

16 March 2015

Mr. Martin P. Honigberg, Chairman  
Site Evaluation Committee  
Public Utilities Commission  
21 South Fruit Street  
Concord, NH 03301

Dear Mr. Honigberg: Re: 13 March 2015 Order on Pending Motions , Docket 2014-05

I am requesting a modification of your Order of 13 March 2015 as it pertains to my Intervenor status before your Committee. I am requesting to be allowed Intervenor Status without coordination with other non-abutters.

My request for participation as an intervenor was only partly due to the effects on my property, and was asserted to inform the Committee of the reason I initially got involved. To that extent, I do share a common interest with other non-abutters. The main reason for my intervention however, was far more serious. This proposal gave me my first real opportunity to assist the SEC in understanding the serious problems which Industrial Wind Facilities portend for our state and our region, generated because of the special topography and meteorology of New Hampshire. Both the topography and the meteorology of our state are very different from the topography of the midwest, west Texas, Europe, etc. As I stated at the hearings on 4 Mar 2015, and in my written filings in this matter, I chose, as a meteorologist to analyze real wind data to determine whether there would be any special meteorological situations which would have (heretofore unconsidered) effects on the SEC proceedings regarding Industrial Wind Facilities.

The wind data from all over New Hampshire, and indeed over all New England, show that power-generating winds are highly correlated over the entire region. This means that when one Industrial Wind Facility is generating MAXIMUM power, most/all of the other facilities in New Hampshire and New England will also be generating MAXIMUM power. The legislative requirement to generate wind power to the grid is an AVERAGE 15% percent. With turbine operating efficiencies in the 1/4-1/3 range, the MAXIMUM power needs to be 3-4 times the AVERAGE to reach the 15% requirement. 1000, or more, turbines are required to generate 15% AVERAGE power. In simplest terms, the 15% AVERAGE wind power requirement translates directly to 45-60% MAXIMUM wind power!

My analysis of real wind data from weather stations around New Hampshire and New England shows a very interesting effect, when one turbine is experiencing high winds, and generating MAXIMUM power, most/all the other turbines in the state and the region will also be generating MAXIMUM power. Can ISO/NE stand a surge of 45%-60% surge of this MAXIMUM power in the middle of the night, or any time?? The deficit of power which the grid can accept, and not generated by the base-load plants in the middle of the night is small, hence the allowable surge from wind turbines is very limited. But the meteorology of New Hampshire forces these midnight surges to be the main contributor to the 15% AVERAGE legislative requirement! The situation is made even worse by the fact that the meteorological situations which primarily produce the higher winds at the

turbines, are likely to be specific, requiring the ISO/NE grid to adapt in specific ways. This means that the sites at which the grid can accept and use additional wind power will be specific too. The bottom line is that the SEC needs to determine both the MAXIMUM surge from wind turbines that ISO/NE can accept in the middle of the night, and the specific locations at which these surges can enter the grid..... prior to the consideration and approval of any one facility.

Therefore, Doctor Ward requests that he be allowed to represent himself, and thereby speak for other meteorologists who are unaware of these hearings, and who would wish to assert a similar point of view, and all the residents of New Hampshire outside of the Antrim area who, when apprised of this overriding meteorological issue, will be affected. That the public notice has not been transmitted to the neighboring Town of Stoddard, which Town will be equally affected as Antrim, is also a serious concern, particularly as to jurisdiction, since the alternative is the likely exclusion of Stoddard concerns. .

The aesthetic, aural, sunlight and icing issues need meteorological consideration. Doctor Ward is the only intervening meteorologist who can speak to these, in addition to representing the interest of the residents of the adjoining Town of Stoddard. The non-abutting group to which the SEC has proposed to have Dr. Ward join, and be spoken for, are local Antrim residents with a quite different view of the effects of the proposed facility. The SEC must allow both the meteorological and outside county, concerns to be explicitly addressed.

In conclusion, my interest argues strongly for SEC jurisdiction, irrespective of the capacity of any wind facility in the state because it affects every Town and resident of the state, its ratepayers, its visitors, and its businesses. I am not aware as to the extent that my point of view is either shared by the other non-abutters. I therefore request that my arguments be considered separate from theirs.

Dr. Fred Ward  
386 Route 123 South  
Stoddard, NH 03464  
[drfred@myfairpoint.net](mailto:drfred@myfairpoint.net)  
603-446-2312