for meteorological tower removal, replacing it, if appropriate, with removal of the two LiDAR stations. Additionally, so that the site restoration plans are clear in the record, Deerfield shall confirm the extent of roads to be removed, regraded, and restored for decommissioning, and shall confirm which sections of road would remain in place (e.g., Putnam Road, Sleepy Hollow Road, and GMP access road).

In summary, the Board reserves its determination regarding compliance with Condition 21 of the Amended CPG and requires that Deerfield provide the Board with the clarifications and/or revisions to the decommissioning cost estimate requested above.

CONCLUSION

Regarding the compliance materials filed by Deerfield on July 22, 2015, we have determined the following:

We approve the PPA required in accordance with Conditions 4 and 5 of the Amended CPG.

We find that the draft LC is appropriate as to form but find that it does not fulfill the requirements of Condition 19 of the Amended CPG because it is not a fully executed LC. In order to comply with Condition 19 of the Amended CPG, Deerfield shall file a final, executed LC with the Board consistent with the draft LC, with the following modification to the drawing certificate provided with the LC (text in italics to be added): "The Beneficiary represents that it has issued an order that decommissioning shall occur and [Deerfield] or its successor is unable or unwilling to commence decommissioning activities within a reasonable period of time *not to exceed ninety (90) days* after the issuance of the order." Deerfield shall not commence site preparation or construction until its final, executed LC has been approved by the Board.

We are deferring our ruling on the revised decommissioning cost estimate required pursuant to Condition 21 of the Amended CPG and require Deerfield to provide confirmation of the per-turbine cost of demolishing and disposing of each concrete foundation and transformer pad; to clarify the line item for meteorological tower removal, replacing it, if appropriate, with removal of the two LiDAR stations; and to confirm the extent of roads to be removed, regraded, and restored for decommissioning and which sections of road would remain in place (e.g., Putnam Road, Sleepy Hollow Road, and GMP access road). Deerfield shall provide these clarifications and shall provide a revised decommissioning cost estimate if warranted.

SO ORDERED.

Dated at Montpelier, Vermont, this 8th day of January, 2016.

s/James Volz	)	PUBLIC SERVICE
s/Margaret Cheney	)	BOARD
s/Sarah Hofmann	)	OF VERMONT

OFFICE OF THE CLERK

FILED: January 8, 2016

ATTEST: s/Judith C. Whitney
Acting 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@vermont.gov)

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.