STATE OF VERMONT
PUBLIC UTILITY COMMISSION

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: 12/14/2017

ORDER RE: SOUND MONITORING PLAN

I. INTRODUCTION

This case pertains to the amended certificate of public good ("Amended CPG") issued by the Vermont Public Utility Commission ("Commission")[1] to Deerfield Wind, LLC ("Deerfield") on July 17, 2009, for construction and operation of a 30 MW wind electric generation facility located in Searsburg and Readsboro, Vermont (the "Project"). Condition 30 of the Amended CPG requires Deerfield to submit a sound monitoring plan for review and approval by the Commission. In this Order, the Commission directs Deerfield to file an amended sound monitoring plan that is based on Deerfield's proposal and incorporates modifications suggested by the parties. If Deerfield's amended sound monitoring plan incorporates all of the requirements of this Order it will be deemed approved without further action by the Commission and Deerfield will have fulfilled Condition 30 of the Amended CPG.

[1] Pursuant to Section 9 of Act 53 of the 2017 legislative session, the Vermont Public Service Board's name was changed to the Vermont Public Utility Commission, effective July 1, 2017. For clarity, activities of the Vermont Public Service Board that occurred before the name change will be referred to in Commission documents as activities of the Commission unless that would be confusing in the specific context.

II. Procedural History

Condition 30 of the Amended CPG states:

> Deerfield shall submit to the [Commission] 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 [Commission].

On May 16, 2017, Deerfield filed its proposed sound monitoring plan ("Plan").

On June 5, 2017, Wind Action Group ("WAG") and Tom Shea (together, "WAG/Shea") filed joint comments on the Plan.

On June 14, 2017, the Vermont Department of Public Service ("Department") filed comments on the Plan.

On June 15, 2017, the Department made an additional filing incorporating three paragraphs that were inadvertently omitted from its June 14 comments.

On June 16, 2017, WAG/Shea made an additional filing incorporating changes to their June 5 comments.

On June 28, 2017, Deerfield filed a reply to comments and a revised sound monitoring plan (the "Revised Plan").

On July 12, 2017, WAG/Shea filed comments on the Revised Plan.

On July 26, 2017, Deerfield filed a response to the WAG/Shea comments.

No other filings have been received.

III. Request for Technical Session

WAG/Shea recommend that the Commission convene a "technical session" to discuss the Revised Plan, citing the technical nature of the subject matter of the Revised Plan, the amount of disputed information, and the substantial differences in approach that exist between the parties. According to WAG/Shea, the intent of the technical session would be to reach consensus.

Deerfield maintains that none of the comments raised by WAG/Shea warrant a technical hearing. Deerfield states that WAG/Shea's July 12 comments repeat arguments that they have already made, focus on questions that the Commission has already addressed in prior decisions and in the wind sound rulemaking process, or address issues that should be left to the discretion of the sound monitoring consultant. Further, Deerfield argues that certain of WAG/Shea's concerns are policy questions that are within the Commission's province to decide based on the filings.

We have carefully considered WAG/Shea's request for a "technical session" with the goal of reaching consensus among the parties. Based on our review of the Revised Plan and the parties' comments thereon, we find that the remaining issues are not of a factual nature, which would be aided by a hearing. Rather, the issues are policy issues that can be decided by the Commission based on the filings. Therefore, we will not convene a technical session, and instead address the issues in dispute below.

IV. Discussion

The Revised Plan incorporates some of the recommendations proposed by the Department and WAG/Shea. Accordingly, where a recommendation has been incorporated into the Revised Plan and a dispute no longer exists, we do not include the parties' discussion on that topic and that section of the plan is approved. The following sections provide a brief description of each part of the Revised Plan, a description of the parties' positions, and our determinations.

A. Section 1.0 – Introduction

This section recounts the three applicable CPG conditions related to Project sound emissions and monitoring.

No party filed comments on this section.

B. Section 2.1 – Monitoring Contractor

Pursuant to the Revised Plan, Deerfield will select an experienced contractor who is certified through the Institute of Noise Control Engineering to conduct the sound monitoring, subject to the Commission's approval.

The Department contends that Deerfield should not be allowed to select or supervise the sound monitoring contractor. Instead, the Department recommends that sound monitoring be conducted by an expert selected and supervised by a State agency designated by the Commission. According to the Department, monitoring under the direction of a State agency engenders increased confidence in the accuracy of calculated Project-only sound levels and subsequent CPG compliance determinations. The Department contends that State-sponsored monitoring is consistent with recent Commission decisions as well as the Commission's Rule on Sound Levels from Wind Generation Facilities (Rule 5.700). The Department recommends that State-sponsored sound monitoring should be paid for by Deerfield.

Deerfield argues that nothing in the CPG or prior Commission cases suggests that monitoring must be conducted exclusively by a State agency. Nevertheless, Deerfield states that this is a policy decision that the Commission is well suited to make after weighing the considerations of due process, transparency, and accountability.

We agree with and adopt the Department's recommendation. We find it appropriate to monitor the sound emissions of in-state wind projects under the direction of a State agency. While a regulated entity may be capable of selecting and supervising a qualified independent monitor, we conclude that trust and acceptance of a monitor's findings will be enhanced if the monitor is selected and supervised by a State agency, rather than a regulated entity.

Accordingly, we direct Deerfield to amend this section of the Revised Plan so that the first sentence reads:

> A State of Vermont agency will select and supervise a contractor to conduct the sound monitoring.

Further, we direct Deerfield to amend this section of the Revised Plan so that the last sentence reads:

> Costs for the sound monitoring contractor shall be borne by Deerfield Wind, LLC.

No party made a recommendation as to which State agency should select and supervise the sound monitoring. Therefore, we request that the Department file a recommendation within 10 days of this Order, and that any comments on the Department's recommendation be filed within 10 days of the Department's recommendation. We note that Commission resolution of this question shall not preclude the commencement of commercial operations of the Project, provided that Deerfield has met all other pre-operation CPG conditions.

C. Section 2.2 – Third-Party Review

Pursuant to the Revised Plan, a neutral, mutually acceptable third-party observer will be used during each sound monitoring period to assess compliance with the applicable sound-monitoring requirements. The third-party observer would be experienced in short-term attended and long-term unattended sound monitoring at wind projects, and would be responsible for reviewing implementation of the monitoring protocols as well as the review of raw and processed monitoring data. The third-party observer would file a report with the Commission after the completion of each monitoring period addressing the sufficiency of the data collected, whether the Project's sound levels were accurately captured, the appropriateness of data filtering, and any recommendations for alterations to the plan.

WAG/Shea recommend that any third-party reviewer remain entirely independent of Deerfield and serve as an expert observer of the sound monitoring process to ensure the integrity of data collection and analysis. WAG/Shea agree with the Department that the independent reviewer need not be mutually accepted by both Deerfield and the Department. Absent a guarantee of independence, WAG/Shea support the Department's recommendation, under Section 2.1, that post-construction sound monitoring be conducted at the direction of a State agency. In either scenario, WAG/Shea request that they be granted access to the reviewer selection process and all sound monitoring reports and data.

The Department states that the role of the observer is unclear and reiterates its position that a designated State agency should be the sole entity to conduct the entire post-construction sound monitoring program.

Based on our determination in Section 2.1, above, that sound monitoring will be conducted under the direction of a State agency, we conclude that a third-party observer is no longer necessary. Accordingly, we direct Deerfield to delete this section of the Revised Plan and to renumber the sections accordingly.

We will not grant WAG/Shea, or any party that is not the State agency supervising the sound monitoring contractor, access to the sound monitoring contractor selection process.

Granting such access could diminish the perceived independence of the sound monitoring process. We will, however, grant WAG/Shea and other parties access to sound monitoring reports and data consistent with the provisions of the Revised Plan.

D. Section 2.3 – Duration and Frequency

Pursuant to the Revised Plan, sound monitoring would take place during two periods of at least two weeks in duration, and up to five weeks, to gather sufficient valid data. Deerfield proposes that one monitoring period take place in spring and another in fall over the first year of commercial operation.

The Department states that late winter/early spring and fall are the two times of year that are most likely to yield favorable source-to-background sound ratios that enable the accurate calculation of project-only sound levels. The Department recommends that the sound monitoring plan establish monitoring periods of at least five weeks each.

WAG/Shea and Deerfield did not comment on this section.

We approve this section of the Revised Plan. The proposed duration and frequency of monitoring are appropriate for assessing compliance with the CPG sound requirements during the first year of operation. This section of the Revised Plan reflects the Department's recommendation that monitoring take place in spring and fall. In the event that a sound monitoring contractor has not been retained in time to conduct monitoring in the spring of 2018, the first monitoring campaign will commence in the fall of 2018.

E. Section 2.4 – Microphone Locations

Pursuant to the Revised Plan, sound monitoring is proposed for three locations (Sites A, B, and C) representing unique soundscapes around the Project. According to Deerfield, Site A is representative of the closest homes to the north of the Project along Vermont Route 9, and Sites B and C are representative of the closest homes along Vermont Route 8. Where the proposed monitoring locations are near residential areas, to the extent that permission is granted, monitors would be set near individual homes closest to the Project. If permission is not granted, then alternative residents would be contacted or monitors would be placed in public rights-of-way that are representative of a home at a similar or lesser distance from the Project. To the extent possible, sound monitors would be located away from roads to avoid background sound contamination. Under the Revised Plan, up to three additional monitoring locations may be selected in response to noise complaints made prior to the beginning of the last monitoring period provided that any such additional locations are materially different from the locations already subject to monitoring, and that they are within the 30 dBA (exterior) contour.

WAG/Shea object to this section based on their understanding of the three proposed microphone locations – Sites A, B, and C. WAG/Shea request that the monitoring locations be mutually agreed upon in advance of the first monitoring period, and contend that any additional monitoring sites should be identified at the outset of the monitoring periods and not when complaints are filed.

The Department did not comment on this section.

Deerfield states that the Revised Plan calls for Deerfield to file a map showing all monitoring, turbine, and met tower locations when the final monitoring sites are selected. Deerfield argues that it is premature to object to the monitoring locations, which Deerfield suggests should be determined by the sound monitoring consultant based on experience.

The Commission makes no determinations as to appropriate sound monitoring locations at this time. We conclude that it is appropriate for the sound monitoring consultant to determine appropriate locations consistent with the terms of the Revised Plan. Accordingly, we direct Deerfield to amend this section of the Revised Plan so that the final sentence reads as follows:

> Final monitoring locations will be selected by the sound monitoring consultant. When the sites have been selected, Deerfield Wind shall file a map with the Commission showing the monitoring, turbine, and met tower locations.

F. Section 2.5 – Logistics

The Revised Plan sets forth priorities for site conditions for selecting microphone locations, height, and placement relative to other structures. The Revised Plan specifies that on-site meteorological instrumentation will log data in no more than 10-minute increments and will include one or more of the following: anemometer (all sites), wind vane (one site), temperature sensor (one site), and rain sensor (one site). The Revised Plan sets forth the sound-level meter specifications and proposes that data be logged in one-second intervals.

WAG/Shea suggest that sound monitoring data should be collected at 0.125-second intervals. WAG/Shea state that measurements at longer intervals, such as the one-second interval suggested by Deerfield, would prohibit capturing turbine noise data, including the full blade "whoosh." WAG/Shea contend that blade "whoosh" occurs more frequently than at one-second increments. Thus, WAG/Shea maintain that measurements must be taken at a faster rate. WAG/Shea further state that collecting data using "Lfast" measurements would enable other parties to review the data and validate project-only sound levels and CPG compliance determinations. Further, WAG/Shea recommend that a rain sensor be located at each monitoring station.

Deerfield maintains that a rain sensor at each location is not necessary. Deerfield notes that the monitoring area covers an area of about one mile in radius, and that no substantial difference in the timing of a rain event would be expected in an area of that size. Furthermore, in the event different rain events occurred at different monitoring locations, Deerfield contends that localized rain events could be detected through audio recordings that are made at each location.

Deerfield notes that the Amended CPG imposes a one-hour sound level standard, not an Lmax standard. Accordingly, Deerfield argues that 0.125-second sound measurements are unnecessary to assess compliance under the Amended CPG sound limit. Deerfield states that requiring 0.125-second increments would increase the amount of data to be collected by eight times, and thus increase the cost of compliance monitoring, yet would do nothing to help make CPG compliance determinations. Thus, Deerfield maintains that one-second measurement intervals are appropriate.

We accept this section of the Revised Plan and do not require any revisions. We conclude that the rain events can be accurately captured through the combination of the single proposed rain sensor and the audio recordings that will be made at each monitoring location. With respect to the sound measurement interval, we conclude that a one-second interval will provide sufficient data granularity for assessing CPG compliance without adding undue costs.

G. Section 2.6 – Outside-to-Inside Test

Pursuant to the Revised Plan, sound monitoring would only occur at exterior locations because interior monitoring for sound levels at the 30-decibel limit is easily contaminated by normal indoor activities and because frequent sound monitoring inside a bedroom would be intrusive. Accordingly, the Revised Plan proposes to calculate interior sound levels based on a fixed outside-to-inside reduction of 15 dBA. In the event of a complaint at a residence, the homeowner would be given the option of allowing outside-to-inside noise reduction ("OINR") testing of the house under the following circumstances: (1) preconstruction sound modeling indicates Project sound levels of 40 dBA or higher at the location; or (2) post-construction sound monitoring indicates sound levels of 40 dBA(Leq)(1 hour) or higher at the location. OINR testing would be conducted with windows fully open, one quarter open, and closed. Results of windows fully open, quarter open, and closed would be applied based on the time of year that the complaint occurred. If the offer of OINR testing is rejected by the complainant, the outside-to-inside reduction would be assumed to be 15 dB.

WAG/Shea observe that the Amended CPG sound level limits are not constricted to any particular residences. Accordingly, WAG/Shea suggest that OINR testing should not be limited to houses meeting the Revised Plan's criteria. WAG/Shea suggest that criteria be established for conducting OINR tests in order to achieve process and cost efficiencies. WAG/Shea argue that establishing a cutoff for when OINR testing is to occur is not reasonable, especially during the first year of compliance testing.

The Department argues that the proposed 15 dBA attenuation assumption renders the 30 dBA interior sound level meaningless. The Department notes that in past proceedings the Commission has determined that attenuation assumptions for determining compliance with indoor sound limits should contemplate windows fully open during the summer months. According to the Department, imposing a blanket 15-dBA attenuation assumption as part of the sound monitoring protocol is not appropriate in light of the windows-open assumptions that the Commission has articulated in the past.

The Department contends that the proposed criteria for offering homeowners OINR testing are too stringent. The Department maintains that determination of interior sound levels should not be triggered exclusively in response to a specific complaint. Rather, the Department recommends that OINR testing be offered to any homeowner whose residence is within a modeled sound level of 30 dBA or higher prior to or during the life of the Project at the request of the eligible homeowner. Further, the Department recommends that OINR testing account for windows fully open, partially open, and closed, and that the designated State agency conduct all OINR testing. Finally, the Department recommends that interior sound level compliance be assessed based on assumed windows-open conditions regardless of the time of year that a complaint may be filed.

The 30 dBA interior sound level limit applies to all residences, not only those that file a complaint. Accordingly, we conclude that at the outset of commercial operations, OINR testing should be offered to all homeowners whose residence meets one of the following criteria: (1) the preconstruction sound model shows Deerfield Project sound levels of 40 dBA or higher at that location; or (2) sound monitoring (post-construction) shows Deerfield Project sound levels of 40 dBA(Leq)(1 hour) or higher at the location. If a homeowner who meets one of these criteria initially declines OINR testing, Deerfield may assume attenuation of 15 dBA. However, if a homeowner who initially declined OINR testing subsequently files a complaint, that homeowner shall again be offered OINR testing at Deerfield's expense. We do not adopt the Department's recommendation that compliance with the interior sound level requirement be assessed under the assumption that windows will be open regardless of time of year. Instead, the sound monitoring consultant should ask the complainant about their window opening patterns throughout the year, and should use the complainant's response as the basis for the window-position assumption.

Deerfield shall amend this section of the Revised Plan to reflect these determinations.

H. Section 2.7 – Background Sound Measurements

Pursuant to the Revised Plan, background sound levels must be excluded from the measurement of Project sound levels when assessing compliance with the Amended CPG. Under the Revised Plan this would be accomplished by turning off the Project turbines at regular intervals to allow for a direct comparison of periods with and without turbines operating. During sound monitoring campaigns, Project turbines would be shut down for 20 minutes at a time at least once per night when hub-height wind speeds are at or above 6 m/s, and more frequently as necessary to ensure sufficient turbine-off data to accurately determine background sound levels. Individual contaminating events could be manually filtered or removed from the data set, and insect and bird noise could be filtered using the "Ai" weighting (i.e., subtracting sound at and above 1.6 kHz). The sound monitoring consultant would be enabled to modify the background sound methodology for good cause and with the agreement of a third-party observer.

WAG/Shea recommend that all Project turbines be shut down when background sound measurements are taken. WAG/Shea contend that individual contaminating events should not be filtered or removed from data unless the removal is agreed to by a third-party observer, and even if it is removed the original data should be maintained and made available upon request. WAG/Shea agree that certain high-frequency background sounds, such as birds and insects, can be filtered from the data set.

The Department contends that this section of the Revised Plan is unnecessarily complex. Instead, the Department recommends a general statement that background measurement data should be collected as needed to quantify the ambient sound during conditions representative of those during the turbine-on measurements.

We approve this section subject to one modification. The final sentence states, "The sound engineer conducting the testing may modify the background sound methodology for good cause, with the agreement of the Third-Party Reviewer." As explained above under Section 2.2, there will not be a third-party reviewer. Accordingly, the last phrase of the quoted sentence should be deleted. In addition, should the sound monitoring contractor deem that good cause exists to modify the background sound methodology, we require that the sound monitoring report include a description of the good cause and the modifications that were made. Accordingly, we direct Deerfield to amend this section of the Revised Plan to reflect these changes.

I. Section 2.8 – Attended Measurement

Pursuant to the Revised Plan, attended monitoring would take place for one hour before or after at least one turbine shutdown event at each monitoring location. Attendants would make time-stamped notes as to what they hear and the relative loudness of those sounds.

No party filed comments on this section, and it is approved.

J. Section 3.0 – Data Processing

Pursuant to the Revised Plan, data would be removed from the monitoring results under certain circumstances, such as when wind speeds at a monitoring site are above 4-5 m/s (to avoid false noise generated from pressure fluctuations around the microphone), when temperatures are below 14 degrees Fahrenheit, when precipitation (rain, sleet, or ice, but not snow) is present, when spikes in the data are present that are not consistent with wind turbine operation, and when the background sound levels are within 3 dB of the adjacent measured Project-only sound levels. Sounds from insects and birds may be filtered by employing a low-pass filter. All results would be rounded to the nearest whole number. At least two valid hours of turbine-on data would be needed to assess the Project's compliance with the Amended CPG sound limits. If five weeks of data monitoring were completed before two hours of valid data were collected, the monitoring campaign would conclude and the available valid data would be used for compliance determination. Tonal sounds would be assessed using the criteria of ANSI S12.9 Part 4 Annex C.

WAG/Shea object to the removal of any data from the data set absent agreement from a third-party observer that the sound is not turbine-related. WAG/Shea recommend that any precipitation or wind-induced noise be validated against the anemometer and rain sensor at each monitoring location. WAG/Shea argue that the full data set should be maintained and should accompany the sound monitoring reports filed with the Commission.

As discussed under Section 2.2, there will not be a third-party observer. Thus, any data removal from the monitoring results will be done at the discretion of the sound monitoring consultant selected and supervised by a State agency. Such data removal will be subject to the provisions of the Revised Plan. Reporting should include a description of each reason why data has been removed from monitoring results. The removed data should be retained by the sound monitoring consultant and should be provided to the Commission. Deerfield is directed to amend the Revised Plan as appropriate to reflect these changes.

K. Section 4.0 – Reports

Pursuant to the Revised Plan, a report would be prepared for each monitoring campaign and would include: (1) a description of any Project operation changes, special operating conditions, or turbine maintenance issues during monitoring; (2) the layout of the project area, including topography, Project boundary lines, and property lines delineating properties surrounding the site; (3) locations of the sound measurement points with photographs and GPS coordinates of the microphones; (4) distance between sound measurement points and the nearest wind turbine; (5) a summary of all data collected, including sound levels, meteorological data at the monitoring stations, and turbine operating conditions; (6) times of potential exceedances of the outdoor, indoor, or tonal standard, and the results of investigations into those exceedances; (7) conclusions; and (8) an appendix containing 10-minute data for each turbine including wind speed and electrical output. In addition, if cold-weather certified sound monitors are not used, then a report addendum will be prepared that includes sound levels during periods when the temperature is below 14 degrees F. Reports would be submitted within six weeks of the end of each monitoring period.

The Revised Plan defines "residence" as a permanent structure for human habitation that is occupied by one or more people for a minimum of 90 days each year. Deerfield states that this definition is taken directly from the Commission's Temporary Sound Rule and is repeated in the final rule.

WAG/Shea disagree with the Revised Plan's definition of "residence." WAG/Shea state that it is not unusual for second-home owners to spend their summers or extended holidays in Vermont with a total annual stay of less than a quarter of a year. WAG/Shea contend that the proposed definition's inclusion in the Commission's temporary sound rule should be given no weight. WAG/Shea maintain that the proposed definition is "overtly hostile" to property owners who are not full-time residents but who expect equal protections as other residents in the Project area. WAG/Shea argue that the Amended CPG applies no such qualifications to residences surrounding the Project.

WAG/Shea further recommend that sound monitoring reports include additional measurements, such as C-weighted, 10^{th} percentiles, and 90^{th} percentiles.

Deerfield argues that only those metrics that pertain to the Amended CPG sound standard should be required to be reported, and that those metrics do not include C-weighted measurements, 10^{th} percentiles, or 90^{th} percentiles.

The Department did not comment on this section.

The applicable CPG condition does not distinguish between homes that are occupied permanently, occasionally, seasonally, or rarely. Rather, the CPG condition applies to "any existing surrounding residences." Therefore, we direct Deerfield to amend the definition of "residence" in the Revised Plan so that it reads "a permanent structure for human habitation."

We decline to require that C-weighted measurements, 10th percentile, or 90th percentile data be reported because those measurements do not pertain to the Amended CPG.

L. Section 5.0 – Complaint Resolution

Pursuant to the Revised Plan, a complaint resolution procedure would be in place for the life of the Project and would be followed to ensure that neighbors' concerns are addressed in a timely manner while preventing abuse of the complaint process. Certain paragraphs of this Section received no comments, and in some others Deerfield has incorporated the parties' recommendations, thus resolving disputes. Accordingly, the following discussion addresses only those paragraphs that require Commission resolution.

Paragraph 4

Deerfield proposes that complainants provide Deerfield with certain information related to the complaint, including the location of the observed sound, time and date the sound occurred, weather conditions, and a description of the sound.

The Department observes that the CPG Complaint Protocol adopted by the Department pursuant to 30 V.S.A. § 208 provides that complainants should not be required to direct a complaint to a company prior to submitting a complaint to the Department. Accordingly, the Department recommends that language be added to this section of the Revised Plan stating that complainants may file complaints with the Department.

We agree that it would be helpful to provide a reference to the Department's CPG Complaint Protocol as well as contact information. We direct Deerfield to incorporate such reference and contact information into the Revised Plan for those complainants who would like to contact the Department in lieu of or in addition to following the Revised Plan's complaint resolution protocol.

Paragraph 7

Deerfield proposes that sound-related complaints concerning an unidentified icing condition or mechanical problem would be investigated as needed and acted upon if warranted. If no aberrational condition exists or the condition is fixed, Deerfield would not take any further complaint resolution steps. We direct Deerfield to follow up with complainants in these cases with a description of Deerfield's findings. In addition, we direct Deerfield to maintain files concerning such complaints to enable future inspections by the Commission or Department as warranted. Deerfield shall reflect these requirements in its amended sound monitoring plan.

Paragraph 8

Deerfield proposes that it would investigate sound complaints from a residence within the 30 dBA contour of Figure 1 of the Revised Plan. Deerfield proposes to define "residence" as "a permanent structure for human habitation that is occupied by one or more people for a minimum of 90 days each year."

WAG/Shea maintain that the 30 dBA sound contour that was established when the Amended CPG was issued does not reflect the larger turbine models selected by Deerfield post-CPG. WAG/Shea argue that the CPG sound level requirements must be met regardless of modeled predictions, and that it would be reckless and inappropriate to shift complaint resolution to homeowners when CPG compliance obligations should be borne by Deerfield.

The Department notes that its CPG Complaint Protocol is not restricted to permanent residents and is applicable to persons who live beyond a certain distance from the Project. Accordingly, the Department contends that this paragraph should be amended to be in conformance with the CPG Complaint Protocol.

We do not require the Revised Plan to mirror the Department's CPG Complaint Protocol. Whereas the Department's Protocol was developed for general applicability and dictates how the Department may respond to a complaint, the Revised Plan is specific to this Project and dictates how Deerfield shall respond to complaints.

We conclude that using the 30 dBA contour as a preliminary screen for when investigations will be required is reasonable. The language in this paragraph does not prevent Deerfield from conducting investigations on its own beyond the 30 dBA contour, nor does it preclude the Commission or the Department from investigating complaints, including those that arise from residences beyond the 30 dBA contour.

Deerfield is directed to amend the definition of "residence" in this paragraph to match the definition that we adopted in Section 4, above. Further, at the time that Deerfield files its amended plan incorporating the requirements of this Order, we require Deerfield to indicate whether Figure 1 represents sound modeling results based on the turbine models that were constructed. In the event that the as-constructed turbines did not form the basis for Figure 1 of the Revised Plan, Deerfield shall update Figure 1 to reflect a 30 dBA contour based on the as-constructed turbines.

Paragraph 9

Deerfield proposes that sound monitoring may be conducted in response to a complaint from a residence within the 30 dBA contour if the sound level is within 5 dB of the exterior sound limit based on sound modeling.

WAG/Shea contend that relying on predicted noise levels at the façade of a residence as a means of pre-approving sound monitoring locations is contrary to the Commission's intent when it established a sound-level limit to be enforced at any existing surrounding residences. WAG/Shea argue that this proposal could potentially disqualify many properties from the protections cited in the Amended CPG.

Deerfield argues that using the predicted noise levels provides a reasonable basis upon which to determine whether Deerfield should be required to investigate a complaint. Deerfield states that the substantial time and expense of sound monitoring should be avoided where there is no reasonable probability of a violation of the applicable CPG sound limit.

We agree with Deerfield that it is reasonable to use the 30 dBA contour based on sound modeling as an initial screen for when sound monitoring may be required. However, we conclude that the potential for sound monitoring in response to a complaint should not be limited to those residences that meet this paragraph's criteria because the sound-level limits apply to all existing surrounding residences. Accordingly, we require Deerfield to amend this paragraph by adding the following phrase: "or upon order of the Commission in response to a complaint."

Paragraph 10

Deerfield proposes that additional sound monitoring may also be conducted if first-year compliance monitoring during normal operating conditions shows that a monitoring location within one mile of a complainant's home indicates higher sound levels than were modeled.

The Department recommends that this paragraph be revised to reflect that additional sound monitoring may be required based on the results of any subsequent Commission-ordered sound monitoring, and not only first-year monitoring.

We adopt the Department's recommendation. Deerfield shall amend this paragraph as proposed by the Department to reflect the results of any subsequent Commission-ordered compliance monitoring in addition to first-year monitoring.

Paragraph 11

Deerfield proposes that any sound monitoring undertaken in response to a complaint should begin within six weeks, and that reasonable efforts should be made to conduct such monitoring under conditions similar to those that caused the complaint.

WAG/Shea contend that waiting six weeks before sound monitoring is conducted would be excessive and would leave the complainant with no recourse. WAG/Shea argue that if an exceedance is suspected, the issue should be resolved as soon as possible.

The Department proposes that the first sentence should be changed so that such monitoring would begin as soon as possible, but in no event later than six weeks.

Deerfield observes that nothing in the Revised Plan prevents monitoring sooner than six weeks from the time of the complaint.

While we agree with Deerfield that the current language does not prevent prompt commencement of monitoring, we conclude that the proposed language also does not encourage it. Accordingly, we direct Deerfield to amend this paragraph as proposed by the Department to reflect the policy interest of commencing sound monitoring as soon as possible, but in no event later than six weeks following a complaint.

Paragraph 12

Deerfield proposes that its sound consultant will work with the complainant to determine an appropriate location for the sound monitoring equipment. Because we have determined that sound monitoring will be conducted under the supervision of a State agency, we direct Deerfield to amend this paragraph so that it begins with "The sound monitoring consultant…"

Paragraph 13

Deerfield proposes that sound monitoring in response to a complaint will follow the applicable protocols established in Sections 2.7, 3.0, and 4.0, and that the sound monitoring consultant may revise aspects of the protocol to address specific conditions and limitations. The basis for any such deviations would be described and substantiated in the sound monitoring report.

WAG/Shea maintain that the sound monitoring contractor should not be permitted to make adjustments to the protocol when conducting a compliance test, and that any such adjustments would need to be reviewed by a third-party observer and the Commission in advance and approved by all affected parties.

The Department concurs with the WAG/Shea comments.

Deerfield contends that specific field conditions, or the nature of the complaint, may warrant changes to the protocol that were not anticipated at the time of its writing. Accordingly, Deerfield contends that the sound monitoring contractor must be given the flexibility to modify methodologies that are inapplicable, unnecessary, wasteful, or would not achieve valid results when responding to a specific complaint.

We agree with Deerfield that some degree of flexibility in the sound monitoring protocol should be reserved for the sound monitoring consultant to respond to the nature of specific complaints or unforeseen circumstances encountered in the field. In the event that the sound monitoring consultant deviates from the prescribed protocol, the deviation will be described and substantiated in the sound monitoring report. We direct Deerfield to amend this paragraph by replacing "should" with "shall" in the last sentence.

Paragraph 14

Deerfield proposes that the primary method for determining the attenuation value of a complainant's home will be OINR testing. Such testing would be offered to complainants at Deerfield's expense if the conditions for sound monitoring described in Paragraph 9 of this section are met. If permission is not granted for OINR testing, Deerfield proposes that the attenuation value would be 15 dBA.

For the same reasons expressed under Section 2.6, above, WAG/Shea object to the method for determining when an OINR test will be performed.

Subject to our determinations with respect to Section 2.6 and Paragraph 9, above, and for the same reasons, we conclude that this paragraph is reasonable. Accordingly, it is approved.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Utility Commission ("Commission") of the State of Vermont that:

1. The request for a "technical session" by Mr. Tom Shea and Wind Action Group is denied.

2. Deerfield Wind, LLC ("Deerfield"), shall file an amended sound monitoring plan within 10 days of this Order that incorporates the changes discussed herein. Provided that the amended sound monitoring plan incorporates the required changes, the plan will be deemed approved without further action by the Commission and Deerfield will have fulfilled Condition 30 of its amended certificate of public good. The amended plan should reflect the Commission's name change. All instances of "Public Service Board" shall be replaced with "Public Utility Commission" and all instances of "Board" shall be replaced with "Commission."

3. The Department of Public Service ("Department") is requested to file a proposal within 10 days of this Order addressing which State of Vermont agency should select and supervise the sound monitoring consultant who will conduct sound monitoring and reporting as required by the sound monitoring plan. Any comments on the Department's proposal should be filed with the Commission no later than 10 days following the Department's recommendation.

SO ORDERED.

Dated at Montpelier, Vermont, this 14th day of December, 2017.

______________________	)	PUBLIC UTILITY
	)	
Margaret Cheney	)	COMMISSION
	)	
Sarah Hofmann	)	OF VERMONT

OFFICE OF THE CLERK

Filed: December 14, 2017

Attest: Judith C. Whitney
Clerk of the Commission

Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Commission (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: puc.clerk@vermont.gov)