

William Cundiff

From: neexpansion@aol.com
Sent: Tuesday, September 07, 2010 4:01 PM
To: wcundiff@douglasma.org
Subject: Fwd: Summary of Peer Review Meeting and Next Steps

Bill,

Below is the original email.

Regards,

Rod

Rod Jané
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-----Original Message-----

From: neexpansion <neexpansion@aol.com>
To: rtab <rtab@atlanticcompanies.com>; burkardrg <burkardrg@cdm.com>; info <info@americanprowind.com>
Sent: Thu, Sep 2, 2010 12:19 pm
Subject: Summary of Peer review Meeting and Next Steps

Bob/Rich/Ernesto,

The meeting on Tuesday was very productive. I have summarized below the key points coming out of our Peer Review meeting on Tuesday.

1. ZVI: We discussed the need and/or benefit of having a Zone of Visual Influence Map included in the Shadow Flicker Study. While the ZVI Map can give a general sense of where the turbines will be visible from, it is a macro analysis only and is therefore limited in its usefulness. It will not determine whether the turbines will or will not be visible from particular houses or neighborhoods. Therefore, it can potentially lead to confusion or create false expectations with residents. It was decided that the ZVI Map issue would be brought up for discussion (and samples to be shown by Atlantic Design) at the next Planning Board meeting and that the Planning Board can make the decision on whether to request it or not.
2. Experienced (Real) Flicker Hours Criteria: CDM concurs that the correct criteria for maximum annual flicker hours should be 30 hours of experienced (or real) flicker taking into account sunshine and wind direction and not theoretical worst case hours. This is substantiated by the variance language which states that the applicant shall "provide for mitigation where shadowing/flicker is reduced to 30 Experienced Hours or below per year." It is also substantiated by the research that CDM did which showed that the standard typically applied in North American wind projects is "Experienced" hours and not theoretical worst case hours. However, CDM did recommend that the theoretical worst case hours still be shown in the Study for each receptor location alongside the "Experienced Hours" even though it is not realistic and is not used as the basis for mitigation. APW concurs with this recommendation and will incorporate it into the final Shadow Flicker Study.
3. Number of Receptors: CDM Recommends that the number of receptors be increased to include all residences that lay within the 30-hours or more band on the "Flicker Annual Experienced Hours Map" instead of the four representative receptors as submitted in the current Shadow Flicker Study. This change will make clear the total number of affected households that experience 30 hours or more of flicker per year. In addition, for each of these receptors (affected residences receiving more than 30 Experienced Hours) the Shadow Flicker Study will show

within the text the calculated "Experienced Hours" and the theoretical worst case hours. The "Experienced" hours for each affected household will form the basis of the Flicker Mitigation Plan. Finally, this list will serve as a list of those residents who must be given a copy of the "Flicker Mitigation Plan" per condition #7 of the ZBA Variance. APW concurs with this recommendation and will incorporate it into the final Shadow Flicker Study.

4. Include Sample of Residences Outside of 30-Hour Band: In addition to the receptor households (those receiving more than 30 "Experienced Hours annually), CDM recommends that the final Shadow Flicker Study show several residences just outside the 30-hour band (at least one from each neighborhood cluster) and the calculated "Experienced Hours" and theoretical worst case hours for each of these residences, just to contrast the affected residences (more than 30 Experienced Hours) from the non-affected residences. APW concurs with this recommendation and will incorporate it into the final Shadow Flicker Study.
5. Elimination of Discount Factor for Trees: CDM questioned the use of further discount factors that Atlantic Design used in the Shadow Flicker Study that took into account the location of trees relative to the residence and were used to further reduce the "Experienced" hours of shadow flicker. After lengthy discussion, CDM reiterated that either the discount factors should be eliminated (which would be very conservative) or there should be an adequate scientific micro analysis at each of the receptor locations to scientifically justify a particular discount factor. While APW believes that discount factors are certainly justifiable because of the clear presence of trees, APW agreed to make a concession and to eliminate the discount factors entirely, which presents a very conservative calculation of "Experienced (Real)" Flicker Hours. APW will comply with the CDM recommendation and will incorporate it into the final Shadow Flicker Study.
6. Elimination of Reference to German standard: Since the variance makes no reference to the German standard, CDM recommends that any reference to this standard should be eliminated from the Shadow Flicker Study to avoid confusion. APW concurs with this recommendation and will incorporate it into the final Shadow Flicker Study.
7. Flicker Mitigation Plan: Several points were discussed and consensus between CDM, APW, and Atlantic Design reached on the following:
 - A separate Flicker Mitigation Plan will be submitted in addition to the Shadow Flicker Study (Rod Jané to draft the plan for review by CDM, Rich, Ernesto with technical addendums on the Flicker Impact Module from Nordex to be added)
 - Once finalized, we will seek to obtain approval of the Flicker Mitigation Plan by the Douglas Planning Board
 - Once approved by the Planning Board, copies of the plan will be mailed (Certified Mail with Return Receipt) to each of the affected residents
 - The Mitigation Plan will use the conservative calculation (no additional discount factors applied) for "Experienced" Hours based on the calculations in the Atlantic Design Shadow Flicker Study.
 - All households in the 30 "Experienced Hours" or more band will be included on the list of "Affected Residences"
 - A list of all affected residences and the calculated "Experienced Hours" will be included in the Flicker Mitigation Plan
 - The Nordex Flicker Impact Module will be installed on the four most "affecting" turbines
 - The Modules will be programmed to shut down the turbines a sufficient number of hours to reduce the "Experienced" Hours to below 30 hours per year for each affected household and below 30 minutes per day for each affected household
 - The actual shut-down hours and resultant flicker hours will be tracked and reported as follows:
 - If available, these reports will be available for viewing on-line
 - If not available on-line, a quarterly report will be submitted to the Town of Douglas

The objective is to have both the final Shadow Flicker Study and Flicker Mitigation Plan submitted to the Town of Douglas by 9/8/2010 in time for review by the Planning Board for their 9/15/2010 Planning Board meeting.

Please call me if you have any questions or believe there are corrections or significant omissions in the above summary.

Regards,

Rod

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