

Health Impacts:	Comments	Action
1 Air Emissions displaced Sox, Hg, PM = NA CO2 = 3.2 million lbs of CO2/yr NOx = 2,660 lbs Knox / year	<p>Consider 50% emission reductions assuming gas fired combustion turbine used for peaking unit. Projected energy output is 3,546 MWh / yr. This is very conservative because for every lb of fuel fired there are emissions blown into the environment. Reducing MWe of Fossil Fueled Power generation will reduce fuel burning and emissions.</p> <p>1800 lbs of CO2 / MWh max, per State emissions criteria. This data should be further investigated with Mass DEP to obtain recent emission data.</p> <p>1.5 lbs NOx / MWh per State emissions criteria. This data should be further investigated with Mass DEP to obtain recent emission data.</p>	
2 Solid Wastes	Assume gas-fired peaking units to meet demand load swings with zero PM	
3 Liquid wastes	no direct liquid emissions into environment	
4 Water Pollution	No direct water pollution emissions considered for combustion turbines	
5 inaudible Sound (infrasound)	<p>No standards established in Massachusetts yet. Conflicting data at this time as to health impacts. Mass DEP and Mass DH report says....</p> <p>Existing Objective studies on Infrasound indicate that spl levels below 100 dB are believed to be benign.</p> <p>Infra-sound is all around us in the form of wind, waves/surf, transportation vehicles</p> <p>We have requested infra-sound data from PowerWind for evaluation by our Consultants - ADE. Data has not been received at this date.</p> <p>A need exists to define the acceptable Infrasond emissions from a Wind Turbine. These regulations doe not presently exist at the State or local level.</p>	
6 Audible Sound	<p>Standards are under review by the Mass DEP and Mass DH in the form of siting criteria and noise sound pressure levels in the audible frequency range (spl's - e.g., dBA)</p> <p>People are complaining of negative health effects. The objective evidence which does exist indicates there should be no ill health effects.</p> <p>The available objective data to define the causes for these ill health effects do not define why these effects are experienced by a few people. Furthermore, the State is investigating this issue. Therefore, we cannot say that this issue is settled.</p> <p>Wind Shear, that is Vertical wind velocity has been evaluated at the weighted average of .3 m/s. However, the test data indicates a range of vertical wind speed of</p> <p>-Peer Review of the Rand-Ambrose noise study and the ADE study has been Requested. Rand-Ambrose is the study performed at the Request of Common Sense nantucket</p> <p>The peer review report will address, among other things, a critique of the input data and evaluation of that data with respect to State and local regulations as well as Mass CEC guidelines.</p>	
7 Visual Impacts Shadow Flicker	<p>Very mixed responses - Some people see beautiful and graceful machines, some see ugly.</p> <p>Flicker is the interruption of sun light a person will percieve while the turbine blades pass by interrupting the view of the sun light. This phenomenon has been investigated with regards to the Madaket Wind Turbine. A person's perception of Flicker depends on where they are. The Energy Study Committee's consultants have evalauted this phenomenon and determined that Flicker will be observed as locations as far away as 2,000 meters (6,542 ft).</p>	
FAA Lighting	One steady red light will be affixed to the Wind Turbine. We understand No Strobe lighting is anticipated or required by the FAA.	
8 Community Conflict	<p>Not just on Nantucket. Siting distances from residences are critical. State and local acceptance criteria not firmly established yet. There is no set distance. It is a function of the noise emissions in the neighborhood.</p> <p>Severe community conflicts in Falmouth and others in the State</p> <p>Some research indicates that no perceived ill effects if the person is receiving a benefit, while ill effects are more prevalent if the individual does not receive a direct benefit, e.g., financial benefit.</p> <p>Studies in the USA and Europe indicate that Post wind turbine installation Acceptance of wind turbines generally rises (Resistance usually is reduced by 50%.</p>	
9 Others Regulation Status	<p>Health Regulations are under investigation and review by the State. Although politically attractive, it is very unlikely that these regulations will be resolved in time for the Nantucket Town Meeting.</p> <p>- Nantucket's bylaw is considered more restrictive than the current State regulations. Mass CEC is a more demanding criteria for acoustical analysis than the State regulations.</p>	