Dennis Cashman, Ph.D. 114 Shore Drive South Bridgewater, NH 03222

My name is Dennis Cashman. I live in Bridgewater, NH. I am a PhD - degreed management consultant and college professor, teaching leadership and management programs. I presented testimony to the SEC during the siting criteria process. I testified in support of clear photo simulations of wind turbines depicted face-on with the full dimension of rotating blades against an unobstructed blue sky background. I was pleased that you agreed with my assessment and that of others as representing a fair depiction of a proposed industrial wind turbine facility.

Today, I want to share and comment on a few observations regarding the visual impact testimony provided by Antrim Wind.

Within criteria #8, it is stated that photo simulations should include the "view that closely matches human visual perception, under clear weather conditions and at a time of day that provides optimal clarity and contrast". In support of this, it further states, "Turbines shall be placed with full frontal views and no haze or fog effect applied." The photos clearly indicate the applicant has failed to follow these criteria. Note the Applicant's submission of a hazy view of Gregg Lake. Notice how difficult it is to see some very prominent wind turbines against a hazy background.



In the next picture, it becomes clear why the applicant submitted a hazy view of Gregg Lake in 2016 when compared to the Gregg Lake photo simulation back in 2012. Here, the turbines clearly appear in Antrim Wind's earlier photo when the haze is removed.

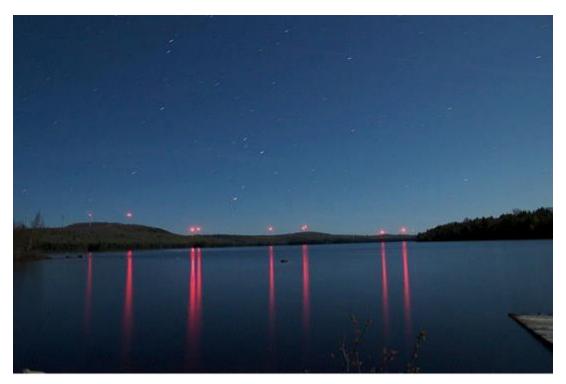


Another quick comparison clearly indicates how difficult is to count the number of turbines in a hazy background as depicted in this Franklin Pierce Lake photo simulation. Compare this to the clarity of a comparable photo simulation provided in Kelly Connolly's testimony.





Further, nighttime photo simulations and the assessment from key observations points were not submitted. Photo simulations should also include nighttime conditions, since the FAA requires flashing red strobe lights. Wind developers have claimed that new systems will not need these strobe lights, but until Antrim Wind actually receives FAA approval and can ensure the radar detection will be in use during all times during the night, the Applicant should be required to follow the SEC criteria. A nighttime photo simulation clearly indicates the distraction that red strobing lights create in a lake setting such as that proposed by Antrim Wind.



Within SEC criteria #7, it is stated that photo simulations should include "a sample of private property observation points". It is interesting to note that LandWorks dismissed the inclusion of White Birch Point and Black Pond in the evaluation because they are privately owned. The photo simulation by Kelly Connolly, clearly shows the dominance of the turbines in the landscape! Additionally, note the clarity provided by a blue sky background.



LandWorks should only present the data with an objective analysis. The visual impact has been minimized by placing them in a hazy background, which is clearly in violation of the SEC criteria. Some locations have been removed from the evaluation though it was clearly stated that a sample of private property should be included in the analysis. Further, nighttime photo simulations were deleted due to a hope that the FAA would relax its rules. The consultant indicated a significant level of subjectivity by making statements that go beyond the scope and role of an objective consultant. The consultant stated that turbines greater than 6 miles away are "really not visible". A field visit to Groton Wind proves those turbines to be clearly visible from Cardigan Mountain or the southern end of Newfound Lake, which are well beyond six miles away. The consultant further stated that how you view turbines is related to how you view wind energy and climate change. Subjectivity appears confirmed through the high number of low visual impact ratings throughout the report. The inclusion of the term "reasonable viewer" as interchangeable with the required impact on the "typical viewer" further sounds dismissive of anyone who might disagree.

I appreciate your time and consideration and hope that you have found it to be both valid and helpful in preserving the integrity of the application of the SEC siting criteria. Thanks.